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Project Submission Sheet

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Date: 09 August 2024

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'Exploring hybrid working conditions and the influence on work-life balance and wellbeing for caregivers and non-caregivers within the pharmaceutical sector in Ireland.'

Karen Hudson
MSc in Management, 2024
National College of Ireland

Abstract

'Exploring hybrid working conditions and the influence on work-life balance and wellbeing for caregivers and non-caregivers within the pharmaceutical sector in Ireland.'

The aim of this research is to explore the influence of hybrid working on work-life balance and wellbeing for caregivers and non-caregivers in the pharmaceutical sector in Ireland.

To achieve the research aims and objectives, an evaluation of the literature surrounding this topic and its various influences was completed. The literature review focused on understanding the prior research available on the topics of burnout, work-life balance, quality of life and job satisfaction. Each variable was evaluated by reviewing the broader context of the overall subject, corporate specific literature and current literature within a pharmaceutical setting was also included.

A quantitative questionnaire was used to collect the participant responses through an online survey tool. This was circulated to target participants online via email and social media platforms. Participants completed pre-validated questionnaires on burnout, work life balance, quality of life and job satisfaction. A total of 53 participants responses were collected (33 caregivers and 20 non-caregivers). The response data was then analysed through relevant quantitative statistical tests and results then reported and interpreted.

The results found that there were higher levels of burnout in the caregiver group compared to the non-caregiver group demonstrating statistical significance. Results were similar for work-life balance, quality of life and job satisfaction, with no statistical differences found between caregivers and non-caregivers in each of these measures.

In the final chapters, the outcomes for burnout, work life balance, quality of life and job satisfaction were discussed further against each hypothesis statement, potential implications and suggested recommendations provided. Future areas of research are also suggested and an overview of this study's limitations.

Declaration of Authorship

National College of Ireland Research

Students Declaration Form
(Thesis/Author Declaration Form)

Name: Karen Hudson

Student Number: x20255586

Degree for which thesis is submitted: MSc Management

Title of Thesis:

Date: 09 August 2024

Material submitted for award

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C. I agree to my thesis being deposited in the NCI Library online

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   √ Karen Hudson

I, Karen Hudson, hereby declare that this dissertation is the result of my own work, and that all information in this document has been obtained and presented in accordance with academic rules and research ethics. I also declare that due acknowledgement has been given in the bibliography and have fully cited and referenced all materials and sources, be they printed, electronic or personal.

Acknowledgements

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Finally, I would like to say the biggest 'Thank You!' to my Husband Karl and four children, Fiáin, Evie, Billy and Harry for their support, patience and love. On the long evenings of classes, assignments and completing this research study you always brought the happiness, fun and laughter. You are all amazing.

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Chapter I: Introduction

1.1 Background

This chapter addresses the study's overall context.

The Covid-19 pandemic accelerated the need for hybrid working for men and women, however there is research to suggest that this may contribute to longer working hours (DeFilippis, 2020). Prior research demonstrates that caregivers in comparison to non-caregivers also carry the emotional burden of the home, even while working full time (Dean et al, 2022). This research will focus on the influence that hybrid working has on the work life balance and wellbeing of people in the pharmaceutical sector in Ireland. Burnout, hybrid working, work-life balance, quality of life and job satisfaction will be researched and evaluated to determine the effects on wellbeing and work life balance in this participant group. There is a vast body of research published in relation to hybrid working (Konovalova, 2022) and work- life balance (Sundaresan, 2014). There is a clear gap in literature on the pharmaceutical sector and their feelings towards hybrid models of working and work-life balance. This provides a strong rationale to complete research on this topic so that insights and learnings can be developed and create a foundation for future research in this area of study.

By way of conducting this research, a quantitative online questionnaire was prepared and circulated to the target audience. The aim was to recruit 128 participants who are employed within the pharmaceutical sector in Ireland, that work in a hybrid set up and have caregiving responsibilities or are a non-caregiver with no caregiving responsibilities.

1.2 Research aim

The aim of this research study was to explore the work life balance and wellness of caregivers and non-caregivers working in the pharmaceutical sector in Ireland. This study explored the level of work life balance and wellness by investigating the participants feelings towards their levels of burnout, work-life balance, quality of life and job satisfaction. The study then also compared each independent variable (caregivers and non-caregivers) to understand if there are differences across the dependent variables by analyzing and evaluating the data that is reported.

1.3 Research questions

Q1. What is the level of burnout for participants working in the pharmaceutical sector in Ireland?

Q2. Does hybrid working have a different impact on work-life balance for caregivers verses non-caregivers working in the pharmaceutical sector in Ireland?

Q3. Is there is a difference in quality of life between caregivers and non-caregivers working in a hybrid setting in the pharmaceutical sector in Ireland?

Q4. Does hybrid working allow for greater job satisfaction for caregivers and non-caregivers working in the pharmaceutical sector in Ireland?

1.4 Research Objectives

Objective 1. Understand the participants attitudes to hybrid working in the context of their homelife responsibilities of caregiving and non-caregiver status.

Objective 2. Understand the participants feelings towards their work-life balance and if this is driven by their ability to work in a hybrid set up.

Objective 3. Understand the participants feelings towards their quality of life and if there are differences between caregivers and non-caregivers.

Objective 4. Understand if their attitudes to their job and job satisfaction is influenced by their hybrid working set up and explore if this has an influence on their work-life balance depending on their caregiving status.

1.5 Research Hypothesis

Burnout

Null Hypothesis 1 (H0): There will be no significant difference in burnout between caregivers and non-caregivers working in the pharmaceutical sector in Ireland

Alternate Hypothesis 1 (Ha): There will be a significant difference in burnout between caregivers and non-caregivers working in the pharmaceutical sector in Ireland

Work Life Balance

Null Hypothesis 2(H0): There will be no significant difference in work life balance between care-givers and non-caregivers working in the pharmaceutical sector in Ireland

Alternate Hypothesis 2(Ha): There will be a significant difference in work life balance between caregivers and non-caregivers working in the pharmaceutical sector in Ireland

Quality of Life

Null Hypothesis 3(H0): There will be no significant difference in quality of life between care-givers and non-caregivers working in the pharmaceutical sector in Ireland

Alternate Hypothesis 3(Ha): There will be a significant difference in quality of life between caregivers and non-caregivers working in the pharmaceutical sector in Ireland

Job Satisfaction

Null Hypothesis 4(H0): There will be no significant difference in job satisfaction between care-givers and non-caregivers working in the pharmaceutical sector in Ireland

Alternate Hypothesis 4(Ha): There will be a significant difference in job satisfaction between caregivers and non-caregivers working in the pharmaceutical sector in Ireland.

Chapter II: Literature Review

2.1. Introduction

The following section presents literature that is available for each of the dependent variables which was explored throughout this research study. In line with the research question, the objective of the literature review was to present existing research on this topic. By exploring the current literature, the lead researcher gained an understanding if there is a relationship between the variables that influence work life balance and wellbeing. This literature review provided the lead researcher with a better understanding on what has been researched previously and if there are relevant themes, phrases, interconnections but also provided an opportunity to identify gaps that this research may fill. The researcher focused on the following dependent variables in this study.

1. Burnout
2. Hybrid Working
3. Work-Life Balance
4. Quality of life
5. Job Satisfaction

The literature for each topic was investigated and explored to understand if there is a relationship between them and the contribution that they perhaps make to the work life balance to the wider population.

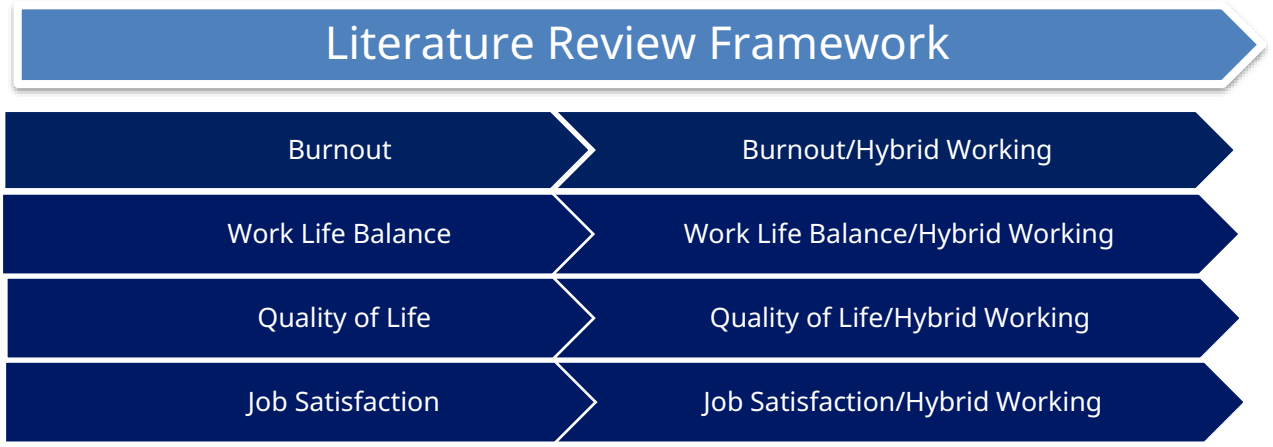

Figure 1. Literature Review Framework

2.2 Burnout

One definition of burnout from Maslach (2016) states that 'Burnout' is the prolonged response to chronic emotional and interpersonal stressors on the job.' Although Maslach's definition is one of many other definitions, this is what the lead researcher has referenced to explain what burnout means. Although this definition is specific to 'on the job', it does support this area of research as it relates to work life balance of caregivers and non-caregivers in the pharmaceutical sector and 'their job'.

Over the past number of years, there has been a significant increase in the media with relation to burnout within the frontline healthcare profession (Lacy, 2018). One study estimated that 10% - 70% of nurses and 30% - 50% of physicians, nurse practitioners and physicians' assistants were affected by 'burnout syndrome' (Bridgeman, 2018). Another study that was conducted with junior doctors in Ireland found that burnout correlated with an increase of 64% in medical error occurrence compared to 22% of those who did not experience burnout symptoms (O' Connor, 2017). The statistics convey the reality of how burnout can have negative effect and cause distress in a work setting. These findings are also supported by De Hert (2020) who found that burnout influences negatively on patient care and the quality of care provided to patients. In contrast to this, one study that focused on well-being initiatives within a hospital-based team and the benefits of improving burnout was 'The Happiness Project' (THP) (Rubin, 2009). This project primarily focused on the employee's happiness and resilience through teaching 'new ways of thinking, feeling and behaving' towards their working environment to enhance their working life. It showed a benefit and a decrease in burnout for nurses and executive leadership hospital-based teams.

There is not a significant amount of current available literature on the pharmaceutical sector and burnout overall but one may draw similarities from a corporate literature review. One study reflected that burnout within the corporate structure relies on interpersonal relationships and may suggest that if there is a weakness in interpersonal relationships, this may lead to burnout vulnerabilities (Cordes, 1997). Another study by Pehlivanoğlu (2019) looked at the sales function within the pharmaceutical sector and if the personal accomplishments of sales employees working in the pharmaceutical sector is affected emotional exhaustion and depersonalization. Harvard Business Review refer to the fact that emotional exhaustion is directly connected to burnout and is when all emotional resources are used up due to lack of support, overwhelming demands, conflicts and a person's wellbeing is diminished as a result. Depersonalistion is when a person feels disconnected or detached from oneself. The results demonstrated that there was a link of emotional exhaustion and depersonalisation to burnout and the merit of measuring burnout and having a focus on employee wellbeing incentives is recommended by Walter (2012).

Jovanović (2016) also found that the highest level of burnout was associated with a feeling of reduced personal accomplishment with 53% of respondents feeling this impacted on their burnout levels. This study included marketing professionals and the manufacturing side of the business. A lack of personal accomplishment was explored and found that this contributed again to the overall burnout in another study by Wade (1986), which further supports the evidence that it is not only the constant work stressors that drive exhaustion but the feeling of fulfillment in one's job and the ability to have a sense of accomplishment in their work is also a driver of burnout in many employees.

Burnout is an international phenomenon and needs to be examined in a wider context as many of the factors associated with burnout are not specific to certain populations, cultures, or companies (Mc Cormick, 2013). The American Institute of Stress estimated that stress and burnout on the job costs US businesses $300 billion per year (Walter, 2012). Another study states that the corporate wellness market is estimated to be $77 billion by 2027. This demonstrates a direct correlation that

organizations and companies are aware of burnout in the corporate sector and the necessity to address those needs is more critical than ever (Klamut, 2022).

2.3 Hybrid Working

An article from Mitel, states that a hybrid workforce is a significant number of employees engaged in a hybrid working model, spending part of their time at an office, and part of their time working from home. Hybrid working has become a major part of how companies operate. Since Covid-19, organisations have had little choice but to opt for a hybrid working model to retain employees. According to a survey, carried out by CIPD in the UK, 39% of employers are now more willing to offer flexible working than before the pandemic (CIPD.co.uk, May 2023).

"The COVID-19 pandemic has pulled down psychological and cultural barriers to telework. It has forced both employers and employees to overcome their previous reluctance about remote work", was how one study concluded the important role that the Covid-19 pandemic played on forcing the requirement for remote working (Grzegorczyk, 2021.) At the same time in 2020, Twitter CEO Jack Dorsey stated that he would let employees work from home 'forever' (Christie, 2020).

A hybrid model of working is considered a perk in many industries (Bloom, 2024) which is used to attract the best people for the job. Konovalova (2022) found that a hybrid working model opens the opportunity for flexibility and people being able to work across different time zones and having access to a wider talent pool. However, hybrid working is not all positive and may lead to some challenges in contrasting literature on hybrid working. Challenges have been seen with this kind of model that result in employees feeling isolated, deprived of interactions and increases the risk of emotional burnout (Petitta, 2023). Romer (2023) also highlighted challenges that more women than men recorded higher stress levels with hybrid working.

However, this conflicts with other studies such as De Marinis (2023) who found that overall hybrid working did have a positive impact on working mothers in the Ontario Public Service. This is also supported in another study which found that flexible working had a significant positive impact for women and their homelife (Aura, 2023).

Advantages of hybrid working showed positive outcomes in a Nigerian study which showed that flexible working arrangements contributed to greater autonomy and promoted work performance. This study suggests that by having greater autonomy, people can work the hours that best suits their needs, some prefer early working hours, and some prefer later working hours for example (Naqshbandi, 2024). This study also demonstrated that hybrid working leads to greater job satisfaction.

The advantages and disadvantages of hybrid working can be seen from the current literature that is available and likely applicable to most industries and not only the corporate setting. The positive findings can range from benefits such as less time commuting, less interruptions from colleagues, more mental and physical energy to spend time on work and reducing fuel and living costs by working from home (Oppong Peprah, 2024). This same study however showed that there are disadvantages to hybrid working such as decision making can be slower, internet infrastructure can cause issues, blurred lines between personal and professional time, loss of a sense of shared community and culture and the feeling of social isolation and loneliness.

2.4 Burnout and Hybrid Working

Literature that looks at both hybrid working and burnout highlights some connections between both. Depersonalization (Jovanović, 2016) is the detachment from oneself, and many employees may feel the need to work longer hours to feel like they belong. The 'overcommitment' is suggested in one paper (Best, S2021) who suggests that because hybrid or remote workers are at home and away from colleagues, that may feel the need to overwork or be overcommitted which leads to burnout. This is contradictory to a Chinese study which found that employees that engaged in a hybrid work setting had a better work life balance and lower burnout rates (Tsipursky, 2022).

2.5 Work Life Balance

'A state of equilibrium in which the demands of both a person's job and personal life are equal' is one definition of many that may be used to explain work life balance (The Word Spy, 2002).

Over eight hundred business professionals contributed to a book on how work and life conflict can 'hurt each other' (Friedman and Greenhaus, 2000). It explores the dynamics of how work and family life create conflict and career attainment for both men and women. Sundaresan (2014) explored this topic again over twenty years later and found that the theory of 'hurt' is still visible between family and professional life and that an overload in family life had a direct impact on work-life for women specifically.

Due to this imbalance, consequently women may never reach their full potential at work. The idea that family life and work balance have a negative impact on working mothers' progression in the workplace can be backed up by (Brue, 2018), who reviews the expectation around women to have a harmonious work and life balance so that they can progress successfully in their professional life. Much of the research on work-life conflict and maintaining a successful balance is related to women (Burke, 2000) but a paper by (Evans, 2013) challenges this and opens the conversation that men also experience such conflicts since traditionally their focus on their works and careers was central to their identity (Cochran, 2000).

Evans (2013) dismantles the theory and suggests a Counselling Framework whereby men can deal with the work-life conflicts because today is quite different to decades ago where men were expected to be the main 'breadwinner'. This same research discusses how dual income earners in a household, men now too suffer the consequences of balancing their work- life due to the fact they have a hands-on approach to what was traditionally the norm for many families with women taking the lead on the household chores and child-minding (Evans, 2013).

Studies focused on caregivers and work life balance provides some interesting insights. An American study found that 6 out of 10 people who had caregiving responsibilities reported this affected their work and how they had to make some adjustments such as starting early or going into work later (Pitsenberger, 2006). A Canadian study (Duxbury, 2009). found that people who had caregiver responsibilities had a breakdown of hours in paid employment of 34.4 hours per week and 30.3 hours providing caregiving with 4.1 hours commuting hours due to caregiving responsibilities. This creates an exceptional amount of pressure on people who have caregiver responsibilities when you compare it to the number of hours in a week of 168. If you take the Canadian work life study this means that 68.8 hours of the week is spent on caregiving and work excluding sleep, chores and personal time.

One study which had non-caregivers included was by Dang (2024) which explored the work life balance of caregivers and non-caregivers but with a focus on young adult students. The results of

this study showed that young adult caregivers have less of a work life balance than young adult non-caregivers. Interestingly, both young adult groups of caregivers and non-caregivers in this study experienced high levels of burnout which suggests that work life differences could be influenced by the age of the population being studied and something to be aware of in the analysis process of this research study. Another study found similarities that age and as people get older, they have more family commitments, so balance is more important to them than younger generations (Ghiselli & Zhao, 2016). Comparing research for people who have no caregiving responsibilities there are limited research papers which is disappointing. However, the lack of research provides rationale for this study to explore how non-caregivers feel around work life balance in the pharmaceutical sector in Ireland.

Work-life balance studies have some commonalities between working life and home life for women, men, caregivers and non-caregivers and the advantages and conflicts that potentially exist. Relating prior research to this research study shall provide an opportunity to explore this dynamic for both caregivers and non-caregivers working within the pharmaceutical sector in Ireland and if these conflicts are of relevance.

2.6 Work-Life Balance & Hybrid Working

Ateeq (2022) studied hybrid working which provided recommendations for organisations to encourage working from home policies by the employees who participated in the study. This study encouraged organisations on the basis that by having a flexible working policy this would retain their talented workforce. Further investigation seen was that employees felt a greater sense of autonomy and the positives of flexible working contributed to their work life balance. The positives of hybrid working comes out strong in another article which states that employees are productive and happier with a mixed working set up, however the author notes that there should be dedicated days set out from top-down leadership and applied to the whole organisation so that the hybrid model remains and people do not start coming in extra days (Bloom, 2021).

Hybrid working and the impact on work life balance raised challenges in one study when 66% of people surveyed had concerns about the concept of longer working hours and that they are more contactable throughout the day or at any time (Yosunkaya, 2023). However, hybrid working was still seen as a positive as 86.8% of people in this study were happy with the hybrid approach and wanted it to remain permanent. Although much of the research on hybrid working and the impact on work life balance reads as positive, there are considerations to be mindful of such as working hours (Yosunkaya, 2023), structure from the leadership downwards on expectations of hybrid working (Bloom, 2021) and supportive work policies put in place to retain talent within the organization (Ateeq, 2022).

2.7 Quality of Life

Quality of Life has been assessed across a broad range of sectors and industries within the literature including higher education employees (Edwards, 2009), government employees (Kim, 2012), multinational companies (Narehan, 2014) and within the healthcare and hospital setting (Askari, 2021). The World Health Organisiation refers to Quality of Life as ‘An individuals’ perception of their position in life in the context of the cultures and value system in which they live and in relation to their goals, expectations, values and concerns’. This is one of many definitions but used to set the context of the following paragraphs which address quality of life.

There is often debate around public v private sector employees and their quality of life. A Korean study found that public government employees scored lower on quality of life verses their counterparts working in the private sector (Kim, 2012). The recommendation from this study was that Korean government agencies should focus on improving the work-related environment for their employees. Similarities can be seen in another study where bule collar private employees have higher job satisfaction rates than public blue-collar employees (Smith, 1980).

A study which was specifically related to the pharmaceutical sector was conducted with seventy employees based in India provides some insights into quality of life (Jain, 2016). This study highlighted that factors such as compensation, career development and organizational commitment were linked to overall quality of life. A Malaysian study conducted research with multinational companies and concluded that the quality of work life programs offered by multinational organizations has a direct impact on employees and their perceptions around their quality of life and feeling of value in that organization (Narehan, 2014).

2.8 Quality of Life and Hybrid Working

Many factors influence a person's quality of life. When it comes to working and how you work can also influence your quality of life. Perhaps commuting causes unnecessary stress for people daily and this impacts the persons stress levels and ability to be productive. By removing this 'stressor' does hybrid working reduce stress thereby improving quality of life overall? There are studies that focused on the advantages which would lead to the assumption that quality of life is improved by organisations who offer a hybrid working option. Albreiki (2023) found that productivity improved, and people had higher satisfaction rates which are both factors that would influence quality of life.

2.9 Job Satisfaction

Amstrong (2006) states that job satisfaction refers to people's attitudes and feelings toward their jobs. Job satisfaction is indicated by positive and favorable attitudes toward the job. Job dissatisfaction is indicated by negative and unfavorable attitudes toward the job.

One well known author proposed that an employee's motivation to work is best understood when the attitude of a particular employee is understood. How can one motivate someone if they are not aware as to what interests them and drives their motivation? (Herzberg et al. 1959). Herzberg aimed to answer these questions by delving deeper into understanding job satisfaction and how to evaluate an individual's attitude to this. The outcome of Herzberg's findings has become a well-known phenomenon in how job satisfaction is measured in many instances and the now plays a key role in a corporate setting. 'Intrinsic' and what 'motivates' people to do the job and the 'Extrinsic' factors known as the 'extra-job factors' or the 'hygiene factors' (what keeps people doing a job). Today, one only needs to view job postings on LinkedIn to understand that 'Extrinsic' job factors are a core element of attracting talent and creating a 'culture' that people feel they want to belong too, for example 'Flexible working, opportunity to work for a company dedicated to developing their team members, a company focused on improving societal outcomes'. Job satisfaction no longer relies solely on the job profile but now yearns for more and a sense of 'belonging' and Herzberg set a solid foundation to build on in 1959.

Job satisfaction and behaviors was also extensively reviewed by Vroom (1964) and support the concept deployed with the nurses and 'The Happiness Project' as previously discussed (Rubin, 2009). Vroom found that behaviors and attitudes is a key factor in how satisfied someone is with their job. Behavior and attitudes are addressed again when 93% of respondents answered that they received

praise from their employer when they perform their job well and are entitled to additional pay increases, promotions, and bonus in 1992 and variations of this remain the same today (Sarumathi, 1992).

The world's largest corporations work hard at attracting talent from around the globe and make their organization stand out from the crowd. Due to skilled workforces and educated employees, today the labour market is one of fierce competition (Magbool, 2016). Corporate organizations have adopted the 'extrinsic' motivators and hygiene factors in many cases which can be seen from recent literature that builds on Herzberg's original 1959 findings. Are there differences in a corporate setting towards job satisfaction and what motivates employees in this scenario? One study found that lower levels in an organization were more focused on extrinsic factors of motivations due to a lesser paid job than higher level positions (Bård, 2006).

According to the previous research, job satisfaction has an impact on how satisfied people may be overall with their life (Rubin, 2009). Praise and rewards are also deemed important motivating factors which are linked to job satisfaction as discussed by Sarumathi (1992). A sense of belonging is also highlighted in the literature and how people want to feel part of a culture.

2.10 Job Satisfaction and Hybrid Working

How working from home, works out was the headline from another study which showed results that hybrid working directly improved job satisfaction in over 1600 employees working in a large technology firm (Bloom, 2022). In contrast there is a study that looked at improving hybrid working set ups because long term, hybrid working had a negative effect on job satisfaction as people had job unhappiness, social isolation and no working collaboration drove an increase in negativity towards a hybrid set up and job satisfaction (Kumar., 2022). It is important to reflect on what can be positive for job satisfaction and hybrid working but also the negative side of job satisfaction.

2.11 Research Gap & Rationale

The rationale for conducting this research is to explore the influence that hybrid working may have on caregivers and non-caregivers working in the pharmaceutical sector in Ireland and the impact on their work-life balance. Although there is literature within each of the topics on burnout, quality of life, hybrid working, work life balance and job satisfaction to be explored (O' Connor, 2017, Sundaresan, 2014, Vroom,1964) there is limited research related to the pharmaceutical industry specifically.

There is research that has been completed in other sectors such as the public healthcare and corporate sector Kim (2012) and Narehan (2014), but this also highlighted that there is a lack of information and literature with regards to the pharmaceutical sector in Ireland specifically. Due to a lack of research that relates to this sector, this research study will be novel in its approach to create a foundation for early theories to be developed on hybrid workers within the pharmaceutical sector in Ireland on burnout, work life balance, quality of life and job satisfaction. This area of research will develop insights into the current behavior and attitudes to hybrid working, work-life balance for both caregivers and non-caregivers working in the pharmaceutical sector in Ireland. This will provide an opportunity for this area of research to be developed and expanded on in the future.

2.12 Conclusion of the literature

On reflection of the main topics for this literature review burnout, hybrid working, work life balance, quality of life and job satisfaction various themes that run through each topic. One can see that hybrid working and flexible working arrangements may contribute to an improved work-life balance De Marinis (2023), Aura (2023) and Desiana (2023). However, there is evidence also to suggest from the literature that hybrid working may increase stress levels for working others due to the feelings of isolation and engagement with other colleagues by Lenka (2021) and Romer (2023). Although there is limited research in the case of burnout, hybrid working, work life balance, quality of life and job satisfaction in the pharmaceutical sector the above literature is relatable to what this proposed research topic has done.

As mentioned above, development of foundational theories on this topic is important. Ireland is an international base for many multinational pharmaceutical companies with 9 out of 10 of the largest pharmaceutical companies in the world having a base in Ireland and employing over 24,500 people in Ireland according to the Irish Pharmaceutical Healthcare Association (IPHA.ie). Due to the vast workforce in this sector, albeit, this is a mix of office based ,field based and manufacturing personnel, it is a large population contributing to the growth of Ireland and reputation at an international scale so understanding their needs and having insights into levels of burnout, work life balance, quality of life and job satisfaction should provide beneficial outcomes for future learnings and potential adjustments if required to individual company policies.

Chapter III: Research Methodology

3.1 Introduction

This chapter focuses on the research method and approach that has been applied to answer the research questions and research objectives outlined in Chapter II. The aim of this chapter will be to understand and outline the research philosophy, design and approach that has been applied to this study and the rationale to support this decision and choice of direction that the study will take by the lead researcher. The strategy of the research will also be outlined and why the lead researcher had focused on the 'Research Onion' framework by Saunders (2009) to guide the process. In addition to the approach and strategy, data collection/procedures and the population sample information shall also be outlined along with any ethical considerations and bias considerations and the that may influence interpretations of this research study.

3.2 Application of the Research Onion Framework

By applying the approach of the 'Research Onion', the lead researcher could breakdown the research structure and methodology to determine that this process would be successful in answering the research questions. Following the multi layered framework that Saunders proposes enabled the lead researcher to describe the stepwise approach to this research study and define the approach and research strategy which follows.

The study is a comparative cross-sectional study because it compared caregivers and non-caregivers in the pharmaceutical sector. It explores the hypothesis to determine if there are differences of work-life balance and wellbeing between caregivers and non-caregivers through the application of a quantitative research design which provided a platform for the lead research to survey participants and statistically test and validate the outcomes verses each hypothesis outlined in chapter I. By using Sauders Research Onion, the lead researcher was able to work from the outer layer to determine the rationale of and structure of the inner layers of the onion. This is described in Figure 1 below.

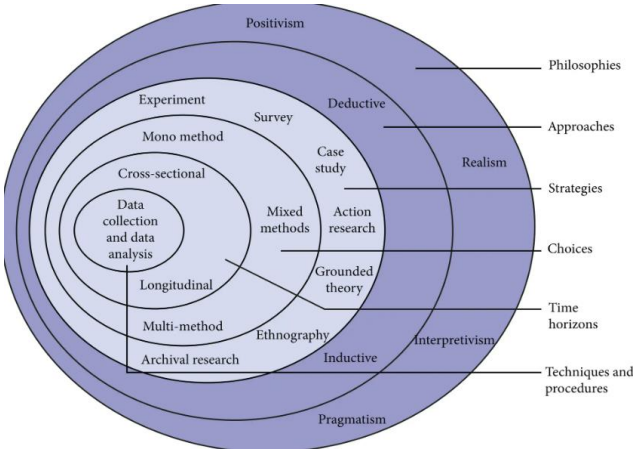

Figure 2. Research onion (Saunders, et al.,2009)

3.3 Philosophical Assumptions

The research onion framework has been applied by the lead researcher to determine what direction this study should take. Saunders four philosophies and stances have been explored by so that the overarching philosophical approach can be determined, and inner layers of the research onion can then be progressed further. Each philosophical stance is summarised below (Saunders, 2009).

1. **Positivism** is a philosophical approach that focuses on the use of measurable data and the data which can be observed to study a social phenomenon. The use of quantitative research is used to understand relationships or differences in relationships.
2. **Critical Realism** is a philosophical approach which is based on what we experience and what we see. This type of research philosophy can be conducted through various research methods that include qualitative, quantitative, and mixed so gain further insights and understanding around a topic.
3. **Interpretivism** is a philosophy which is subjective in nature. It relies on the theory that humans are different from physical phenomena because they create meaning. A qualitative approach to this research is a way to explore individuals, their meanings and experiences.
4. **Pragmatism** is another philosophical stance presented by Saunders et al and this relies on the concept to improve practices and depending on the research aims or questions to be answered they will use a range of research strategies to achieve this.

3.4 Applying the philosophical assumptions

Based on the application of the philosophical approaches to this area of study. The lead researcher has taken the 'Positivism' approach. The rationale for this is because by choosing this approach the use of quantitative data can be used to determine if there are differences between caregivers and non-caregivers who are working in the pharmaceutical industry in Ireland. In this study, the independent variables of burnout, work life balance, quality of life and job satisfaction were used to understand if any differences exist between two independent variables of caregivers and non-caregivers. This study then applied measures and prepared key observation points to determine the reality of the differences of the relationships to understand work life balance for both populations.

Collins (2009) aligns to this theory that positivism assumes that research is based on the facts which is associated to a certain situation or cementing the similarities between positivism. Once the research has been conducted using the existing theories and frameworks as a basis the lead researcher then used this to draw comparisons of how the independent variables show the same significance, equal significance, or a difference in significance within work life balance and wellbeing. This rationale supports the philosophical assumption of Saunders positivism and provides clarity as to what philosophical approach is best for this research.

3.5 Research Approach

For this research study, two standard approaches may be taken to achieve the objectives of the study but will depend on the reasoning and the observations that should be expected from the data (Soiferman, 2010).

The difference between the two approaches are as follows and by understanding this and knowing what is to be achieved will be a critical factor in deciding which approach is best suited to the type of

research to be conducted and are both presented as part of the Research Onion Framework (Saunders, 2009).

1. **Inductive Approach** relies on specific reasoning which can become more generalized
2. **Deductive Approach** is the opposite, as this relies on generalised assumptions which can then be validated through specific tests or measures

As the null hypothesis of this research study is assuming that there is no difference to work life balance between caregivers and non-caregivers, this is a broad generalised assumption. However, by applying a deductive approach to test this presented the lead researcher with validation using tests or measures, resulting in specific predictions within each independent variable. Based on this rationale, the lead researcher has taken a deductive approach to this study, which progresses this study a step further in the research onion framework.

The use of quantitative research was used for this study and is aligned to the positive philosophy according to author Maksimovic (2023). The research question and objectives will be answered by testing the dependant and independent variables to compare the caregiver and non-caregiver groups. Once the data had been generated from the participant responses, the lead researcher organised and analysed the data to understand and draw assumptions and conclusions from the statistical tests and methods used.

3.6 Research Design

This research study was designed using a quantitative approach online survey taking this research into the next layer of the research onion framework as illustrated in *Fig 2*. above. As there were four dependant variables identified and two independent variables identified as required to gain a true understanding on this topic, pre-populated and pre-validated questionnaires were used. As the two groups of respondents gave their opinions and attitudes towards four dependant variables, it was important to use a validated and scales of measurement and ones that have been utilised in many research studies.

This method of using pre-validated quantitative questionnaires provided a common format which has been tested in other areas of study. The pre-validated questionnaires used were delivered through the online survey tool 'Microsoft Forms' for eligible participants to complete. The survey design consisted of four scales which measured the feelings of caregivers and non-caregivers working in the pharmaceutical sector in Ireland. There was the inclusion of questions to determine the demographic of participants. The scales of measure that were used as the following.

1. **Burnout Scale** - The Burnout Measure, Short version. Malach-Pines, A (2005)
2. **Work Life Scale -** Work-based resources as moderators of the relationship between work hours and satisfaction with work-family balance. Valcour (2007).
3. **Quality of Life Scale -** Single Item Global Quality of Life Scale (SIG-QoL), version 1.0. Williams, Z.J. (2021).
4. **Job Satisfaction Scale -** Job Satisfaction Brayfield & Rothe (1955).

By selecting the scales above, ensured that the research objectives will be answered to determine if there are any differences between caregivers' work-life balance and non-caregivers work-life balance. How the use of each measurement scale above shall answer the research objectives and questions is conveyed within the below table.

Measurement Scale	Research Objective and Question
Burnout	**Objective 1.** Understand the participants attitudes to hybrid working in the context of their homelife responsibilities of caregiving and non-caregiver status. **Q1.** What is the influence of burnout working on for caregivers and non-caregivers working in the pharmaceutical sector in Ireland?
Work Life Balance	**Objective 2**. Understand the participants feelings towards their work-life balance and if this is driven by their ability to work in a hybrid set up. **Q2.** Does hybrid working have a different impact on work-life balance for caregivers verses non-caregivers working in the pharmaceutical sector in Ireland?
Quality of Life	**Objective 3.** Understand the participants feelings towards their quality of life and if there are differences between caregivers and non-caregivers. **Q3**. Is there is a difference in quality of life between caregivers and non-caregivers working in a hybrid setting in the pharmaceutical sector in Ireland?
Job Satisfaction Scale	**Q4.** Does hybrid working allow for greater job satisfaction for caregivers and non-caregivers working in the pharmaceutical sector in Ireland? **Objective 4.** Understand if their attitudes to their job and job satisfaction is influenced by their hybrid working set up and explore if this has an influence on their work-life balance depending on their caregiving status.

3.7 Data Collection Method

Process of Data Collection

The process of data collection for this study was made possible through an online survey tool by creating the questionnaire through the Microsoft Forms application. This was the main source for collection of data and was identified as an efficient and validated tool to protect the identity of respondents. This method of collection was also a cost-efficient way to produce the questionnaire and provided the opportunity for all data to remain anonymous once it was submitted by the participants.

Consent Form and Information Sheet

As this survey was in an online format, the lead researcher and study Supervisor agreed on the text within the Information and Consent sheet which should accompany the link to the online survey. This information was attached to all email lists and the social platform where the questionnaire was shared (LinkedIn).

Survey Tool

The survey questionnaire tool used was Microsoft Forms which was set up on the lead researchers google profile. The survey consisted of six sections to include the following.

1. Eligibility questions
2. Demographic questions
3. Work Life Balance Scale
4. Quality of Life Scale
5. Burnout Scale
6. Job Satisfaction Scale

Data Protection

Participant responses were anonymised and could not be withdrawn once a respondent had submitted their data and responses to each of the pre-validated scales to the platform. This ensured data integrity and their identity to remain anonymous post completion of the survey. This was also highlighted within the information and consent sheet that was circulated with the link to the survey questionnaire so that potential participants were made aware of the use of their data to be used for this research study only and kept on a secure network managed by the lead researcher.

3.8 Sampling Strategy

G*Power was the software that was used to generate the power level for this study with the result being 128 participants in total. The overall respondent numbers were 61 but with 7 being 'void' and excluded due to their answer of 'do you work in the pharmaceutical sector?' being 'no'. 7 respondents were removed from the dataset prior to the analysis being carried out. The total number of respondents was 53 of which 33 identified as 'caregivers' and 20 identified as 'non-caregivers'. This was the final dataset that was organised and analysed and represent all findings within the results and analysis chapter.

The survey questionnaire was circulated with permission through the lead researchers' network which included internal organisations mailing list, peer network and LinkedIn from a social media perspective. It had also been shared for reach by colleagues to other pharmaceutical organisations. Although the sample size of 128 was not reached, respondents from various organisations confirmed that they had completed the survey which excludes any bias towards one organisation.

3.9 Data Analysis Procedure

Analysis of the data was completed using Microsoft Excel. All data which was submitted via Microsoft Forms was extracted and downloaded in excel format for analysis. The data was then organised and analysed to provide the following statistical methods.

- Descriptive Statistics including, mean, mode, median, range, variance, standard deviation.
- Independent Sample t-Test
- P-Value outcomes
- Cohen's D Effect

Completion of these tests provided the researcher an opportunity to analyse and interpret the data of the dependant variables (work life, burnout, quality of life and job satisfaction) and to see if there were differences presented in the group and caregiver and non-caregiver independent variable groups.

3.10 Ethical Considerations

For the purposes of this research study, the development of an information sheet and consent information was created to attach to the survey questionnaire link and was also detailed in any email/social media post so that all potential and actual respondents were made aware of what their data would be used for. This information also informed the participants that their responses would be anonymous and unretrievable once their responses had been submitted.

A reliable support mental health helpline phone number was also within the information sheet, should any participant require support throughout their participation or after.

As the researcher was responsible for managing of the data, they always ensured during the research process ethical standards was upheld throughout. This protected the respondent data and integrity of the data submitted as per confidentiality guidance that data will only be used for the stated research study only (*Armstrong, 2012).*

Chapter IV: Results & Analysis

4.1 Introduction

The 'Results and Analysis Chapter' presents the results and provides an analysis of the findings to understand if this research conducted has answered the research questions and objectives that are outlined in the earlier chapters.

As previously outlined, the aim of this research was to understand the work life balance caregivers and non-caregivers who are working in a hybrid set up within in the pharmaceutical sector in Ireland to explore the levels of burnout, work life balance, quality of life and job satisfaction for this sample population.

The survey that was used to conduct this research was exported from Microsoft Forms into excel format and all analysis was prepared and completed through Microsoft excel utilising the statistical functionality within the excel application. This was the only tool used to organize, analyse, and interpret the datasets produced. The results of the data included caregivers and non-caregivers and their responses to burnout, work life balance, quality of life and job satisfaction in the pharmaceutical sector in Ireland using the pre-validated measures. This data provides a basis to either accept or reject the null hypothesis which has been formulated to determine if there is a difference in work-life balance between caregivers and non-caregivers working in the pharmaceutical sector in Ireland. A total of 53 responses were collected for this survey which included a split of 33 caregivers and 20 non-caregivers.

The results feature an analysis of the descriptive statistics of each dependant variable for the full population and a comparision of caregivers v non-caregivers within each dependant variable (burnout, work life balance, quality of life and job satisfaction). The results also present the p-value and the cohen's d effect to demonstrate further statistical differences between the independent variables of caregivers and non-caregivers.

4.2 Demographic Information

The demographics section within the questionnaire presented the following questions to determine the eligibility of participants.

- ✓ Age
- ✓ Gender
- ✓ Employed in head office function in the pharmaceutical sector in Ireland
- ✓ Confirmation that they are working in hybrid or remote work setting
- ✓ Select if they are a Caregiver or Non-Caregiver (By caregiver we mean that you have care-giving responsibilities for children, partner, parents, guardians and/or other family/dependents)

The total number of respondents was 61 but 8 respondents had selected 'no' to being employed in the pharmaceutical industry so were excluded before analysis. This left 53 respondents remaining eligible and the breakdown between caregiver N=33 and non-caregiver N=20 is illustrated below.

Considerations to be observed when interpreting the results and analysis

Due to an unequal distribution of caregivers v non-caregivers and the recruitment target not being achieved N=128 v actual N=53 the results of this analysis must be interpreted with caution, should not be generalized and the lead researcher suggests for further validation of the results to be conducted with a larger and equal sample size to confirm accuracy of findings that will be presented below.

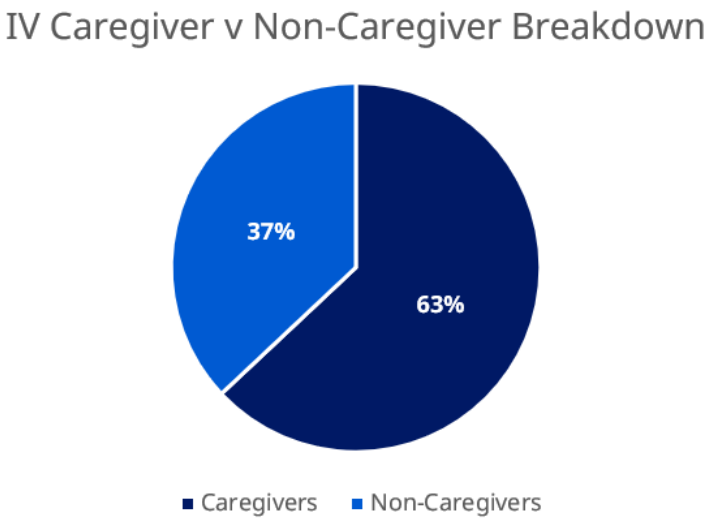

Figure 3. caregiver v non-caregiver participant breakdown

4.3 Descriptive Statistics

4.3.1 Burnout - statistics and findings

Table 1. Burnout – Full Population Descriptive Statistics

Burnout	Full Group Descriptive Statistics
N	**53**
Mean	**7.57**
Mode	**1.00**
Median	**10.00**
Minimum	**0**
Maximum	**24**
Range	**24**
Variance	**51.83**
Standard Deviation	**7.20**

The lead researcher has presented the descriptive statistics for the sample population N=53 in the table 1. above.

Mean The overall burnout mean of the full participant group was 7.75 which shows the average burnout rate across the full population. The mean score would suggest that they are high levels of burnout amongst the group overall. The result of the mean will be further interpreted within the caregiver v non-caregiver groups to understand if there are differences between groups influencing this mean score.

Standard Deviation results of the full participant group of 53 was 7.20 which is the variation of the data points around the mean score of 7.57. As both the mean and the standard deviation score are relatively close together, this would also suggest that the mean is a close representative of the dataset.

Range and Variances A range of 25 and variance of 51.83 has been found for burnout among the full population of 53 participants. This suggests that the data set and scores are contradictory of the mean and standard deviation. This also suggests that there are inconsistencies within the data set. The implications of a higher range score could indicate that there is high variability or experiences of this full population or that there are outliers within the dataset. The outcomes should be studied further within the independent variables of the caregiver and non-caregiver to understand if there is one cohort driving the differences or is there outliers perhaps within the dataset.

Table 2. Burnout – Caregiver v Non-Caregiver Descriptive Statistics and Analysis

Burnout	Caregiver	Non-Caregiver	Combined Result
N	33	20	
Mean	6.75	3.75	
Minimum	1	0	
Maximum	15	10	
Range	14	10	
Variance	18.66	7.00	
Standard Deviation	4.32	2.65	
P-Value			0.000169

Mean values that have been reported for both groups are caregivers 6.75 v non-caregivers 3.75. This shows that the average mean scores on burnout within the group demonstrates that there is disparities or differences between caregivers and non-caregiver groups when it comes to burnout levels. As the mean is higher for the caregiver groups, this may have influence in what is driving the overall differences on burnout across the full group.

Standard Deviation In both independent variables, the standard deviation is relatively close to the mean. Caregivers' standard deviation 4.32 with a mean of 6.75. Non-Caregivers mean 3.75 and standard deviation of 2.65. Although there is a visible difference in the participant numbers within in group, the fact that the standard deviation and the means in both groups do provide reassurance that consistency exists within each of the datasets is comparable. Closer means and standard deviations may suggest that the data points are clustered around the mean in each group and highlights less variability which further supports the assumption of consistency of data within each of the independent variables.

P-Value The p-value was tested between groups through the t-test functionality and the reported result between groups was 0.0001. This indicates that there is a statistically significance difference between both groups when it comes to burnout rates within each group. This could support the variation in data for the full population of 53 in analysis and demonstrates the variability between the groups. This result indicates that there is clear evidence to reject the null hypothesis 1 H (0) and accept the alternative hypothesis 1(Ha) that there is a difference in burnout levels between caregivers and non-caregivers overall.

Table 3. Burnout Cohen's D Effect – Caregiver v Non-Caregiver

Burnout Caregiver v Non-Caregiver	Cohen's D Effect
M1-M2	3
Pooled Standard Deviation	6.99
Cohen's D Effect	0.43

As outlined in the above table, the Cohen's D Effect score between caregivers and non-caregivers shows a result of 0.43. This suggests a moderate level if difference between both groups which would further support the P-Value difference showing significant difference between both independent variable groups.

4.3.2 Work life balance - statistics and findings

Table 4. Work Life Balance – Full Sample Population Descriptive Statistics and Analysis

Work Life Balance	Full Group Descriptive Statistics
N	**53**
Mean	**10.6**
Minimum	**2**
Maximum	**27**
Range	**25**
Variance	**66.25**
Standard. Deviation	**8.14**

The lead researcher has presented the descriptive statistics for the population N=53 in table 4.

Mean The overall burnout mean of the full participant group was 10.6 which shows the average burnout rate across the full population. This score reflects the average score across the full participant group. The result of the mean will be further interpreted within the caregiver v non-caregiver groups to understand if there are differences between groups influencing this mean score.

Standard Deviation results of the full participant group of 53 was 8.14 which is the variation of the data points around the mean score of 10.6. As both the mean and the standard deviation score are relatively close together, this would also suggest that the mean is a close representative of the dataset like the full population within the burnout variable.

Range and Variances A range of 25 and variance of 66.25 has been found for work life balance among the full population of 53 participants. This result suggests that there is variability within the dataset on what participants have reported when it comes to their work-life balance. This suggests that the data set and scores are contradictory of the mean and standard deviation. The outcomes should be studied further within the independent variables of the caregiver and non-caregiver to understand if there is one cohort driving the differences or is there outliers perhaps within the dataset.

Table 5. Work Life Balance – Caregiver v Non-Caregiver Descriptive Statistics and Analysis

Work Life Balance	Caregiver	Non-Caregiver	Combined Result
N	33	20	
Mean	10.6	4	
Minimum	1	0	
Maximum	15	10	
Range	14	10	
Variance	18.66	7.00	
Standard Deviation	4.32	2.65	
P-Value			0.052

The lead researcher has presented the statistics for the caregiver population N=33 and the non-caregiver population N=20 in the table 5 above.

Mean values that have been reported for both groups are caregivers 10.6 v non-caregivers 4 This shows that the average mean scores on burnout within the group demonstrates that there is disparities or differences between caregivers and non-caregiver groups when it comes to work life balance levels. As the mean is higher for the caregiver groups this suggests that caregivers have a perceived better balance of work life than non-caregivers.

Standard Deviation The standard deviation in the caregiver group 4.32 with a mean of 10.6. The non-caregivers mean 4 and standard deviation of 2.65. Although there is a visible difference in the participant numbers within in group, the fact that the standard deviation and the means in both groups do provide reassurance that consistency exists within each of the datasets is comparable. Closer means and standard deviations in the non-caregiver group may suggest that the data points are clustered around the mean in each group and highlights less variability. However, in the caregiver group the standard deviation which suggests a moderate spread of variation within the dataset.

P-Value The p-value was tested between groups through the t-test functionality and the reported result between groups was 0.052. Although this p-value does not show statistical significance between work life balance for caregivers, it is leaning that way but considered borderline or approaching significance. This result indicates that there is evidence to question the null hypothesis 2H (0) and explore further the alternative hypothesis 2(Ha) that there is a difference in work life balance between caregivers and non-caregivers overall.

Table 6. Work Life Balance Cohen's D Effect Analysis – Caregiver v Non-Caregiver

Work Life Caregiver v Non-Caregiver	Cohen's D Effect
M1-M2	2.6
Pooled Standard Deviation	4.9
Cohen's D Effect	0.52

As outlined in the above table, the Cohen's D Effect score between caregivers and non-caregivers shows a result of 0.52. This suggests a moderate level if difference between both groups which would further support the P-Value leaning towards significance but not quite significant. This result of 0.52 would imply that attention should paid to improve work life balance for non-caregivers, and it could potentially lead to issues should it not be addressed.

4.3.3 Quality of life - statistics and findings

Table 7. Quality of Life – Full Sample Population Descriptive Statistics and Analysis

Quality of Life	Full Population Descriptive Statistics
N	**53**
Mean	**5.9**
Minimum	**2**
Maximum	**13**
Range	**11**
Variance	**13.61**
Standard. Deviation	**3.69**

The lead researcher has presented the descriptive statistics for the full population N=53 in table 7.

Mean The overall mean of the full participant group was 5.9 for quality of life which shows the average rate across the full population. The result of the mean will be further interpreted within the caregiver v non-caregiver groups to understand if there are differences between groups influencing this mean score.

Standard Deviation results of the full participant group of 53 is 3.69 which is the variation of the data points around the mean score of 5.9 As both the mean and the standard deviation score are relatively close together, this would also suggest that the mean is a close representative of the dataset and that there is moderate variation within the dataset.

Range and Variances A range of 11 and variance of 13.61 has been reported for the quality-of-life measure among the full population of 53 participants. This suggests that the data set and scores provide a moderate range of variation of the mean and standard deviation. The outcomes should be studied further within the independent variables of the caregiver and non-caregiver to understand if there is one cohort driving the moderate differences.

Table 8. Quality of Life – Caregiver v Non-Caregiver Descriptive Statistics and Analysis

Quality of Life	Caregiver	Non-Caregiver	Combined Result
N	**33**	**20**	
Mean	**6.6**	**5**	
Minimum	**2**	**4**	
Maximum	**13**	**6**	
Range	**11**	**2**	
Variance	**25.3**	**0.67**	
Standard Deviation	**5.03**	**0.82**	
P-Value			**0.52**

The lead researcher has presented the descriptive statistics for caregiver v non-caregiver in table 8.

Mean: The mean for caregivers 6.6 v the non-caregiver mean of 5 highlights the difference of central tendency between the two groups and indicates that a there is a slightly higher value on quality of life for caregivers verses the non-caregiver group.

Standard Deviation: In both independent variables, the standard deviation is relatively close to the mean. Caregivers' standard deviation 5.03 with a mean of 6.6. Non-Caregivers mean 5 and standard deviation of 0.82. Although there is a visible difference in the participant numbers within in group Closer means and standard deviations may suggest that the data points are clustered around the mean in each group and highlights less variability which further supports the assumption of consistency of data within each of the independent variables. These results provide a rationale for further investigation with perhaps a more equal distribution of caregivers v non caregivers to gain a true reflection on perceived quality of life.

P-Value The P-Vale result for 33 caregivers v 20 non-caregivers was 0.52. This means that there was no significant difference overall between the quality of life between both independent groups. There could be a suggestion to test larger group sizes but from this result the outcomes are not meaningful.

Table 9. Quality of Life Cohen's D Effect Analysis – Caregiver v Non-Caregiver

Quality of Life Caregiver v Non-Caregiver	Cohen's D Effect
M1-M2	**1.60**
Pooled Standard Deviation	**1.70**
Cohen's D Effect	**0.94**

As outlined in the above table, the Cohen's D Effect score between caregivers and non-caregivers shows a result of 0.94. In contract to the P-Value not demonstrating statistical significance, the Cohen's D Effect implies a large that there is a large effect size which contradicts the P-Value. This may suggest that there is some significance albeit not meeting the threshold of statistically meaningful.

4.3.4 Job Satisfaction - statistics and findings

Table 10. Job Satisfaction – Full Sample Population Descriptive Statistics and Analysis

Job Satisfaction	Full Population Descriptive Statistics
N	53
Mean	8.42
Minimum	1
Maximum	30
Range	29
Variance	62.12
Standard. Deviation	7.88

The researcher has presented the descriptive statistics for the full population N=53 in the table 10.

Mean The overall job satisfaction mean of the full participant group was 8.42 which shows the average rate across the full population. The result of the mean will be further interpreted within the caregiver v non-caregiver groups to understand if there are differences between groups influencing this mean score.

Standard Deviation results of the full participant group of 53 was 7.88 which is the variation of the data points around the mean score of 8.42. This would suggest that there is moderate to high variability within this dataset and spread within the data set. The results of the independent groups of caregivers and non-caregivers may be influencing the data spread which will be explored in the comparative caregiver v non-caregiver dataset.

Range and Variances A range of 29 and variance of 62.12 has been found for job satisfaction among the full population of 53 participants. This outcome is supportive of the differences seen between the mean and standard deviation due to the fact the scores here also suggest high data spread and data variability. The outcomes should be studied further within the independent variables of the caregiver and non-caregiver to understand if there is one cohort driving the differences or is there outliers perhaps within the dataset.

Table 11. Job Satisfaction – Caregiver v Non-Caregiver Descriptive Statistics and Analysis

Job Satisfaction	Caregiver	Non-Caregiver	Combined Result
N	33	20	
Mean	5.16	3.38	
Minimum	0	1	
Maximum	18	12	
Range	18	11	
Variance	28.52	7.67	
Standard Deviation	5.34	2.77	
P-Value			0.10

The researcher has presented the descriptive statistics for caregiver v non-caregiver in table 11.

Mean: The mean for caregivers 5.16 v the non-caregiver mean of 3.38 highlights the difference of central tendency between the two groups and indicates that a there is a higher value on job satisfaction within the caregiver group versus the non-caregiver group. Further investigation is necessary in both groups to understand what is influencing a higher job satisfaction average for the caregiver group.

Standard Deviation: In both independent variables, the standard deviation is relatively close to the mean. Caregivers' standard deviation 5.34 with a mean of 5.16. Non-Caregivers standard deviation of 2.77 and mean of 3.38. The dataset for caregivers suggests that there are higher levels of variability in this group which again may be due to the fact of 33 v 20 participants. Closer means and standard deviation for the non-caregiver group may suggest that the data points are clustered around the mean in each group and highlights less variability which further supports the assumption of consistency of data within each of the independent variables.

P-Value result for this group when the job satisfaction levels are compared for caregivers and non-caregivers is 0.10. This is p-value suggests that there is not sufficient evidence to reject the null hypothesis and that that there is not substantially statistical evidence to show that there is a difference in job satisfaction between independent groups.

Table 12. Job Satisfaction Cohen's D Effect Analysis – Caregiver v Non-Caregiver

Job Satisfaction Caregiver v Non-Caregiver	Cohen's D Effect
M1-M2	1.77
Pooled Standard Deviation	4.97
Cohen's D Effect	0.36

As outlined in the above table, the Cohen's D Effect score between caregivers and non-caregivers shows a result of 0.36. This suggests a small level of difference between both groups which would further support the p-value result showing non-significance between both independent variable groups.

4.4 Reliability of Measures

The scales of measure used to determine the results from the dependent variables are outlined below. Each scale is a pre-validated questionnaire and have been recognized as stable measurement for burnout (Malach-Pines, 2005), work-life balance (Valcour, 2007), quality of life (Williams, 2021) and job satisfaction (Brayfield & Rothe, 1995).

Table 13. Burnout Scale (Malach-Pines, 2005)

Q1	**Tired**
Q2	Disappointed with people
Q3	Hopeless
Q4	Trapped
Q5	Helpless
Q6	Depressed
Q7	Physically weak or sick
Q8	Worthless/Feel like a failure
Q9	Not sleeping

Table 14. Work life Scale (Valcour, 2007)

Question	Rate				
Q1. The way you divide your time between work and personal or family life	1	2	3	4	5
Q2. The way you divide your attention between work and home	1	2	3	4	5
Q3. How well your work life and your personal or family life fit together	1	2	3	4	5
Q4. Your ability to balance the needs of your job with those of your personal or family life	1	2	3	4	5
Q5. The opportunity you have to perform your job well and yet be able to perform home-related duties adequately	1	2	3	4	5

Table 15. Quality of Life Scale (Williams, 2021).

Rating	Question
0	Worst possible quality of life (Life could not be worse; Would change literally everything)
1-10	Extremely bad quality of life (Extremely dissatisfied with life; Would change almost everything)
11–20	Very bad quality of life (Very dissatisfied with life; Would change most things)
21–35:	Bad quality of life (Generally dissatisfied with life; Could still be worse)
36–49:	Somewhat bad quality of life (More dissatisfied with life than not; Could still be much worse)
50:	Neutral quality of life (Equally satisfied and dissatisfied; Could be much better or much worse)
51–64:	Somewhat good quality of life (More satisfied with life than not; Could still be much better)
65–79:	Good quality of life (Generally satisfied with life; Could still be better)
80–89:	Very good quality of life (Very satisfied with life; Would change a few things)
90–99:	Nearly perfect quality of life (Extremely satisfied with life; Would change almost nothing)
100:	Best possible quality of life (Life could not be better; Would not change anything

Table 16 - Job Satisfaction (Brayfield & Rothe, 1995)

Question	Rate						
Q1. I feel fairly satisfied with my current job	1	2	3	4	5	6	7
Q2. Most days I am enthusiastic about my work	1	2	3	4	5	6	7
Q3. Each day of work seems like it will never end.	1	2	3	4	5	6	7
Q4. I find real enjoyment in my work	1	2	3	4	5	6	7
Q5. I consider my job rather unpleasant.	1	2	3	4	5	6	7

Chapter V: Discussion

5.1 Introduction

This chapter shall provide discussion points on the key findings from the results and analysis from the previous chapter. It discusses in detail the results and the implications of such. The lead researcher then provides insights on the limitations of this study and what the future recommendations perhaps can be considered.

This chapter discusses the outcomes from each of dependent variable measures (burnout, work life balance, quality of life and job satisfaction) and how they influence the independent variables groups of caregivers and non-caregivers working in the pharmaceutical sector in Ireland.

5.2 - Burnout

5.3 – Work Life Balance

5.4 – Quality of Life

5.5 – Job Satisfaction

5.2 Burnout Discussion

Table 17. Statistics to support discussion on burnout

Burnout	Caregiver	Non-Caregiver	Combined Result
N	**33**	**20**	
Mean	**6.75**	**3.75**	
Variance	**18.66**	**7.00**	
Standard Deviation	**4.32**	**2.65**	
P-Value			**0.000169**
Cohen's D Effect			**0.43**

Hypothesis Testing

The following hypothesis were developed for the burnout measure in this study

- Null Hypothesis 1(H0): There will be no significant difference in burnout between caregivers and non-caregivers working in the pharmaceutical sector in Ireland

- Alternate Hypothesis 1 (Ha): There will be a significant difference in burnout between caregivers and non-caregivers working in the pharmaceutical sector in Ireland

The null hypothesis 1(H0) is rejected for burnout, with the alternate hypothesis 1(Ha) being true. There is a statistically significant difference in burnout levels between caregivers and non-caregivers within the pharmaceutical sector in Ireland according to this result. The p-value for this measure was 0.000169 which confirms that there is a difference in burnout levels between caregiving groups and non-caregiving groups.

Interpretation

The research question and supports the interpretation of this outcome for burnout to understand the influence it has on both the caregiver and non-caregiver groups working in the pharmaceutical sector in Ireland.

Q1. What is the influence of burnout working on for participants working in the pharmaceutical sector in Ireland?

The results confirm that there was a statistically significant difference in the burnout of caregivers v non-caregivers. This result demonstrates that there are higher levels of burnout among the caregivers' group and supports the prior research findings from authors (Bridgeman., 2018, De Hert S, 2020) although from different sectors.

The burnout measures and outcomes for the participant groups provides some clarification on understanding how each group feels about burnout. Although there are statistically significant differences between the groups it does require further investigation because the groups had unequal distribution between caregivers N=33 and non-caregivers N=20.

Implications

As this study has demonstrated the higher levels of burnout between caregivers' v non-caregivers it should be noted that this may have negative implications if not addressed.

As highlighted within the literature review burnout can have negative effects on overall employee wellbeing (Cordes, C.L, 1997), can cause emotional exhaustion (Pehlivanoğlu, M.Ç, 2019) and organizational culture (Oppong Peprah, 2024).

Addressing burnout requires a multi-faceted approach and this research study should offer early insights into burnout levels across the sector overall and with a focus on caregivers employed in the pharmaceutical sector.

Recommendations

Statistically significant differences between caregivers and non-caregivers' groups potentially indicate areas for further investigation, intervention, or policy development. The pharmaceutical sector as mentioned could review the following as recommendations to ensure that they continuously improve employee wellbeing.

1. Internal policies to ensure that burnout threats are minimized as much as possible. The benefits of doing this should reduce risk of turnover and improve employee retention if this is a challenge in any company. Further recommendations would be to
2. Focus on employee well-being initiatives (Rubin, G., 2009)
3. Flexible work policies (Naqshbandi et al. 2024) as both have been beneficial in supporting work life balance and reducing burnout across other sectors.

5.3 Work Life Balance Discussion

Table 18. Statistics to support discussion on work life balance

Work Life Balance	Caregiver	Non-Caregiver	Combined Result
N	**33**	**20**	
Mean	**10.6**	**4**	
Variance	**18.66**	**7.00**	
Standard Deviation	**4.32**	**2.65**	
P-Value			**0.052**
Cohen's D Effect			**0.52**

The following hypothesis were developed for the work life balance measure in this study

Hypothesis Testing

- Null Hypothesis 2(H0): There will be no significant difference in work life balance between care-givers and non-caregivers working in the pharmaceutical sector in Ireland

- Alternate Hypothesis 2(Ha): There will be a significant difference in work life balance between caregivers and non-caregivers working in the pharmaceutical sector in Ireland

The p-value suggests that there are borderline differences between the caregiver and non-caregiver groups for work life balance but does not demonstrate statistical significance. This means that the null hypothesis is accepted that there is no significant difference between work life balance between caregiver and non-caregivers in the pharmaceutical sector in Ireland, but that it may be leaning in the direction of an alternative hypothesis but very much borderline.

Interpretation

The research question supports the interpretation of this outcome for work life balance to understand the influence it has on both the caregiver and non-caregiver groups working in the pharmaceutical sector in Ireland.

Q2. Does hybrid working have a different impact on work-life balance for caregivers verses non-caregivers working in the pharmaceutical sector in Ireland?

The results for the work life balance measure does not provide statistically significance to reject the null 2(H0) hypothesis therefore it cannot accept the alternate hypothesis 2(Ha). However, there is a borderline significance indicated which would suggest that the null hypothesis can be questioned.

The work life balance measures and outcomes for the participant groups provides some clarification on understanding how each group feels about the balance between their work and homelife. Although the differences are not statistically significant between the groups it does require further investigation because the groups had unequal distribution between caregivers N=33 and non-caregivers N=20 which may push the result to in the direction on statistically significant or not.

Implications

Although the work life balance result is not statistically significant if should not create the assumption that everything is fine within this area and no enhancements are required. As mentioned, a limitation of this study is the unequal distribution of caregivers and non-caregivers, and this should prompt a larger study to determine a consistent outcome in future research. By not understanding and continuously improving work life balance and standards across sectors can have long term negative effects.

As highlighted with the previous literature on work-life balance employees view work life balance as important (Ghiselli & Zhao, 2016) and therefore it should be important to this sector and improving balance as much as possible. By focusing on how to improve work life balance will also reduce the risk of 'hurt' between the two as studied by Friedman and Greenhaus in 2000 and further supported by Sundaresan in 2014.

The absence of statistical significance does not deter from the importance of companies providing work life balance initiatives and documentation around best practices so that the concept of 'overcommitment' does not happen on a frequent basis with hybrid working and it is having a negative influence on work life balance (Best, S.J., 2021).

Recommendations

Work life balance should be prioritized by all companies, but should a company need to assess their work life balance approach, some of the recommendations for this are as follows.

1. Ensure that there is a flexible work policy is in place so that employees may use this to reduce any day-to-day stressors (Tsipursky, G., 2022).
2. Policies and guidelines developed to ensure consistency, fairness and understanding across all functions and departments
3. Implementation of well-being programs (Ateeq, K., 2022).
4. Supportive culture around work-life balance and senior management leading by example (Bloom, N., 2021).

5.4 Quality of Life Discussion

Table 19. Statistics to support discussion on quality of life

Quality of Life	Caregiver	Non-Caregiver	Combined Result
N	**33**	**20**	
Mean	**6.6**	**5**	
Variance	**25.3**	**0.67**	
Standard Deviation	**5.03**	**0.82**	
P-Value			**0.52**
Cohen's D Effect			**0.94**

Hypothesis Testing

The following hypothesis were developed for the quality-of-life measure in this study

- Null Hypothesis 3(H0): There will be no significant difference in quality of life between care-givers and non-caregivers working in the pharmaceutical sector in Ireland

- Alternate Hypothesis 3(Ha): There will be a significant difference in quality of life between caregivers and non-caregivers working in the pharmaceutical sector in Ireland

As the p-value in this research measure is 0.52 for perceived quality of life differences between caregivers and non-caregivers working in the pharmaceutical sector in Ireland, this suggests that there is not enough statistical evidence to reject the null hypothesis 3(H0), therefore the null hypothesis being true. There is not sufficient evidence to accept the alternative hypothesis 3(Ha) of a difference between groups.

Interpretation

The research question and will support the interpretation of this outcome for quality of life to understand the influence it has on both the caregiver and non-caregiver groups working in the pharmaceutical sector in Ireland.

Q3. Is there is a difference in quality of life between caregivers and non-caregivers working in a hybrid setting in the pharmaceutical sector in Ireland?

Based on the statistical tests for quality of life between groups, research question number 3 may now be answered. Although the results for the quality-of-life measurement confirms that there is no significant difference in quality of life between caregivers and non-caregivers. The evidence overall is too weak to support the alternative hypothesis 3(Ha) being true. However, like the burnout measure and work life balance measure discussed above, there is scope to gain deeper understanding from this study by collecting a larger sample size and more equal distribution of caregivers and non-caregivers who participate in future studies.

Implications

As there is not enough evidence to reject the null hypothesis that there is no difference in quality-of-life outcomes for caregivers and non-caregivers within the pharmaceutical sector, there is merit in comparing the importance on quality of life in prior research to this study and the rationale to support

initiatives that have an influence on quality of life in employees in general.

Quality of life in this study is based on the private sector and so and may contribute to the research study on better outcomes in quality of life between blue collar private workers v white collar (Smith, M.P., 1980). Similarities may also be drawn from the Indian study of pharmaceutical employees where the results indicated that greater job satisfaction is linked to a better quality of life and factors such as compensation, career development and organization commitment all played a key role in positive QOL outcomes (Jain, 2016).

The absence of statistical significance does not deter from the importance of companies focusing on their employee's quality of life. The skilled work force is increasing every year and retention of employees is becoming increasingly difficult due to the competitive landscape (Narehan, H.,2014). The culture within the organization is also at risk if there is not a focus put on quality of life. This is highlighted and discussed by Albreiki., 2023 who found that quality of life was improved by the flexibility of hybrid working so by integrating flexible working, the companies will enhance quality of for their employees.

Recommendations

Quality of life should be prioritized by all companies, but should a company need to assess their quality-of-life approach, some of the recommendations for this are as follows.

1. Ensure that there is a flexible work policy is in place so that employees may use this to reduce any day-to-day stressors (Tsipursky, 2022).
2. Policies and guidelines developed to ensure consistency, fairness and understanding across all functions and departments
3. Implementation of well-being programs (Ateeq, 2022).
4. Employee Assistance Programs which offer confidential support and counselling if required (Walter, 2012)
5. Recognition and a sense of belonging (Herzberg, 1959)
6. Supportive culture around work-life balance and senior management leading by example (Bloom, 2021).

5.5 Job Satisfaction Discussion

Table 20. Statistics to support discussion on job satisfaction

Job Satisfaction	Caregiver	Non-Caregiver	Combined Result
N	**33**	**20**	
Mean	**5.16**	**3.38**	
Variance	**28.52**	**7.67**	
Standard Deviation	**5.34**	**2.77**	
P-Value			**0.10**
Cohen's D Effect			**0.36**

Hypothesis Testing

- Null Hypothesis 4(H0): There will be no significant difference in job satisfaction between care-givers and non-caregivers working in the pharmaceutical sector in Ireland

- Alternate Hypothesis 4(Ha): There will be a significant difference in job satisfaction between caregivers and non-caregivers working in the pharmaceutical sector in Ireland

The p-value in this research measure is 0.10 for job satisfaction differences between caregivers and non-caregivers working in the pharmaceutical sector in Ireland, suggests that there is not enough statistical evidence to reject the null hypothesis 4(H0) and that the evidence is too weak therefore the null hypothesis being true. There is not sufficient evidence to accept the alternative hypothesis 4(Ha) of a difference between groups.

Interpretation

The research question and will support the interpretation of this outcome for job satisfaction to understand the influence it has on both the caregiver and non-caregiver groups working in the pharmaceutical sector in Ireland.

Q4. Does hybrid working allow for greater job satisfaction for caregivers and non-caregivers working in the pharmaceutical sector in Ireland?

Based on the statistical tests for job satisfaction between groups, research question number 4 may now be answered. Although the results for the job satisfaction measurement confirms that there is no significant difference in quality of life between caregivers and non-caregivers. The evidence overall is too weak to support the alternative hypothesis 4(Ha) being true. However, like the burnout measure, work life balance measure and quality of life measure discussed above, there is scope to gain deeper understanding from this study by collecting a larger sample size and more equal distribution of caregivers and non-caregivers who participate in future studies.

Implications

As there is not enough evidence to reject the null hypothesis that there is no difference in job satisfaction outcomes for caregivers and non-caregivers within the pharmaceutical sector, reviewing and taking prior research into consideration when anticipating the implications of not prioritizing the job satisfaction for employees.

Job satisfaction is discussed widely and emphasizes the importance of one being satisfied within their jobs or roles. Although from this study we see no difference in job satisfaction, it should still be prioritized based on prior research findings. Manhas., 2013 highlights that job satisfaction influences how valued an employee feels which would support the 'belonging' theory (Herzberg et al. 1959)

which both contribute to the overall sense of wellbeing, quality of life and work-life balance.

The absence of statistical significance should not remove the importance of companies focusing on the job satisfaction of their employees. The absence of job satisfaction can cause a lack of intrinsic and extrinsic motivators and the differences of what drives behaviors around job satisfaction (Armstrong, 2006). Organizations hire people to perform so if they are not satisfied with their job overall, this can have a negative effect on individuals, teams and departments.

Recommendations

Job satisfaction should be prioritized by all companies, some of the recommendations for ensuring that people have good levels of satisfaction are as follows.

1. Transparency and communication build trust which has been shown to improve overall job satisfaction (Hofmann., 2020).
2. Regular feedback and recognition from senior management on your role and responsibilities and how it contributes to the successes of the company (Tessema., 2013).
3. Encouragement of autonomy and empowering people to make decisions based on their experience and skills (Shobe, K., 2018).
4. Fostering of a flexible work policy which allows for people to feel like they can organize their day and be control their working hours so that can achieve a good work life balance which also contributes to job satisfaction levels (Wheatley, D., 2017).

Chapter VI: Conclusion

6.1 Future Research

This research study has presented an opportunity and foundation to understanding how hybrid working influences work life balance and wellbeing for caregiver and non-caregivers working in the pharmaceutical sector in Ireland. As there are limited studies in this area that specifically focuses on this participant group, it provides a platform to development of more robust and comprehensive theories in the future.

The below table provides a summary of statistical significance within each dependent variable and if there was a difference seen across the independent variable groups of caregivers and non-caregivers. This table provides evidence to support the future direction of research suggestions as outlines below and the rationale provided.

Table 21. Statistical findings for caregivers and non-caregivers

Dependent Variable	caregiver / non-caregiver	Acceptance of null H (0)
Burnout	p-value 0.0001	False
Work life balance	p-value 0.052	True
Quality of Life	p-value 0.52	True
Job satisfaction	p-value 0.10	True

Suggested future research could be expanded in the following ways to build knowledge and learnings in each dependent variable.

Burnout
Based on the null hypothesis 1(H0) being rejected for the burnout measure provides potential and opportunity to further test this outcome in a longitudinal study on burnout and a larger sample population size within both caregiver and non-caregiver groups. Burnout, emotional exhaustion and depersonalization (Pehlivanoğlu, M.Ç, 2019) have all been associated to reduce wellbeing and have an impact on work-life balance. This should be prioritized within the pharmaceutical sector so that a more informed study can provide wider consensus on how a larger population feels. As this study was limited in population and unequal distribution of caregivers and non-caregivers, future research should have a larger population and balanced independent groups so that a more consistent understanding is achieved.

Work Life Balance
There was not statistically significant evidence to suggest that caregivers had a better work-life balance than non-caregivers and does not remove the importance of work-life balance for employees (Ghiselli & Zhao, 2016). As this study has provided some insights and learnings for work-life balance it would be interesting to assess in the future perhaps differences in generations or age groups to gain a better understanding if there are differences in work life balance and specific to age within the pharmaceutical sector. Another key factor would again to ensure a robustness to the data and balance across the independent variables. This will provide a greater balance in views and contribute to a more consistent dataset.

Quality of Life

As seen from the table above, the null hypothesis was true for quality of life between caregivers and non-caregivers working in the pharmaceutical sector in Ireland. This result is reassuring and could relate to both caregivers and non-caregivers feeling valued in their roles within the pharmaceutical sector to the previous research conducted by Narehan, H.,2014. Areas for future research and insights could focus on other factors such as compensation, rewards to understand if there are differences seen here as this also would contribute to understanding what influences the quality-of-life measures (Hertzberg, 1986). Another potential area of research may focus on the leadership aspects for people working in the pharmaceutical sector and how quality of life is influenced by the leadership styles. This would explore further the research from Manhas (2013) which demonstrated that employees need motivating leaders, and this forms an important part of their overall quality of life in a corporate setting. As the research from Manhas was completed from a corporate perspective, it would provide a foundation to explore the pharmaceutical sector specifically. As this study was limited in population and unequal distribution of caregivers and non-caregivers, future research should have a larger population and balanced independent groups so that a more consistent understanding is achieved.

Job Satisfaction

The overall result from this research showed that there was no statistical difference in job satisfaction levels between caregivers and non-caregivers. Firstly, like the other variables, a more robust dataset to better assess outcomes would be advised. This would provide a comprehensive and more consistent interpretation of the results which would provide a secure understanding to do further and more targeted research in this area. Job satisfaction has been highlighted in the previous literature across various industries and one study by Jain (2016) highlighted that job satisfaction is directly linked to quality of life because of the compensation and career development aspects. From this study, it is good to see that there are no statistical differences in job satisfaction between caregivers and non-caregivers within the pharmaceutical industry. A suggestion for future research perhaps would be to conduct research on career development specifically and if as a caregiver there are any differences verses someone who is a non-caregiver and vice versa. It would be interesting to establish if career development was faster or slower for both groups within the pharmaceutical industry.

6.2 Conclusion

By way of concluding this study of research, the lead researcher will discuss the following aspects of the research and the outcomes and reflections of the approach taken.

1. Research Aim, Questions and Hypothesis
2. Research methodology
3. Limitations

1. Research Aim, Questions and Hypothesis

The aim of this research study was as follows and the lead researcher feels that the aim was achieved but that there are reflections due to limitations of the study to be considered the lead researcher acknowledges if this area of research is progressed in the future.

'The aim of this research study is to explore the work life balance and wellness of caregivers and non-caregivers working in the pharmaceutical sector in Ireland. This study will explore the level of work life balance and wellness by investigating the participants feelings towards the levels of burnout, work-life balance, quality of life and job satisfaction. The study will then also compare each independent variable (caregivers and non-caregivers) to understand if there are differences across the dependent variables by analyzing and evaluating the data that is reported.'

As noted with the results and analysis chapter of this research study, the lead researcher could interpret the findings to draw some conclusions that were successful in answering the research questions and achieving the objectives. What can be concluded from the research conducted is as follows from each of the dependent variables.

Burnout
The results confirm that this study was successful in achieving answers to the following research question.

Q1. What is the influence of burnout working on for participants working in the pharmaceutical sector in Ireland?

The overall burnout mean of the full participant group is 7.75 which shows the average burnout rate across the full population. The mean score would suggest that they are high levels of burnout amongst the group overall. The p-value was tested between groups through the t-test functionality and the reported result between groups was 0.0001. This indicates that there is a statistically significance difference between both groups when it comes to burnout rates within each group. The Cohen's D Effect score between caregivers and non-caregivers shows a result of 0.43. This suggests a moderate level of difference between both groups which would further support the P-Value difference showing significant difference between both independent variable groups. Although there are statistically significant differences between the groups it does require further investigation because the groups had unequal distribution between caregivers N=33 and non-caregivers N=20.

Work life balance
The results confirm that this study was successful in achieving answers to the following research question.

Q2. Does hybrid working have a different impact on work-life balance for caregivers verses non-caregivers working in the pharmaceutical sector in Ireland?

The overall work life balance mean of the full participant group is 10.6 which shows the average rate across the full population. As the mean is higher for the caregiver groups this suggests that caregivers have a perceived better balance of work life than non-caregivers although not statistically significant. The Cohen's D Effect score between caregivers and non-caregivers shows a result of 0.52. This suggests a moderate level if difference between both groups which would further support the P-Value leaning towards significance but not quite significant. There are no perceived differences between the groups for work life balance which would suggest further investigation because the groups had unequal distribution between caregivers N=33 and non-caregivers N=20.

Quality of life
The results confirm that this study was successful in achieving answers to the following research question.

Q3. Is there is a difference in quality of life between caregivers and non-caregivers working in a hybrid setting in the pharmaceutical sector in Ireland?

The overall mean of the full participant group is 5.9 for quality of life which shows the average rate across the full population. The mean for caregivers 6.6 v the non-caregiver mean of 5 highlights the difference of central tendency between the two groups and indicates that a there is a slightly higher value on quality of life for caregivers verses the non-caregiver group. The p-value result for 33 caregivers v 20 non-caregivers was 0.52. This means that there was no significant difference overall between the quality of life between both independent groups. The Cohen's D Effect score between caregivers and non-caregivers shows a result of 0.94. In contract to the p-value not demonstrating statistical significance. This may suggest that there is some significance albeit not meeting the threshold of statistically meaningful. There are no perceived differences between the groups for work life balance which would suggest further investigation because the groups had unequal distribution between caregivers N=33 and non-caregivers N=20.

Job Satisfaction
The results confirm that this study was successful in achieving answers to the following research question.

Q4. Does hybrid working allow for greater job satisfaction for caregivers and non-caregivers working in the pharmaceutical sector in Ireland?

The overall job satisfaction mean of the full participant group is 8.42 which shows the average rate across the full population. The mean for caregivers 5.16 v the non-caregiver mean of 3.38 highlights the difference of central tendency between the two groups and indicates that a there is a higher value on job satisfaction within the caregiver group versus the non-caregiver group. The p-value result for this group when the job satisfaction levels are compared for caregivers and non-caregivers is 0.10. This is p-value suggests that there is not sufficient evidence to reject the null hypothesis and that that there is not substantially statistical evidence to show that there is a difference in job satisfaction between independent groups. the Cohen's D Effect score between caregivers and non-caregivers

shows a result of 0.36. This suggests a small level of difference between both groups which would further support the p-value result showing non-significance between both independent variable groups. There are no perceived differences between the groups for job satisfaction which would suggest further investigation because the groups had unequal distribution between caregivers N=33 and non-caregivers N=20.

6.3 Limitations

Although this study answered many of the research objectives, it must be interpreted with caution due to the following potential limitations.

1. G* Sample size of 128 was not met which was deemed as sufficient to gain a relative understanding across this population group.
2. The caregiver (n=33) and non-caregiver (n=20) groups were unequal in nature meaning there may be greater levels of consistency and variability within the caregiver group
3. The use of a quantitative approach may also be a limitation as this may not represent the true and diverse perceptions of a larger sample size and can be perceived to lack depth.
4. As the measure scales and questions are all self-reported by the respondents this has potential for bias among the respondents
5. As this research was completed at a specific time this may also be a limitation depending on the behaviours and feelings of the respondents
6. The researcher is unable to determine how many organisations took part overall which may result in unequal distribution and respondents.

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Appendices

Survey Questionnaire – Circulated to target participants via email (with permission and social media platform LinkedIn)

Section 1: Demographics and Survey Eligibility

Q1: Please indicate your age in years: _____

Q2: Please select your gender

- Man
- Woman
- Non-Binary
- Prefer to self-describe (please specify):
- Prefer not to say

Q3: Please indicate your care-giver status below. By caregiver we mean that you have care-giving responsibilities for children, partner, parents, guardians and/or other family/dependents.

- Care-Giver
- Non-Caregiver

Q4. Are you employed in the pharmaceutical sector within a business/head office function?

- Yes
- No

Note: Please note pharmaceutical manufacturing/laboratories are excluded due to working requirements

Q5. Does your organisation offer a hybrid working set up for you to work remotely?

- Yes
- No

Q6. What type of hybrid set up does your organisation offer?

- Fully flexible
- Office based a % of the working week
- Dedicated rostered days

Section 2. Burnout

When you think about work, how often do you feel the following?
1= never, 2= almost never, 3= rarely, 4= sometimes, 5= often, 6= very often, 7= Always

Q1. Tired 1-7

Q2. Disappointed with people 1-7

Q3. Hopeless 1-7

Q4. Trapped 1-7

Q5. Helpless 1-7

Q6. Depressed 1-7

Q7. Physically weak or sick 1-7

Q8. Worthless/feel like a failure 1-7

Q9. Not sleeping 1-7

Q10. 'I've had enough' 1-7

Section 3. Work-Life Balance

Please indicate, on a scale from (1) very dissatisfied to (5) very satisfied, your level of satisfaction with each of the following five items.
1= very dissatisfied 2= somewhat dissatisfied, 3= neither satisfied nor dissatisfied, 4= somewhat satisfied 5= very satisfied

Q1. The way you divide your time between work and personal or family life

Q2. The way you divide your attention between work and home

Q3. How well your work life and your personal or family life fit together

Q4. Your ability to balance the needs of your job with those of your personal or family life

Q5. The opportunity you have to perform your job well and yet be able to perform home-related duties adequately.

Section 4. Quality of Life

Please provide a number to rate your OVERALL quality of life on the following scale from 0–100.

Quality of life refers to how satisfied you are with your life RIGHT NOW, considering all of the things that matter to you. Try to consider ALL of the different parts of your life that you think are meaningful, both past and present.

100: Best possible quality of life (Life could not be better; Would not change anything)

90–99: Nearly perfect quality of life (Extremely satisfied with life; Would change almost nothing)

80–89: Very good quality of life (Very satisfied with life; Would change a few things)

65–79: Good quality of life (Generally satisfied with life; Could still be better)

51–64: Somewhat good quality of life (More satisfied with life than not; Could still be much better)

50: Neutral quality of life (Equally satisfied and dissatisfied; Could be much better or much worse)

36–49: Somewhat bad quality of life (More dissatisfied with life than not; Could still be much worse)

21–35: Bad quality of life (Generally dissatisfied with life; Could still be worse)

11–20: Very bad quality of life (Very dissatisfied with life; Would change most things)

1–10: Extremely bad quality of life (Extremely dissatisfied with life; Would change almost everything)

0: Worst possible quality of life (Life could not be worse; Would change literally everything)

Section 5. Job Satisfaction

Please indicate your level of agreement or disagreement with each of the following statements.

1 = Strongly disagree; 2 = Disagree; 3 = Somewhat disagree; 4 = Neither Agree nor disagree; 5 = Somewhat Agree; 6 = Agree and 7 = Strongly Agree

Job Satisfaction (Brayfield & Rothe, 1955)						
. I feel fairly satisfied with my current job	2	3	4	5	6	7
. Most days I am enthusiastic about my work	2	3	4	5	6	7
. Each day of work seems like it will never end.	2	3	4	5	6	7
. I find real enjoyment in my work	2	3	4	5	6	7

. I consider my job rather unpleasant.	2 3 4 5 6 7

--------- Survey Ends ----------

Thank you for your time in completing this survey, it is very much appreciated.