AN EXPLORATIVE STUDY INTO WORK-RELATED STRESS AMONG COMMUNITY PHARMACISTS IN IRELAND

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ABSTRACT

The community pharmacy profession in Ireland has undergone dramatic changes in recent years Research on stress among community pharmacists in Northern Ireland has shown that work-related stress is an important issue The aim of this study was to explore the level of work-related stress among community pharmacists in Ireland

A questionnaire was adapted from one used in the Northern Ireland study The questionnaire was amended, piloted and distributed Four semi-structured interviews were carried out to allow triangulation of data 73 valid questionnaire responses were returned Data was analysed using SPSS and content analysis

Work-related stress was found to exist among the community pharmacists sampled Interruptions due to phone calls or staff members, uncertainty regarding HSE fees and drug prices, increasing workloads and level of patient responsibility were some of the most stressful aspects of the work environment

Business management duties appear to cause considerable stress with supervising and superintendent pharmacists experiencing more stress than support pharmacists Pharmacists working in single pharmacies appear to experience more stress than those in pharmacy groups

Methodology limitations mean that no inferences can be made regarding the total population of community pharmacists in Ireland however results indicate this phenomenon is worthy of further research

ACKNOWLEDGEMENTS

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1 INTRODUCTION

This thesis addresses the issue of occupational stress among community pharmacists in Ireland Occupational stress has been of increasing concern to employees, employers and governments for many years (Le Fevre, Matheny & Kolt, 2003) and is now recognised as representing a real threat to quality of life for employees (Kompier, Cooper & Geurts, 2000) According to Park (2007) stressed workers are more likely to be unhealthy, poorly motivated, less productive and less safe at work Furthermore, the organizations they work for are less likely to succeed in a competitive market In a recent European Working Conditions Survey (EWCS), work-related stress was found to be the second most common work-related health problem across the EU (Parent-Thirion, Macias, Hurley & Vermeulen, 2007) The authors also found that work-related stress is most likely to occur in health and social services jobs as well as education jobs

1 1 Impact of Work-Related Stress

Work-related stress can cost national economies huge sums of money in sick pay, lost productivity, health care and litigation costs (Palmer, Cooper & Thomas, 2004) In the UK, the Health and Safety Executive has estimated that half of the absenteeism which occurs is due to work stress (Cooper & Cartwright, 1994) Stress related symptoms can range from mild medical unfitness, through general unhappiness and anxiety, to more serious impairments including drug dependency, excessive drinking, increased smoking, divorce, psychiatric problems and suicide (Makin, Rout & Cooper, 1988) According to McGowan, Gardner & Fletcher (2006), the prevalence of occupational stress is increasing and the negative consequences of stress on employee's health and wellbeing are increasing also

Despite much disagreement among researchers regarding the terminology and research methodology of stress, there is clear consensus on the importance of this issue and its potential consequences for individuals, organizations and society (Kahn & Byosiere, 1990)

1 2 Community Pharmacy in Ireland

Community pharmacists are among the most accessible healthcare providers in Ireland There are 1,800 pharmacies in Ireland and the sector has experienced huge growth in the last fifteen years as a result of deregulation of the industry There is wide variety in the business model of community pharmacies in Ireland Many pharmacies are independently owned single pharmacies, some are part of a group and others are part of a larger chain Each different business will have different management structures and organisational designs New legislation, the Pharmacy Act 2007, requires that each pharmacy have a 'Supervising Pharmacist,' who works on a full-time basis in the pharmacy, and also a 'Superintendent Pharmacist' who takes overall responsibility for the pharmacy business Both these roles can be filled by the same person however one can only act as supervising pharmacist for a single pharmacy, whereas one can act as superintendent pharmacist for multiple pharmacies This change has forced many organisations to adopt more formalised management structures

The typical community pharmacy in Ireland is now open 56 hours per week (PRICEWATERHOUSECOOPERS (PWC) Report, 2011) with opening hours extending in response to patient demands and increased competition in the sector The role of the community pharmacist includes

- providing detailed advice on medicine use and management
- promoting medical compliance, with favourable implications for patient care
- cross-checking prescriptions to minimise the risk of adverse drug reaction

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- reviewing prescriptions to ensure correct dosage and frequency and identify any potential omissions

- providing advisory services on minor health problems

(PWC, 2011)

Frequently, community pharmacies operate with a single pharmacist on duty This effectively means that many pharmacists must work excessive hours without sufficient breaks as, in accordance with legislation, a pharmacist must be present on the pharmacy premises at all times during which the pharmacy is open for business New guidelines also dictate that the pharmacist on duty must be in a position to supervise all sales of over-the-counter medication carried out by all pharmacy staff Consequently, it is often impractical and costly to provide a pharmacist with a break or allow them to leave the premises during opening hours as this requires employing a second pharmacist for this period or else closing the pharmacy

1 3 Balancing Roles

The duties of a community pharmacist are rarely restricted to the roles outlined in the PWC Report The huge variety in possible roles within the pharmacy necessitates significant skills aside from the expertise required to dispense medication and counsel patients on its use Many pharmacists must also fulfil all the duties of the manager of a small business This may involve dealing with financial, legal and human resource issues on a daily basis Ottewill, Jennings and Magirr (2000) outline key operational and strategic management competencies which are necessary to operate a professional service successfully The research of Ottewill et al (2000) had a direct focus on community pharmacists in the U K and highlights the fact that management skills can be as important as medical skills in community pharmacy Anecdotal evidence would suggest that many pharmacists in Ireland have little or no formal

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training in how to deal with management issues thus it can be much more time-consuming and problematic than it should be These tasks must be done in addition to the duties already outlined This can mean that the process of dispensing medication is very often interrupted and mistakes can easily occur

Managing a busy community pharmacy can be difficult however, when combined with the task of safely and accurately dispensing medicines, this can understandably lead to high stress levels for those involved The fact that the working day is often nine or more hours in duration, during which time the pharmacist cannot leave the premises for a break, further serves to create a potentially stressful environment Life stress events such as financial or family problems are also highly documented causes of stress which can affect pharmacists (Wine, 1971) and can lead to distraction of attention to thinking about these issues at the expense of work-related information

Due to the nature of products a pharmacy will have m stock they can be targets for criminals seeking drugs or for shoplifters The frequency of incidences of a criminal nature in community pharmacies has been increasing (Linehan, 2012) and this can be a major worry for pharmacists as their own safety and the safety of other staff can be put at risk

1 4 Deregulation

Schmidt and Pioch (2004) describe how protective measures at the macro level meant a high level of regulation existed in the U K pharmacy sector until the late nineties Recent deregulation has made the climate much more competitive and this has led to increasing pressure on small and medium sized businesses The Irish situation is very similar to this Major deregulation in the last ten years has led to a much more open marketplace and increased competition In Northern Ireland, a similar situation exists as regulatory changes

have had a significant impact on the community pharmacy sector McCann, Hughes, Adair & Cardwell (2009) (a) discovered that 30% of pharmacists experienced stress due to changing organisational arrangements which can be attributed, in part, to regulatory changes In Germany, increasing competition has meant that professional self-perception among pharmacists is being put under pressure (Schmidt & Pioch, 2001) This has been attributed to the increasing focus on commercial aspects of the job at the expense of the healthcare aspects

1 5 Research Rationale

Mild, moderate and severe stress levels, and even burnout, have been documented in pharmacists (Marshall, Allison, Nykamp & Lanke, 2008) The quantitative and qualitative studies conducted by McCann et al (2009) (a) and McCann, Adair and Hughes (2009) (b) in the area of work-related stress among pharmacists in Northern Ireland indicated that a moderate level of stress exists among community pharmacists in this region A recent British study of pharmacists also found that 15% of pharmacists are so stressed that they considered leaving their job (Seston, Hassell, Ferguson & Hann, 2009)

This research highlights the existence of stress among this sector of healthcare workers and indicates that further research is warranted in this area The position held by the author for the past two years is as support pharmacist in Rathmines Pharmacy in Rathmines, Dublin For the year prior to this the position held was that of locum pharmacist across several pharmacies throughout Munster This area of research was chosen for this thesis as both personal experiences and the experiences of colleagues suggest that work-related stress is becoming an increasingly important issue for community pharmacists in Ireland

1 6 Research Questions

1 Do community pharmacists in Ireland experience work-related stress?

2 What is the nature of the work-related stress experienced?

3 To what extent is this stress experienced among community pharmacists in Ireland?

4 How has community pharmacy in Ireland changed in recent years in relation to legislation, regulation and competition and what impact, if any, has this had on stress levels of community pharmacists?

5 What best practice interventions exist for prevention and reduction of harmful stress among community pharmacists?

1 7 Research Objectives

1 Establish suitable criteria for measuring stress levels of community pharmacists

2 Ascertain how the stress experienced compares to that detailed in other studies on pharmacists and other professions

3   (i) Discover the aspects of the daily duties of the pharmacist that can lead to stressful situations and determine if some stressors are more common than others

    (ii) Discover if factors aside from daily duties such as age, gender or level of seniority are contributing to stress levels

4 Estimate the degree to which external factors such as legislation changes are impacting on the role of the pharmacist and discover if this is a causative factor for high stress levels

5 Examine employer's legal responsibilities in relation to work-related stress

6 Develop a set of recommendations for creating and maintaining a low stress environment in the community pharmacy setting

2 LITERATURE REVIEW

2 1 Introduction

Stress has a major influence on both individual health and organisational health Park (2007) found that stressed workers are likely to be less productive and their organizations are less likely to be successful Stress can evoke feelings of frustration, fear, conflict, pressure, hurt, anger, sadness, inadequacy, guilt, loneliness, or confusion (Cavanagh, 1988) In a recent study on stress among both hospital and community pharmacists in Northern Ireland, McCann et al (2009) (a) reported moderate levels of stress among their subjects amidst a backdrop of changes in the profession The authors also emphasised the need for further research in this area

2 2 What is Stress?

Stress can be defined in several ways due to its highly subjective nature Stress is related to an inability to concentrate and can lead to a multitude of physical and emotional symptoms Harris and Arendt (1998) describe both a response-based view and situational-based view The response-based view defines stress in terms of response to a specific stressor however the situational-based view identifies stress as an intrinsic characteristic of an event or situation which produces a strain in the individual Deadlines, unsupportive co-workers and bad-tempered customers are examples of such stressors and sources of strain Harris and Arendt (1998) conclude that if a disharmony exists between the individual and the environment then the person experiences stress Michie (2002) describes stress as the psychological and physical state that results when the resources of the individual are not sufficient to cope with

the demands and pressures of the situation There is however a growing consensus on the definition of occupational stress as a negative psychological state with both cognitive and emotional components which affects the health of both individual employees and their organisations (Cox, Griffiths & Rial-Gonzalez, 2000)

2 3 Stress Classification

The negative outcomes of stress are well documented however some research suggests stress can be beneficial as well as destructive Selye (1956) described stress as being useful when it helps protect a person in times of danger and helps a person adapt during times of change This type of 'good stress' is referred to by Selye as 'eustress' Selye postulates that eustress enables a person to perform tasks more efficiently Benson and Allen (1980) found that, among managers, a certain level of stress can be quite productive allowing for improved efficiency and concentration levels Nelson and Simmons (2003) agree with this view, asserting that stress can produce positive outcomes and processes This research would suggest that a certain level of stress is a good thing in a community pharmacy environment where high concentration levels are required and efficiency is demanded This research supports the research of Yerkes and Dodson (1908) whose work led to the adoption of the Yerkes-Dodson Law as a basis for developing work environments and shaping work practices The Yerkes-Dodson Law dictates that increasing levels of stress improve performance up to a point, beyond which further stress causes performance to diminish (Yerkes & Dodson, 1908) The application of this law means that managers are encouraged to attempt to maintain stress at optimal levels for performance rather than endeavouring to minimise stress

Le Fevre et al (2003) contend that the concept that some stress is good and enhances performance should be rejected in favour of more useful and accurate concepts The idea that there is a recognised 'acceptable' level of stress that can be placed on a group of workers is strongly rejected by the authors This suggests that the so-called 'positive outcomes of stress' may not be positive for everyone and that perhaps what is 'positive stress' for one person may be 'negative stress' for another The Yerkes-Dodson Law can be seen to imply that a certain level of stress is beneficial however this would have to be tailored for each employee Since this is unlikely to happen for large numbers of employees in an organisation, one obvious possible outcome is a positive response for some and a negative for others The work of Selye (1956) supports this view as he notes that it is the individual which determines whether the stressor is to be good stress (eustress) or bad stress depending on their reaction to it This is a strong indication of the highly subjective and personal nature of stress Organisations that adopted the Yerkes-Dodson Law as a means of designing work environments may have adopted a flawed system since employees will all react differently to stressful situations According to Le Fevre et al (2003) three major reviews of occupational stress and management interventions were undertaken in 1987, 1997 and 2001 and none of these reviews referred to any possible positive aspects of effects of stress It appears that literature does not consider eustress to be of significance which gives credence to the notion that there is no 'optimal' level of work stress

The question remains as to whether stress is actually bad for one's health Common assumption appears to be that experiencing stress has undesirable consequences and can impair health Despite this, however, the evidence suggests that experiencing stress does not necessarily have pathological consequences (Cox et al 2000) While a person may find a

particular environment difficult to deal with, it is unlikely to lead to future health issues Cox et al (2000) also explore the impact that stress can have on a person who is already in a state of ill health The authors conclude that a state of illness can reduce one's ability to cope with stress and this provides support for the view that there is indeed a link between stress and poor health

2 4 Models of Occupational Stress

Contemporary stress theory is psychological in its approach in that it either implicitly or explicitly recognises the part played by psychological processes such as perception and emotion (Cox & Griffiths, 2010) This approach is very useful as it means that individual differences in response to stress are taken into account Two distinct variations of this psychological approach can be identified interactional and transactional Interactional theory focuses on the structural features of the person's interaction with their work environment while transactional theory refers to the psychological mechanisms underpinning that interaction (Dunleavy-Larkin, 2004) Two significant Interactional theories are the Demand-Control Model (Karasek, 1979) and the Person-Environment Fit Theory (French, Caplan & Harrison, 1982)

2 4 1 Interactional Theory

The Demand–Control Model (Karasek, 1979) has had a major influence on the research of occupational stress (Van der Doef & Maes, 1999) In Karasek's model, workplace stress is a function of how demanding a person's job is and how much control (decision latitude) the person has over their own duties and responsibilities Demands consist of psychological stressors such as interruption rate, time pressures, conflicting demands, pace of work, amount

of work performed under pressure and degree of concentration required (Karasek 1979)

Psychological Demands

LOW   HIGH   B

HIGH
Decision
Latitude
(control)

Low-strain   Active

LOW
Passive   High strain

Learning
Motivation to
Develop
New Behavior
PAtterns

Risk of
Psychological Strain
and Physical Illness

A
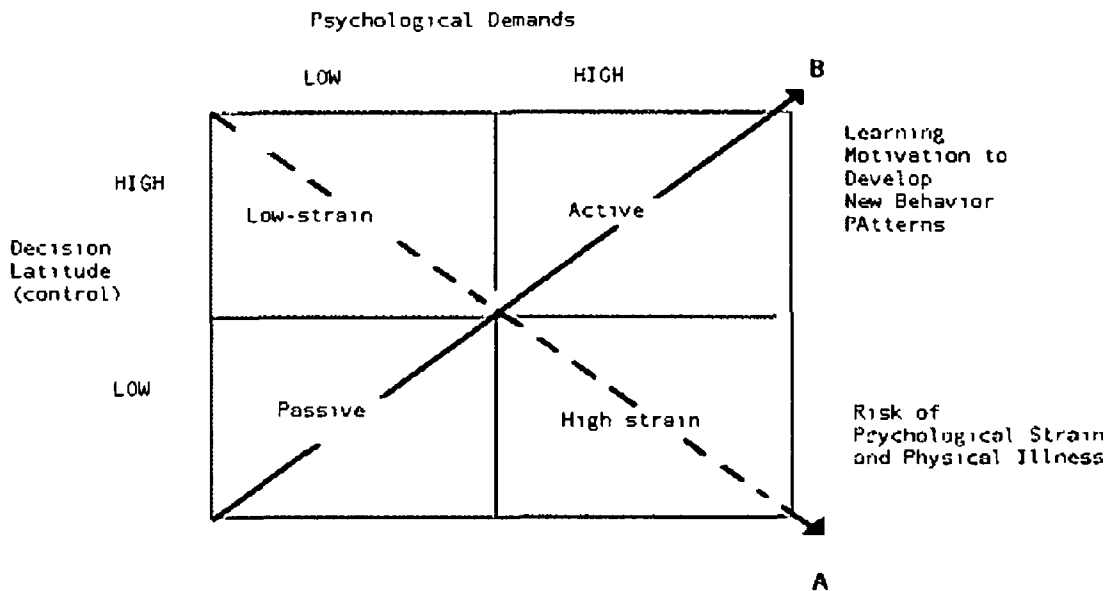
Diagram 1. Demand-Control Model (Adapted from Karasek (1979))

Using this model, a community pharmacist could be identified as having either an 'active' or a 'high-strain job' Anecdotal evidence suggests that demands can be very high as high levels of concentration are required, time pressures can be significant and the interruption rate can be high also e g a pharmacist being required to answer telephones or deal with patients while also dispensing medication correctly Decision latitude can vary greatly as a pharmacist who also manages or owns the pharmacy may have more decision latitude compared to an employee pharmacist Clinical decisions do rest with the pharmacist, however, which gives the pharmacist, whether owner/manager or employee, control regarding dispensing of prescriptions

Person-Environment Fit Theory (P-E Fit Theory) examines the degree of 'misfit' between the person and their environment (Edwards, Caplan &Van Harrison, 1998) This theory is widely recognised as one of the most dominant conceptual forces in the field of organisational

psychology (Saks & Ashforth 1997, Schneider, 2001) The P-E Fit theory involves two major distinctions, as outlined by Le Fevre, Kolt and Matheny (2006)

> the distinction between the person, their abilities and needs, their environment and the demands it makes on them and that which their environment supplies to them

> the distinction between the subjective (person's perception of themselves and the environment) and objective (or 'real') representations of the person and their environment

The first of these distinctions can be broken down into two parts, the first of which relates to the misfit between the job demands and the person's ability to fulfil those demands in terms of skill or ability The second part relates to the misfit between the psychological needs of the individual e g the need to achieve certain goals, and the ability of the environment to meet these needs It is postulated that when there is a lack of 'fit' then physiological stress, psychological stress, or both, are likely to occur

2 4 2 Transactional Theory

The transactional theory of stress (Lazarus, 1966) appears to be less valued than the P-E fit theory however it is still used in a significant amount of stress research (Perrewe & Zellars, 1999) The transactional theory is focused on the emotional reactions of the person and how they cope with the stress rather than attributing the existence of stress to certain factors According to Lazarus (1991), stress arises when there is a conjunction between a certain person and a certain environment which leads to a threat appraisal Two types of appraisal, primary and secondary, are central to Lazarus' theory Primary appraisal concerns whether a transaction facilitates or impedes a person's goals If undesirable conditions exist then the

transactional model proposes that the person will engage in a secondary appraisal in order to change the undesirable conditions to more favourable ones The transactional model depicts coping as a choice that is affected by the primary and secondary appraisals and coping is expected to be consistent with a determination of whether anything can be done to change the situation (Perrewe & Zellars, 1999) The key tenet of Lazarus' theory suggests that it is the way people evaluate what is happening with respect to their well-being, and the way they cope with it that influences whether psychological stress will result, and its intensity (Lazarus, 1993)

2 5 Coping

Coping is an important part of the overall stress process Perrewe and Zellars (1999) describe two forms of coping, problem-solving coping and emotion-solving coping The authors propose that problem-solving coping occurs when an individual perceives that they have control over their situation and can act to change their environment to improve their situation The emotion-solving coping occurs when the person realises they do not have the resources or ability to change their situation This can be interpreted as a lack of control and can lead to frustration, anger, shame or withdrawal from the situation Sparks, Faragher and Cooper (2001) reported that, since the nineties, many employees have perceived a gradual loss of control over their work lives and careers The authors have attributed this to increased job insecurity, increased pace of work and constant advances in technology This can potentially lead to work stress for these employees Currently, in the Irish community pharmacy sector, anecdotal evidence suggests that similar factors may be leading to a degree of work-related stress among community pharmacists as employment in the sector has fallen despite the workload increasing (PWC, 2011)

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2 6 Potential Sources of Stress in Community Pharmacy

Terantanavat and Kleiner (2001) present five major sources of stress in small businesses

- Overload

- Understaffing

- Lack of experience

- Uncertainty

- Personal problems

Each of these factors could be considered relevant for community pharmacy in Ireland however overload, understaffing and lack of experience are the focus of this review as they are the most relevant factors

2 6 1 Overload

In a recent study on workforce planning among pharmacists in Britain, it was found that stress levels are rising significantly and role overload is the main factor involved (Guest, 2009) Owing to the unique characteristics of a small business, where one employee may be required to perform many different roles, pharmacists are often placed in overload situations According to Cramton, Hodge, Mishra and Price (1995), employees dealing with multiple tasks and roles will likely perceive unusually high levels of demand and experience high levels of stress Oates and Oates (1995) found that work overload was the most significant cause of stress for healthcare workers in the hospital setting High stress levels in community pharmacies are often the result of work overload, unreasonable objectives and the promotion of 'long hours' culture (Hassell, 2009) Anecdotal evidence suggests that this 'long hours' culture is evident in the Irish community pharmacy sector also Average opening hours of

fifty six hours per week (PWC, 2011) combined with falling pharmacist employment would suggest this is the case

Smith, Gohn and Reif (2004) suggest that patient care is reduced as workload increases Gidman (2011) agrees with these findings, concluding that increased workload is likely to have a negative impact on pharmacists and the services they provide Gidman (2011) contends that sufficient support staff, supportive management and appropriate resources are required to maintain high quality standards McCann et al (2009) (a) found that work overload was one of the most stressful aspects of a pharmacist's employment among community pharmacists in Northern Ireland In a recent study, Lea, Corlett and Rodgers (2012) found evidence to suggest that stress levels are increasing among community pharmacists in the U K as the nature of the work changes and workloads increase The research of Hassell, Seston, Schafheutle, Wagner, and Eden (2011) contradicts some of these views however There is evidence to suggest a link between heavy workload and aspects of pharmacists' well-being however Hassell et al (2011) contend that there is no robust evidence indicating threats to patient safety caused by their having too much work to do Hassell et al (2011) conclude that more research is needed in this area in order to more accurately determine what constitutes too much work and also the impact of work overload

2 6 2 Multi-Tasking

Adler and Benbunan-Fich (2012) explored the relationship between multi-tasking and performance The results proved very interesting as the authors found that increased levels of multi-tasking led to significant loss of accuracy in the tasks performed Community pharmacists must often perform important checks on prescriptions whilst simultaneously

attending to other matters While the research of Adler and Benbunan-Fich does not relate specifically to dispensing in a community pharmacy, it is significant for the sector as patient safety may be compromised by the level of multi-tasking in pharmacies

2 6 3 Overload and Error

Central to the activities of the community pharmacist is the screening of prescriptions to ensure that prescribed medication is safe and appropriate Currently, there is a growing interest in the international literature, about increasing workload pressures on community pharmacists and the impact this may be having on patient safety (Jacobs, Ashcroft and Hassel (2011) The positive impact pharmacist interventions have on patient outcomes is well documented Research carried out by Rupp, Deyoung and Schlondelmeyer (1992) found that pharmacist interventions took place in 1 9% of new prescriptions and 28% of these prescription errors could have caused patient harm This illustrates the positive impact which pharmacists have on patient outcomes

Rupp et al (1992) also discovered that the rate at which pharmacists identified prescribing problems was negatively related to the number of prescriptions they dispensed per hour This suggests that, while striving for efficiency, pharmacists may be exceeding their safe dispensing threshold It appears that pharmacists working in busy pharmacies who are under increased work stress will identify fewer prescription errors This could potentially result in an increase in negative patient outcomes

Work overload can occur when a pharmacy becomes very busy as the number of prescription items dispensed increases It is at these times that mistakes are likely to occur Each pharmacy

or pharmacist may have a unique process for dispensing and checking of medicines and prescriptions for errors A slip can occur while there is a break in routine while attention is diverted e g having to deal with an urgent phone call A variety of factors can divert attention and make slips more likely Physiological factors include fatigue, sleep loss, alcohol, drugs and illness while psychological factors include workload and emotional states such as fear, anxiety and anger Such psychological factors may be caused by many external factors such as overwork, interpersonal relations and other forms of stress (Leape, 1994) Willis and Elvey (2011) concur with the views of Gidman (2011) and Leape (1994) indicating that increased pharmacist workload leads to more medication errors

Schafheutle, Seston, and Hassell (2011) found that factors relating to workload and work environment were associated with performance problems, particularly in relation to errors This further strengthens the view that workload and a stressful working environment can be detrimental to pharmacist performance The findings suggest that pharmacist performance may be affected by multiple factors, including personal characteristics such as age and gender, factors associated with the workplace and mental and physical health problems The evidence is not unequivocal and gaps in the literature exist, suggesting that pharmacist performance is an under-researched area (Schafheutle et al 2011)

In all aspects of human performance, errors are a frequent occurrence According to Reason (1997), human error is the main cause of up to 90% of incidents involving complex systems such as process control Errors in the healthcare setting occur frequently Doctors and nurses in one intensive care unit were estimated to make an average of 1 7 errors per patient per day (Gopher, Olin Badhih, Cohen, Donchin, Bieski & Cotev, 1989) Wine (1971) described how

high stress levels have been shown to lead to a loss of concentration and distraction from job-related information In light of these findings, analysis of the levels of stress experienced by community pharmacists may prove useful in developing error prevention strategies used in dispensing medication

2 6 4 Understaffing

Understaffing is becoming a more important issue in recent years in community pharmacies In Ireland, community pharmacist employment fell by 4% between 2009 and 2011 (PWC, 2011) while overall employment in the sector has fallen by 10% Employment in the sector is due to fall further in 2012 with one in four pharmacists expecting more redundancies before the end of this year (Irish Pharmaceutical Union (IPU) Report, 2012) This is most likely a result of cost cutting measures by pharmacy owners/managers in response to both the economic downturn and reductions in payments to pharmacies by the Health Service Executive (HSE) This effectively means that the workload of pharmacists still employed has increased as more pharmacists are now working longer hours

Understaffing places employees in task and role overload situations on a daily basis, thereby increasing levels of perceived demand and levels of stress (Teratanavat & Kleiner, 2001) Lapane and Hughes (2004) discovered that the most frequently reported source of stress among the pharmacists was short staffing which affects their ability to perform their duties A report commissioned by the European Foundation for the Improvement of Living and Working Conditions (Eurofound) in 2007 highlighted several important areas which may be causing increased stress as work The report outlines factors at sociological, demographic and national level including ageing workforce, increased diversity in the workplace, developments

in information technology and changing organisational structures and patterns (Parent-Thirion et al 2007) Time pressures due to reduced staffing levels, increased productivity targets and higher customer demands have also been identified as possible contributors to increased stress levels Since community pharmacies in Ireland have been impacted significantly by the recession through reduced staffing levels this lends credence to the view that reduced staffing levels in Irish pharmacies may be leading to increased stress for community pharmacists in Ireland

2 6 5 Lack of Experience

Within a community pharmacy the organisational structure is usually hierarchical with two to three layers of management The superintendent pharmacist has full legal responsibility for the pharmacy and is therefore at the top level of the structure A pharmacy manager/owner may sometimes be above the superintendent pharmacist from a managerial perspective Independently owned pharmacies tend to have a centralised decision making process with the pharmacist at the top of the organisational structure The span of control of the pharmacist often extends to the entire staff whose number may vary depending on pharmacy size

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┌─────────────────────┐
│    Superintendent   │
│ Pharmacist/Pharmacy │
│       Owner         │
└─────────────────────┘
           │
┌─────────────────────┐
│Supervising Pharmacist│
└─────────────────────┘
           │
           │        ┌──────────────────┐
           │        │  Support/Locum   │
           ├────────│    Pharmacist    │
           │        └──────────────────┘
           │                 │
           │        ┌──────────────────┐
           │        │ Dispensary Staff │
           └────────│    OTC Staff     │
                    │  Support Staff   │
                    └──────────────────┘
```
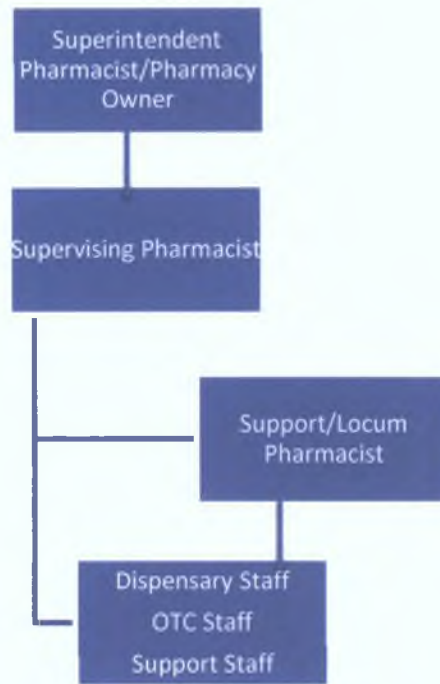
Diagram 2: Typical organisational structure of a community pharmacy in Ireland

One of the areas in which organisational structure can pose a problem is when a newly qualified or young pharmacist begins work in a pharmacy. They often find themselves at the top of the chain of command and responsible for the majority of decisions made on a day-to-day basis in the pharmacy. Terantanavat and Kleiner (2001) pointed out that lack of experience is one of the five main sources of stress in small business. While clinical knowledge may be similar to other pharmacists, more recently qualified pharmacists will have less business management experience. Pharmacy business management is a significant part of the role of the pharmacist in many pharmacies. This may be an important factor for stress experienced by newly qualified pharmacists.

Diagram 3 illustrates the wide variety of work-related risk factors, individual characteristics, reactions and long-term consequences associated with work-related stress The overall health of the worker suffers as both psychological and physiological effects from stress are manifest The incidence of errors can be seen to increase due to stress which is important for the community pharmacy sector as mistakes can have negative patient outcomes

WORK   STRESS   HEALTH

Risks for work-related stress

- High work load
- Low control
- Low support
- Job insecurity
- Long working hours
- Low income
- etc.

Stress reactions

- Physiological
- Behavioural
  o Productivity ↓
  o Reporting sick
  o Smoking ↑
  o Making errors ↑
  o etc
- Emotional reactions
- Cognitive reactions

Long-term consequences

On the worker
- High blood pressure
- Affective disorders
- Disturbed metabolism
- Alcohol dependence
- Musculoskeletal disorders

For employers and companies
- Increased absenteeism
- Lateness
- Decreased turnover
- Impaired performance and productivity
- Increased costs
- etc

Individual characteristics

- Gender
- Age
- Education
- Competitiveness
- Overcommitment
- Self-confidence
- etc

PERSON

Diagram 3 Model of causes and consequences of work-related stress (Kompier & Marcelissen, 1990)

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2.7 Stress and Gender

According to Lundberg and Frankenhaeuser (1999) females working in high ranking positions were more stressed than their male counterparts. This mirrors the findings of Gardiner and Tiggemann (1999) who noted that females reported more pressure in their jobs than males. These findings suggest that gender can influence the level of stress experienced. The findings of Miller, Greyling, Cooper, Lu, Sparks and Spector (2000) contradicted these views however as the results of their study found that no gender differences in work stress existed. McCann et al. (2009) (a) found that female pharmacists experienced more stress than their male colleagues however possible reasons for this difference were not established. More research is required in order to determine the precise reasons for these findings.

2.8 Financial Outcomes of Stress

Community pharmacies are businesses as well as healthcare providers. The relationship between a pharmacist and their patients is crucial for the success of the business. Community pharmacies are both a product and service provider and customers now expect much more than from their pharmacy than just dispensing of medication. As Kotler (1977, p8) pointed out, the importance of physical products 'lies not so much in owning them as in obtaining the services they render'. The service rendered is high quality healthcare which must be tailored to individual customer requirements. Research into customer relationship economics has indicated that a marketing model based on relationship building may be more effective than traditional approaches (Gronroos, 1997). The level of trust between customers and their pharmacist is vital for a successful pharmacy business therefore a focus on building stronger relationships with customers, through improving services, is essential. According to Evans and Lindsay (1996), dissatisfied customers will leave and go to competitors whereas loyal customers spend more and refer new clients.

A study conducted by Reid, Wanh, Young and Awiphan (1999) supports the notion that relationships with patients are vitally important in community pharmacies The study found that while patients may be less able to judge the technical quality of the care they receive, they do judge their social interaction with the pharmacist Personal attention from the pharmacist was found to be the most influential factor in creating patient satisfaction If the care and attention given to patients by the pharmacist is adversely affected by stressful working conditions, this may have detrimental effects on the business Research carried out by Smith et al (2004) suggests that work overload has led to a decrease in the time spent by pharmacists counselling patients which can have a direct negative impact on the business Harris and Arendt (1998), state that employees under stress can affect the financial performance of small businesses because such workers become ineffective in performing their duties causing loss of customer confidence Michie (2002) agrees with this view, claiming that stress is likely to lead to reduced client satisfaction In addition, Cooper and Cartwright (1994) also contend that healthy organizations are likely to be those which are successful in maintaining and retaining a workforce characterized by good physical, psychological, and mental health

A substantial amount of administrative duties may be required of a community pharmacist in the course of their daily duties According to Pines (1993), such administrative tasks are inconsistent with professional activities and take human service professionals away from their primary focus which, for pharmacists, is working with and helping patients High levels of stress may result in employee dissatisfaction, illness, absenteeism, staff turnover, low productivity and subsequent difficulty in providing high-quality service to customers (Organ & Bateman, 1989) This mirrors the views of Gibson, Ivancevich, and Donnelly (1994) who

found that burnout, caused by prolonged periods of unrelieved stress is closely related to decreased employee performance This research indicates that poor employee performance resulting from stress can damage business-client relationships thereby affecting the financial success of the business Insufficient training in communication and management skills is also a major factor which can lead to burnout (Ramirez, Graham, Richards, Gregory & Cull, 1996) This is important as anecdotal evidence suggests that community pharmacists educated in Ireland receive little in the way of training for this aspect of the job

2 9 External Sources of Stress

The research outlined thus far has indicated that stress can lead to mistakes, erode patient trust and decrease patient satisfaction This demonstrates the importance of further research in this area Community pharmacies, like many small businesses, suffer during a recession as credit can become difficult to obtain from lenders Many pharmacists who are also owners and managers of community pharmacies may now have to contend with increased pressure from banks and other lenders Small firms are also vulnerable because of their dependency on financial institutions for external funding Shocks to the banking system can have a significant impact on the supply of credit to small businesses (Berger and Udell, 2002) Brock and Evans (1989) support this view, asserting that liquidity dries up faster for smaller firms than larger firms when the economy goes into a recession In the current economic downturn, the increased difficulty obtaining credit coupled with the radically decreased payments from the HSE mean that many pharmacies are now in an uncertain financial position Therefore the external environment, as well as internal community pharmacy factors, can lead to increased stress for community pharmacists, especially those who are also business owners and managers

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2 10 Continuing Professional Development

The need to keep up with new healthcare developments to maintain professional competence is cited as a major source of stress (Lapane & Hughes, 2006) In Ireland, continuing professional development (CPD) has recently been incorporated into the good practice guidelines for pharmacy in Ireland This makes CPD compulsory for all pharmacists in Ireland Anecdotal evidence would suggest that this may be causing increased stress as normal working hours can be very long therefore this acts as a further time pressure on pharmacists since this can involve attending classes in evenings outside of normal working hours

2 11 Criminal Activity

Theft and hold-ups occur in many businesses and community pharmacies are no different Fichera, Sartori and Costa (2009) found that workplace robbery in the community pharmacy sector can have a mild but long-lasting effect on an employee's ability to work Fichera et al (2009) reported that exposure to a robbery is associated with the onset of post-traumatic stress and impairment of emotional well-being and quality of life This research supports the findings of Leeman-Conley (1990) who found that following staff hold-ups, 30% of staff reported experiencing stress reactions that last from several weeks to several months Miller-Burke, Attridge and Fass (1999) also reported that traumatic events in the workplace such as robberies can affect employee physical and mental health and work performance and lead to post-traumatic stress Since community pharmacies stock medication which has the potential to be abused it makes them a target for hold-ups and theft Recent figures from the Central Statistics Office (CSO) indicate that incidences of theft in community pharmacies has increased by 25% since 2007 while incidences of assault causing harm have also increased

(Linehan, 2012) Consequently, this is may be a significant source of stress among community pharmacists in Ireland given the increasing number, and also the possibly violent nature, of theft or hold-up incidences

2 12 Management Style

Management style can have a significant impact on employee stress In a study on the effect of management style on stress levels, Friedman, Tidd, Currall and Tsai (2000) discovered that those who use a more integrative style experience lower levels of task conflict and therefore lower stress In contrast, those who use a more dominating style experience more task conflict, more relationship conflict and, subsequently, more stress This is very interesting from a community pharmacist perspective Many community pharmacists act as managers in the pharmacy in which they work Since there may be a lack of formal training in the area of management and conflict resolution among many community pharmacists, a proportion of the stress experienced by many pharmacists may be due to lack of management knowledge Sparks et al (2001) also noted that good communication and direction from supervisors had a significant influence on job satisfaction which suggests that supervisory style may be a precursor of other job characteristics linked with increased stress levels This is significant for community pharmacists as they must supervise all activities and transactions taking place in the pharmacy on a daily basis therefore their attitude towards other staff members can have a substantial impact on their stress levels and also on the stress levels of the staff under their supervision

2 13 Management of Occupational Stress

The management of work-related stress is a topic that has received attention at both national and EU level for some time In the early nineties Eurofound began publishing booklets on

how to identify and prevent stress particularly in small and medium sized enterprises (Kompier & Levi, 1994) Lehrer, Carr, Sargunarj and Woolfolk (1994) also reported that many industries are becoming increasingly aware of the deleterious effects of stress and are turning to stress management educators to train their employees to reduce stress levels As the work environment evolves, stress reduction strategies must also evolve Research has shown some stress reduction strategies to be effective (van der Klink, Blonk, Schene & van Dijk, 2001)

Occupational stress management approaches can be classified into primary approaches (those that focus on the organisations structures and processes) and secondary approaches (those which focus on the individual within the organisation) (Le Fevre et al 2006) In this instance the authors are strong advocates of employing the secondary, more personalised, approach In relation to a community pharmacy, managers could likely use a combination of both approaches since the number of pharmacists employed in any one pharmacy is likely to be small which makes the personalised approach very manageable A combination of a process change with a focus on the needs of the employee pharmacist could prove hugely beneficial in improving working conditions for pharmacists experiencing occupational stress The authors also note that one of the key functions of management is to help workers to experience occupational stress as eustress This may also be the case in Irish community pharmacies where a 'long hours' culture exists and managers or owners may view stress as a necessary part of the working day The notion that an optimal level of stress exists is also strongly rejected by the authors When a worker experiences stress this should not be classed as eustress or distress but rather it is the nature of the stressor (causative factor) that should be examined in order to improve the workers experience (Le Fevre et al 2006)

2 14 Employer's Perspective

Recently, work stress has assumed greater importance for employers as their risk of being held legally liable for damages to stressed staff has increased, and the pace of organisational change has accelerated (Rees, 1997) There are no employment laws in the Irish justice system that relate specifically to stress Indeed, the issue of stress is not dealt with succinctly in any statutory instrument In 2005 however, the case of McGrath versus Trinitech Ltd set a new precedent for cases pertaining to occupational stress The ruling underlined the grounds for a stress claim and the court decided that psychiatric harm suffered by an employee due to stress at work had to be reasonably foreseeable by an employer for a breach of statutory duty to give rise to liability To be liable for such injury, the employer also had to have fallen below the standards of a 'reasonable and prudent employer' (O'Dea, 2005) This case illustrates the changing perceptions towards work-related stress and the reality that it is vitally important for employers to be aware of strategies for reducing stress in the workplace

2 15 Stress Reduction Strategies

Elkin and Rosch (1990) provide a useful range of strategies to reduce stress in the workplace

- ➢ Redesign the task
- ➢ Redesign the work environment
- ➢ Introduce flexible work schedules
- ➢ Encourage participative management
- ➢ Include the employee in career development
- ➢ Analyse work roles and establish goals
- ➢ Provide social support and feedback
- ➢ Establish fair employment policies

> Share the rewards

These strategies could have a significant impact on the stress levels of employees in small businesses The first three strategies would be particularly useful in a community pharmacy setting Some of these strategies are impractical in a community pharmacy setting and due financial constraints, some of these strategies may be beyond the scope of many community pharmacies however task and work environment redesign are potentially useful strategies which may not require significant financial investment such as taking on extra staff

Parent-Thirion et al (2007) have drawn up a list of the top ten factors for success It has drawn on research from Kompier and Cooper (1999) and Kompier and Kristensen (2001) among others The list is as follows

> involve employees in the intervention

> acknowledge them as experts

> management must commit to the process

> include everybody in matters of organisational change, and ensure compliance

> approach the issue step by step

> establish a clear structure of tasks and responsibilities

> keep to a tight schedule

> use different types of measures

> treat work-related stress as a normal issue

> after-care

When comparing both lists, a shift in emphasis can be seen between the 1994 list and the Eurofound list drawn up in 2007 The Eurofound list has a much greater focus on the employee (secondary approach) as opposed to the organisation This is significant and is a

positive step as research now points towards the use of secondary approaches as having a greater impact on employee welfare

The community pharmacy sector has experienced great change in recent years in terms of organisational structure Taking this into account, taking a primary as well as secondary approach may be the best way to manage stress among community pharmacists Biron, Ivers and Brun and Cooper (2006) contend that secondary approaches alone are likely to be insufficient to fully deal with the issue of occupational stress and analysis of the organisational environment must be part of the solution This gives support to the view that multiple strategies are likely to be better than single interventions

The constant change that is now a feature of community pharmacy in Ireland means that stress reduction techniques may now be more important than ever As pharmacists assume new roles and regulatory and legislation changes are implemented, the need for stress management techniques will become increasingly important

2 16 Summary

Work-related stress is becoming a more important issue for employees, employers and governments as research into the area highlights the negative impact that work-related stress can have The findings of the literature review suggest that work-related stress among community pharmacists in Ireland is an under-researched area The research published concerning pharmacists in other countries suggests that work-related stress does exist among community pharmacists therefore it is possible that Irish pharmacists experience some degree of work-related stress also

Work-related stress among community pharmacists can lead to negative patient outcomes as well as negatively impacting the pharmacist Pharmacist-patient relationships can also be

damaged by pharmacist stress The negative impact that work-related stress among community pharmacists can have illustrates the importance of further research in this area among community pharmacists in Ireland

3 METHODOLOGY

3 1 Introduction

The purpose of this study was to explore the level of work-related stress among community pharmacists in Ireland As discussed in the literature review, this can be an emotive topic and interest in the area is increasing This chapter will outline all aspects of the research positioning, paradigm and approach The limitations of the chosen methodology will also be discussed

3 2 Research Positioning

The data collected for this study was concerned with work-related negative stress among community pharmacists The epistemology has both interpretivist and positivist characteristics The interpretivist approach comes from phenomenology which examines how people interact with their environment, which is important for occupational stress, whereas the positivist approach uses existing theory to develop a hypothesis A hypothesis was developed following an extensive literature review The hypothesis developed was that community pharmacists in Ireland are likely to experience stress in their working environment This review involved analysis of the recent studies by McCann et al (2009) (a) and McCann et al (2009) (b) These publications were important in developing a hypothesis as the data within concerned work-related stress among pharmacists in Northern Ireland

According to Saunders, Lewis and Thornhill (2007), an integral part of interpretivist epistemology is that the researcher must enter the world of the research subjects and view the world from their perspective This can be interpreted as adopting an empathetic viewpoint In

this instance, the author is a community pharmacist and could therefore empathise with their experiences

The ontology of this study involves a subjective approach This research involves examining occupational stress which, as was discussed in the literature review, is a highly subjective experience Consequently, subjectivism is the most appropriate ontology for this thesis Each individual subject will interpret stress and stressful situations differently It was the intention of the author to develop an understanding of the subjective reality of community pharmacists in relation to stress at work and to use this new understanding to address the research questions of the thesis

3 3 Research Approach

There are two major approaches to theory development deductive theory testing and inductive theory building (Bonoma, 1985 & Romano, 1989) The inductive approach involves developing an understanding of the situation and then developing a theory (Saunders, Lewis & Thornhill, 2009) Therefore induction can be classed as an interpretivist approach Deduction involves developing a theoretical position prior to data collection (Saunders et al 2009) This can be interpreted as a positivist approach

The research approach in this study involved a combination of inductive and deductive approaches Use of both approaches also allowed for triangulation of the data The deductive aspect involved quantitative data which was collected through questionnaires and for which researcher independence was important This allowed statistical data to be generated and conclusions drawn from this The inductive part of the research involved conducting interviews which allowed the researcher to develop a deeper understanding of the experiences of the research subjects For this inductive approach to be successful, a close understanding of

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the context of the research was required As discussed, the author is a community pharmacist with an in-depth knowledge of the industry thus allowing this approach to be effective Another important consideration for the inductive approach is that it is much more subjective than the deductive, more fact-based, approach The issue of work-related stress can be quite emotive and, as such, the inductive approach allowed the author to engage with the interviewees on a more personal level than could be achieved with questionnaires Hill and Wright (2001) believe the interpretivist approach to be more appropriate when researching small or medium sized enterprises (SME's) however for the reasons outlined, a combined interpretivist and positivist approach was deemed suitable

3 4 Questionnaire

Questionnaires were a source of primary data collection for this thesis The questionnaires involved a process where each person was asked to respond to the same set of questions which were presented in the same order each time The questionnaire gathered information relating to whether community pharmacists in Ireland experience stress in the workplace The information collected from these questionnaires contained qualitative and qualitative components as each questionnaire allowed the participant to enter any thoughts or comments into a free-text section

There are drawbacks to the use of questionnaires however Labaw (1980) claimed that the greatest weakness of questionnaire design is lack of theory Questionnaires can be very useful however as they allow a large quantity of data to be collected relatively quickly and at a relatively low cost It can also be easier to gather information relating to sensitive subjects through questionnaires if they are anonymous as this one was The downsides can be that information received can be false and also the level of completion of questionnaires can be

low The literature review that was carried out was extensive and the core themes that emerged from this were incorporated into the questionnaire design process

As already discussed, McCann et al (2009) (a) have recently published data on a study of job stress and job satisfaction among community pharmacists in Northern Ireland The authors of this study were contacted and gave their consent for their questionnaire to be adapted as part of the new questionnaire to be used in this study The questionnaire used by McCann et al (2009) (a) was made up of four sections These include (1) socio-demographic data, (2) items relating to job satisfaction, (3) questions adapted from the Health Professions Stress Inventory (HPSI) developed by Wolfgang (1988) (a) and (4) a section for individual free-text responses The themes that emerged from the literature review were incorporated into the questionnaire that was sent to participants The main themes investigated by the questionnaire were classified into five key areas

> Patient Care Responsibility
> Work Conflicts
> Professional Recognition
> Managing Workload
> Professional Uncertainty

In order to examine these themes, a five point Likert scale was used which was consistent with previous studies Participants were asked to rate the frequency of stress experienced in difficult situations (35 in total) by selecting one of the options provided These options were 'Never', 'Rarely', 'Sometimes', 'Often' and 'Frequently' An example of the type of question asked was Managing Workload Q5 'How often do you feel stressed because you have no control over your workload?' The scales used were those developed by McCann et al (2009)

(a) hence they were already established and validated. Since some modifications of the questionnaire were carried out, Cronbach's alpha values was used to re-test its internal reliability. Cronbach's Alpha is frequently used in research to determine the reliability of an instrument and is an important concept in the evaluation of assessments and questionnaires (Tavakol & Dennick, 2011). The Cronbach's alpha values for the questionnaire used in this study are given in Table 1. Since the values are all above 0.7 this means the scales used are reliable and should give accurate results.

Scale	Patient Care	Job Conflicts	Professional Recognition	Managing Workload	Professional Uncertainty
Cronbach's alpha	0.813	0.738	0.828	0.845	0.704

Table 1: Cronbach's alpha values for scales used in questionnaire

Construction of the questionnaire to be used in this study involved modifying the McCann et al. (2009) (a) questionnaire to suit community pharmacists in Ireland. The McCann et al. (2009) (a) questionnaire involved questions relating to job satisfaction. These questions were removed when designing the new questionnaire as they were beyond the remit of this study. Pharmacy regulators in Northern Ireland have recently implemented major changes in pharmacy practice (McCann et al. 2009) (a). A new piece of legislation, the Pharmacy Act 2007 has changed the way community pharmacies in Ireland are structured and are regulated. From a management perspective, the recent the Financial Emergency Measures in the Public Interest Act (FEMPI) 2009 has also led to huge change as state payments to pharmacies have been cut significantly. The questionnaire was developed with these changes in mind in order to fully address these and other issues from an Irish perspective. A 'Personal Data' section designed to gather demographical data preceded the questions on the themes outlined.

A pilot questionnaire was designed and created using the online survey website 'surveymonkey com' This was distributed to five pharmacists with community pharmacy experience in Ireland They completed the questionnaire and gave feedback on all aspects of the questionnaire and also gave suggestions regarding any other issues that needed to be addressed by the questions Once the questionnaire was finalised, the self-administered questionnaires (Appendix 4) were distributed by email (through surveymonkey com), post and in person to community pharmacists across Ireland Both hard and soft copies of the questionnaire were accompanied by a cover letter (Appendix 1) which provided a brief introduction of the author and the rationale behind the research The distribution process involved non-random sampling or convenience sampling as a random sampling approach was not possible due to time constraints and logistical difficulties This was taken into account when analysing and interpreting the results

In order to maximise the response to the questionnaire the number of questions was kept to a minimum while still allowing for all issues to be addressed Research indicates that short questionnaires receive higher response rates (Nakash, Hutton, Jorasd-Stein Gates, & Lamb, 2006) From the experience of the author and through feedback from those that completed the pilot questionnaire, a short questionnaire was deemed more appropriate in order to encourage completion as community pharmacists are often very busy throughout the day The questionnaire was designed to fit this parameter while still gathering all necessary information Those receiving questionnaires were also advised that responses were anonymous and would be treated with the utmost confidentiality Where questionnaires were delivered in person or by post a follow up phone call was made in order to explain the rationale behind the research and also to encourage the target respondents to complete the questionnaire

The IPU is the representative body for community pharmacists in Ireland They have a wide network of pharmacy contacts and strong membership This body was contacted in the hope that they may give their backing to this research by means of placement of a notice or an article in the monthly magazine issued to all member pharmacists The IPU refused this request however Repeat emails were sent two weeks after the initial email as a means of increasing the response rate A study by Nakash et al (2006) found that telephone reminders and repeat mailing strategies can help to increase questionnaire response rates

To ensure that subject/participant error (Robson, 2002) was minimised, participants were asked to complete the questionnaire at a neutral time It was the opinion of the author that the most suitable time for completing the questionnaires was on Tuesday or Wednesday and preferably between 10am and 11am Ensuring as many questionnaires as possible were completed at this time meant that the data collected was uniform and also was collected early in the day and not at the end of a difficult working day / week as this could lead to participant error thereby damaging the reliability of the results The questionnaire also included the following definition of stress

'Stress is the psychological and physical state that results when the resources of the individual are not sufficient to cope with the demands and pressures of the situation Stress can come from any situation or thought that makes you feel frustrated, angry, nervous, or anxious '

This definition was included in order to overcome some of the limitations involved in stress research Due to the subjective nature of stress, there are several definitions of what constitutes stress and through use of this definition it was hoped that some of these limitations might be mitigated

3 5 Semi-Structured Interviews

Qualitative interviewing is a flexible and powerful tool (Britten, 1995) According to Keen and Packwood (1995), qualitative methods are useful in addressing both practical and policy questions that can impinge on the lives of health professionals Through intense dialogue during an interview, both the participant and the interviewer may reach deeper insights (Ponterotto, 2005) The feelings and perceptions of the participants were crucial for this study, making this type of qualitative data invaluable

There are three main types of interviews structured, semi-structured and in-depth interviews (Britten, 1995) The research involved semi-structured interviews This type of interview was used as it allows for a greater level of flexibility during the interview Such interviews have also been linked to a high response rate Bailey (1982) Additional support for the use of this type of interview has been provided by Layder (1995) who argues that semi-structured interviews give the individual an opportunity to informally develop their own interpretation and meaning to the questions asked

As discussed, stress is a highly subjective experience and the personal feelings and attitudes of the interviewees were a vital part of the research The data collected was used for triangulating the questionnaire responses Completed questionnaires could not convey personal experiences and emotions in the same way an interview could The interviews gave participants a more open platform to think about any stress experienced and its causes Stressors can be quite complex and allowing the participant to discuss them in detail allowed for a much better understanding of the root causes of any stress experienced This rationale is supported by Holloway and Jefferson (2000), who state that interviews are the most regularly used qualitative research method to determine peoples experience

In total, four interviews were conducted The results of the statistical analysis of the questionnaires, the free-text questionnaire responses and the core themes that emerged from the literature review were used to create the questions for the semi-structured interviews

The themes covered in the interviews were broadly similar to those of the questionnaires The free text responses from the questionnaires were also used as they provided an outlet for the questionnaire respondents to express their opinions The author felt that these written responses, as well as the themes covered in the questionnaire, warranted further investigation

The themes investigated in the interviews included

> The role of the pharmacist/ Balancing roles

> Workload

> Work schedule / Long hours culture

> Patient Responsibility

> Impact of the Pharmacy Act 2007

> Impact of the recession on work environment

> The future of community pharmacy

It's vital that the questions asked in any interview are well thought out as if the wrong questions are asked the responses may not address the research questions Patton (1987) states that good questions in qualitative interviews are open ended, neutral, sensitive and clear to the interviewee The interview schedule (Appendix 2) involved fourteen open-ended questions designed to allow the researcher to determine the presence, extent and possible causes of stress among community pharmacists The interviews were productive and proved to be a rich source of information The questions asked during the interviews were not asked in any

particular order and the full fourteen questions were not asked in every interview due to time constraints

Participants were advised that no personal details would be recorded and any reference made to their comments in the course of the research would be fully anonymous Interviews were conducted on a one-to-one, face-to-face basis and, in order to ensure best results, the environment was quiet and free from distractions such as telephones ringing Each interview was recorded to allow the interview to be re-examined so that all the qualitative data could be extracted from it The interviews were conducted outside of working hours which allowed for more complete data to be gathered as the participant had time to consider the interview questions fully and give more detailed responses These interviews are available to examiners should they be required

3 5 1 Background Information on Interviewees

Table 2 provides background information on the four interviewees

Interviewee 1	Interviewee 2
Support Pharmacist Male aged 34 years Twelve years experience as a community pharmacist Has previously acted as Superintendent Pharmacist	Support Pharmacist Female aged 25 years Two years experience as a community pharmacist
Interviewee 3	**Interviewee 4**
Supervising Pharmacist Male aged 34 years Eleven years experience as a community pharmacist	Superintendent Pharmacist Male aged 28 years Four years experience as a community pharmacist

Table 2 Interviewee background data

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3 6 Mixed Methods Research Paradigm

Quantitative research can be described as an investigation into how many people have similar characteristics and views (Wright & Crimp, 2000) This involves gathering information which can be analysed statistically This study involved significant numerical information in the form of questionnaires Questionnaires were chosen for quantitative research as they allow for the analysis and measurement of causal or correlational relationships between variables (Denzin & Lincoln, 2000)

Qualitative tools were also utilised to lend further credence to the quantitative findings According to Birn (2004) qualitative research is carried out after quantitative research as it offers more validity to the findings For the purposes of this research, the real thoughts and feelings of the participants were needed to provide a more in depth level of understanding This data was collected through semi-structured interviews

Mixed methods research involves using both qualitative and quantitative techniques to conduct investigations around a topic This research model can help to bridge the gap between qualitative and quantitative techniques (Johnson & Onwuegbuzie, 2004) Johnson & Onwuegbuzie (2004) assert that using a mixed research approach gives the researcher the best chance of answering their research questions Tashakkori & Teddlie (2003) agree with this view as they contend that mixed method research is hugely advantageous and allows the researcher to answer both confirmatory and exploratory questions at the same time

The questionnaires posed a problem as the author felt that they did not adequately allow for the participants emotional responses Since stress is a very personal issue, such emotional responses would be important for fully addressing the research questions The interviews were also problematic as the element of bias had to be considered The author had a previous

working relationship with one of the interviewees which was felt could lead to biased and unreliable results The questionnaire addressed this issue somewhat as these questionnaires were completed anonymously by the participants The notion of bias is dealt with more fully in Chapter 3 9 Once the questionnaires were returned and analysed, the interviews were used to elaborate further on the main issues raised As the interviews involved fewer questions than the questionnaires, more in-depth and personal responses were elicited from the interviewees The mixed research methods paradigm was, therefore, useful in overcoming potential research difficulties as it allowed a more holistic approach to the research topic

Following a review of the literature published in the area of stress research, the author found that researchers frequently employ both qualitative and quantitative approaches to the methodology Dunleavy-Larkin (2004) used both questionnaires and interviews in a thesis on work-related stress in a small organisation McCann et al (2009) (a) conducted quantitative research on stress and job satisfaction among community pharmacists in Northern Ireland This study was followed up with a qualitative study on work-related stress (McCann et al 2009) (b) This provided the authors with a means of comparing the two studies and giving a more accurate overall picture of stress levels among community pharmacists in Northern Ireland The rationale behind these approaches was used when designing the methodology for this study

3 7 Research Paradigm Justification

Saunders et al (2007) outline two advantages of a mixed method paradigm The first is that different methods can be used for different purposes and, secondly, mixed methods theory allows for triangulation For the purposes of this study, the data collected from the interviews was used to triangulate the results of the questionnaire data This provided a means for validating the data gathered from the questionnaires and also reduced the method effect

(Saunders et al 2007) The method effect refers to the fact that all data collection techniques are imperfect therefore using multiple techniques mitigates these imperfections thus providing more reliable data Jick (1979) supports this view as he describes how the use of multiple measures provide a more certain representation of a phenomenon

Since this research involved both inductive and deductive approaches to it is best described as a 'grounded theory' (Glaser & Strauss, 1967) Saunders et al (2007) assert that a grounded theory strategy is very useful for exploring people's behaviour Since this study involves examining people's behaviour in terms of occupational stress in the workplace this type of strategy was appropriate

Triangulation is a key part of the research design According to Hurrell Jr, Nelson and Simmons (1998), many of the problems associated with researching work-related stress can be overcome through increased use of triangulation This provides further justification for the research design

3 8 Triangulation

One of the goals of a researcher is to design a study that has strong internal and external validity and reliability and a comprehensive multi-perspective view (Boyd, 2000) According to Denzin (1970), triangulation strategy is the best way of achieving this Triangulation involves the use of different kinds of data or different sources relating to the same issue (Gillham, 2000) Triangulation was used in this thesis in order to provide this multi-perspective view Bryman (2008) also encourages the use of both interviews and questionnaires as this permits cross-checking of data which ensures results are more reliable

There are some drawbacks to triangulation as Jick (1979) points out Disadvantages include difficulty in replicating the study and, secondly, if research questions are not clearly focused then triangulation of data will be impossible Difficulty in replicating studies may indicate why McCann et al (2009) (a) and McCann et al (2009) (b) carried out two separate studies, one based on qualitative research and the other based on quantitative research

3 9 Limitations of Research

Research in the area of stress poses several potential difficulties Cooper (1998) describes the basic problem of lack of agreement regarding much of the terminology surrounding stress For the purposes of this research, this issue was dealt with by providing a definition of stress for the participants in the questionnaire as discussed in Chapter 3 4

Comparing different stress concepts for the purpose of stress research can also be problematic since stress research can involve many distinct areas such as psychology, sociology, medicine and management (Cummings & Cooper, 1998) The intensely personal and subjective nature of stress can also make analysis of stress problematic Taking these issues into account, the methodology used in this thesis was developed to ensure the data collected was as reliable as possible and the research questions were fully addressed

Random sampling in both the quantitative and qualitative analysis was not used due to logistical and access difficulties In order to conduct a random sampling, the contact details for every registered pharmacist were required Accessing these large numbers of contact details was not possible due to time constraints and privacy issues This sampling bias must be recognised as a limitation and means that the results cannot be used to describe the entire population as the external validity of the study is put in question Marshall (1996) asserts that a non-random convenience sample, such as this, may result in poor quality data and a lack of

intellectual credibility Catts, Fey, Tomblin and Zhang (2002) concur with this view proposing that convenience sampling is associated with numerous forms of bias This is an area where further studies might improve on this research

Systemic bias is another limitation of this type of sampling technique This is a result of sampling bias and refers to a difference between the results from the sample and the theoretical results from the population as a whole

The response rate was low at 33% This must be acknowledged as a limitation and may affect the reliability of the findings The intrinsic motivation of the respondent must also be considered The nature of the questionnaire meant that pharmacists who had strong feelings on the issue of stress may have been more likely to complete the questionnaire that those who were not concerned by stress This must also be recognised as a limitation

3 9.1 Error and Bias

Robson (2002) outlines four threats to reliability of research All of these potential threats to reliability are relevant for this study The first is subject error This is important for the questionnaires Subjects were asked to complete the questionnaires at a specified time Unfortunately there was no way of controlling when the participants actually completed the questionnaire therefore some may have been completed at the specified time and some may not Having the questionnaires filled at a neutral time meant that it avoided possible subject error as a subject may be more stressed on a Friday evening then e g mid-morning on a Tuesday Subject error was avoided in the interview process as the interviews were conducted on a weekend day that the subjects were not working and at a location separate from the subjects work environment

Subject bias is the second threat to reliability and is important regarding the interview process as some interviewees may in fact have provided answers that they thought the interviewer wanted rather than what they actually felt Since the author had a previous working relationship with one of the interviewees it is possible that an element of bias may exist This was unlikely to be an issue for the questionnaires as they were entirely anonymous

Observer error is the third threat to reliability This was significant as semi-structured interviews were used which increased the likelihood of observer error The rationale for using this style of interview is discussed in Chapter 3 5 Since the author is a community pharmacist the tendency to ask leading questions was recognised To avoid this, efforts were made by the interviewer to ensure the interview questions did not deviate significantly from the interview schedule Use of a second interviewer was used to good effect by Peel (2006) in a study examining culture in SMEs This further reduced any possible bias affecting the results, however, due to time constraints and logistical reasons this was not possible in this study

Observer bias, the fourth threat, was recognised as a potential problem The interview involved interpreting and analysing responses that were in some cases quite personal therefore the potential for observer bias must be recognised

3 9 2 Subjectivity and Objectivity

Research projects are influenced by both external factors such as level of access or funding and also internal factors such as the researcher's desires, interests and preoccupations (Drapeau, 2002) Ratner (2002) supports this view as he describes how subjectivity guides all aspects of research including subject, hypothesis formulation, methodologies, and data interpretation Understanding and recognising subjectivity is critical when conducting

research and interpreting the results of data analysis In order to ensure valid subjectivity, Drapeau (2002) outlines five mechanisms that may be used

- ➤ Submitting the research results to peers and to other experts in the field or comparing the results with what other studies have given
- ➤ Doing the data analysis in groups in order to obtain consensus
- ➤ Triangulation and other validity and reliability precautions
- ➤ Presenting the results of a more objective, that is text-based, analysis before proceeding with subjective analysis
- ➤ Making use of a "discussant" during the research process

In this study, triangulation was used to ensure any lack of subjectivity was minimised as quantitative data was cross referenced with qualitative data This research was also compared to the McCann et al (2009) (a) and (b) studies in so far as the data allowed which also helped to ensure subjectivity

Ratner (2002) describes how the researcher's subjectivity is said to negate the possibility of objectively knowing a social psychological world The author goes on to suggest that objectivity negates subjectivity since it makes the observer a passive recipient of external information This illustrates the complexity and potential difficulty in maintaining objectivity and subjectivity during research It is important that this difficulty is recognised when analysing and interpreting the results of the research This view is supported by Ratner (2002) who explains that one of the advantages of recognising subjectivity is to reflect on whether or it facilitates or impedes objective understanding

3 10 Method of Questionnaire Data Analysis

On the 4th of August the questionnaire data files were downloaded from the surveymonkey com website These files were in Excel format The files were formatted and edited in order to enable them to be analysed using the SPSS data analysis tool Once the data was uploaded to the SPSS program, an SPSS file was generated Using this data, frequency analysis and cross tabulation analysis was carried out

Cronbach's alpha values were obtained in order to test internal reliability The rationale behind using Cronbach's alpha values and the values calculated for this study are presented in Table 1, Chapter 3 4

For the purposes of analysis and cross-tabulation, the following labels were assigned to the variables

Seniority	Year Group
A = Superintendent Pharmacist B = Supervising Pharmacist C = Support Pharmacist D = Locum Pharmacist	A = Registered since 2007 B = Registered from 2002 to 2006 C = Registered before 2002
Community Pharmacy Type	**Frequency**
A = Large multiple (11+) B = Medium multiple (6-10) C = Small multiple (2-5) D = Single pharmacy	Never = 1 Rarely = 2 Sometimes = 3 Often = 4 Frequently = 5

Table 3 Labels assigned to variables for analysis using SPSS

3 11 Method of Qualitative Data Analysis

Content analysis was used to analyse the data collected from the semi-structured interviews This involved listening to the interview recordings and noting the responses of the interviewees The responses were recorded thematically with comments relating to e g workload or work conflicts grouped together The particular interviewee that made each comment was also recorded The interviews were listened to several times until no new themes were noted These themes were then analysed and the responses grouped together where appropriate The various themes which emerged were grouped into major and minor themes and are listed in Table 4

Major Themes	Minor Themes
Working long hours / Lack of adequate breaks	Criminal Activity
Managing OTC staff and level of competence of OTC staff	Impact of Pharmacy Act 2007
Staffing Levels	Impact of recession
Work Overload / Multi-tasking	The future for pharmacy in Ireland
Responsibilities to patients	
Stress management	

Table 4. Major and minor themes to emerge from semi-structured interviews

The questionnaires contained a free-text response section from which 19 responses were obtained These responses were read and were grouped together thematically in the same manner as the semi-structured interview questions The themes to emerge from these responses are presented in Table 5

Theme
Insufficient breaks and long hours
Work overload
Understaffing/Staff Competency
Errors
New Regulations

Table 5 Themes which emerged from free-text response section of questionnaires

4 DATA ANALYSIS

4 1 Introduction

In this chapter the findings of the questionnaire and interviews will be outlined This chapter will be structured around the major themes of analysis for this research project These themes include

> ➤ Patient Care Responsibility
>
> ➤ Work Conflicts
>
> ➤ Professional Recognition
>
> ➤ Managing Workload
>
> ➤ Professional Uncertainty

The statistical data will be presented with the aid of illustrations The data from the interviews and free-text responses from the questionnaires will be presented alongside the statistical data

4 2 Summary of Personal Data from Questionnaires

After the mailings, 97 responses (33%) were obtained Of these, 75% (n=73) worked in the community sector and were therefore valid responses for this study The other 25% of respondents indicated that they were working in other areas of pharmacy (hospital, industry, and academia) For the purpose of data analysis their responses were not relevant therefore they were removed before data analysis was conducted 60% of respondents (n=44) were female and 40% (n=29) were male 17% of questionnaire participants entered a free-text response at the end of the questionnaire

4.3 Patient Care Responsibility

This section of the questionnaire examined whether the level of responsibility a pharmacist has for their patients is a cause of stress. 92% of pharmacists were found to be stressed to some degree by the fact that they are ultimately responsible for patient outcomes. The breakdown of responses is given in Diagram 4.
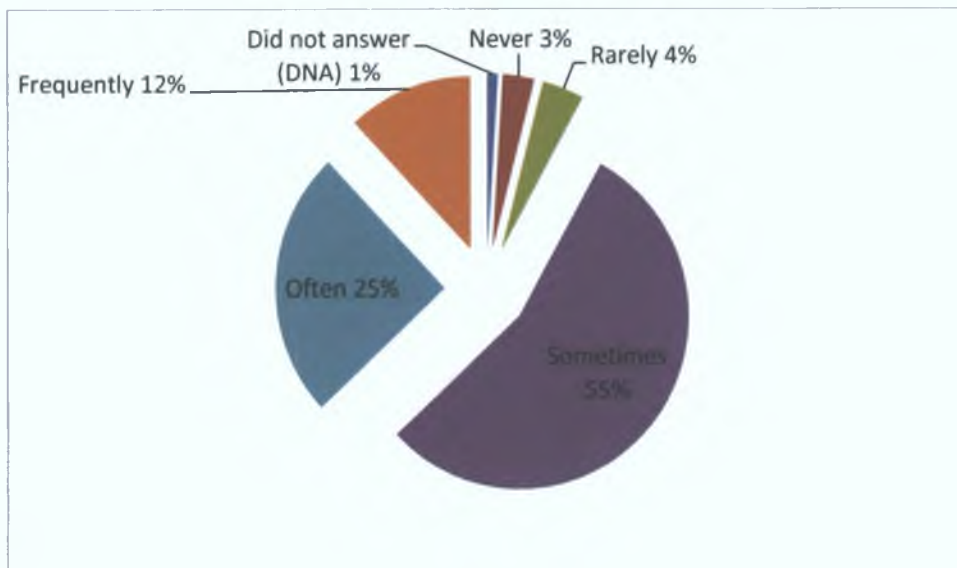
Diagram 4: Pie chart of frequency of stress experienced because of high level of responsibility for patient outcomes

Only 7% of respondents were 'never' or 'rarely' stressed by the level of responsibility they have for patients under their care. From the cross-referencing of data, females appeared to view patient care responsibility as more stressful than their male colleagues. One exception to this was that males indicated they were more stressed than females with regard to having job difficulties which conflict with their personal lives - 2.7% of females are 'frequently' stressed compared to 4.1% of males.

When cross analysing patient responsibility with number of items dispensed, 19% of those dispensing 1-150 items per day experienced stress 'sometimes'. 28% of those that dispensed 150 -300 items per day experienced stress 'sometimes'.

Stress levels due to fears that errors will be made in a patient's treatment were examined and the results proved interesting. The findings are shown in Diagram 5.
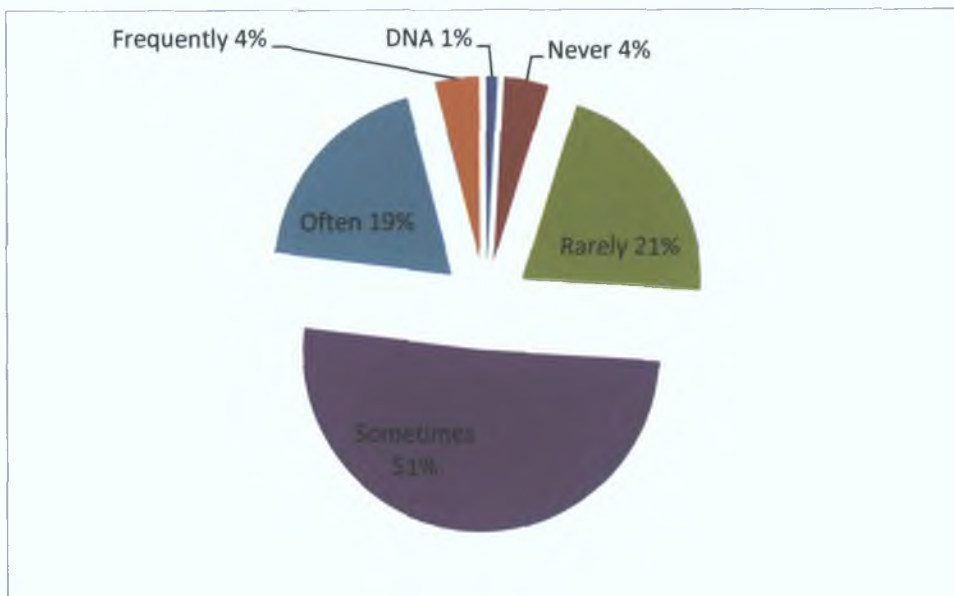
Diagram 5: Pie chart of frequency of stress experienced due to fear of making a mistake in the treatment of a patient

The majority of pharmacists, 74% experience stress 'sometimes', 'often' or 'frequently' due to fear of making a mistake. Using year of registration to cross-analyse the results, all three groupings (since 2007, 2002-2007, before 2002) were found to be stressed to a similar degree due to fear of making a mistake – 40% to 47% indicted they were 'sometimes' stressed. These findings are supported by evidence from Interviewee 4 who remarked *'If it's busier I would worry about it* (making a dispensing error)'. He went on to explain;

'It is difficult especially at night'

it is stressful to get something done as quickly as possible while trying to do it safely'

Interviewee 2 explained how she is,

'Aware that any mistake that I make can have big consequences I would often think of something that evening after I got home'

Comparing males to females, 12% of females were found to be 'often' stressed compared to 7% of males while 33% of females indicated they 'sometimes' feel stress due to fear of making a mistake compared to just 18% of males

A large number of pharmacists were found to experience stress due to lack of adequate information regarding a patient's condition 81% were 'sometimes' or 'often' stressed by this while 6% were 'frequently stressed by this

4 4 Work Conflicts

12% of respondents indicated they were 'frequently' stressed due to other health professionals determining the way they work while 19% were 'often' stressed and 37% were 'sometimes' stressed Of these results, the greater proportion was female

Stress experienced due to entrusting work to other staff members was an emotive issue during the interview process The statistical analysis of the questionnaires is shown in Diagram 6 55% of respondents were either 'sometimes' or 'often' stressed while 12% were 'frequently' stressed 4% were 'never' stressed by this while 26% were 'rarely' stressed by this 3% of respondents did not answer this question
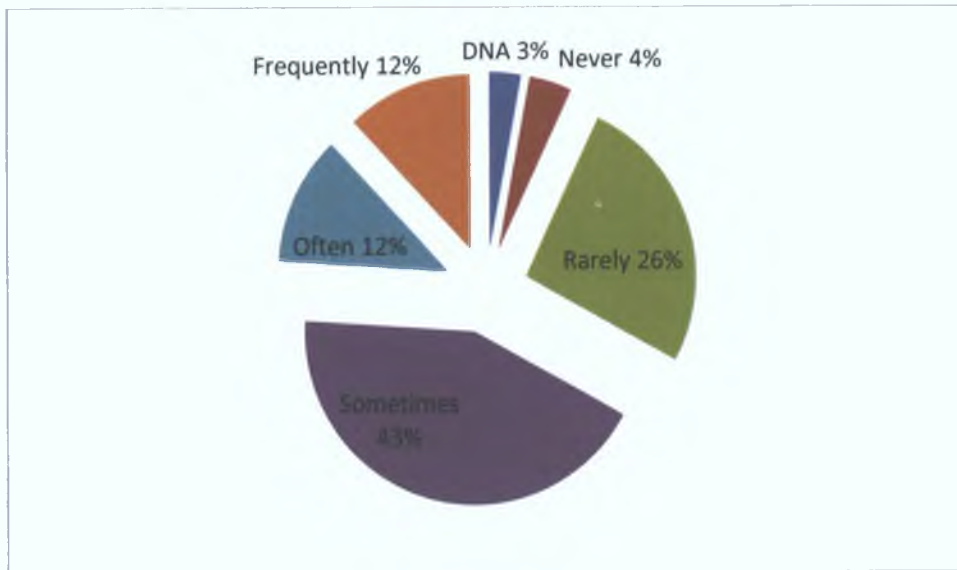
Diagram 6: Pie chart of frequency of stress experienced due to entrusting work to other members of staff

The findings of the interviews support the findings of the questionnaires. Interviewee 1 stated that he found himself '*Stressing myself out getting them to do jobs*'. He went on to explain;

'*It's annoying to have to chase OTC staff up, it's a fine balance trying to have good relationship and be their boss*'

'*I'm not very comfortable with this and find it difficult*'.

Interviewee 3 gave further support to this view as he stated;

'*The difficult element is ensuring they do what you expect and not what they want to do. It's not something I like*'.

41% of respondents 'rarely' experience stress when supervising co-workers while 28% 'sometimes' experience stress in this scenario. 8% reported 'frequently' experiencing stress in this situation. Both males and females were found to experience stress to a similar extent for this scenario as 4.1% of both experienced stress 'frequently'. This is in contrast to the

statistics for entrusting work to other staff members and this delegation of work appears to be a greater cause of stress than actually supervising the work of others

No discernible pattern could be identified regarding work conflict and level of seniority Further cross analysis indicated that approximately 40% of those registered since 2007 experienced stress in this situation 'sometimes' while those registered before 2002 experienced stress in 34% of cases This difference is possibly due to those having registered since 2007 being less experienced than their colleagues who registered before 2002

33% of respondents indicated they experienced stress 'sometimes' due to conflicts with co-workers Interestingly, 33% of respondents were also found to 'rarely' experience stress because of this Slightly more males than females (4% vs 3%) 'frequently' experience stress due to conflicts with co-workers Pharmacists working longer hours were also found to experience increased incidence of stress in this instance than those working shorter hours

4 5 Professional Recognition

70% of respondents indicated they felt stressed because they were not recognised as a true health professional 41% were found to be sometimes stressed by this while 4% were frequently' stressed by this The majority of respondents were also found to be stressed by not receiving recognition from the general public with 40% 'sometimes stressed, 21% 'often stressed and 7% 'frequently stressed by this Regarding stress due to poor career advancement prospects, 20% were 'sometimes stressed while 15% were 'frequently' stressed A further 26% said that this is rarely a cause of stress for them

Feeling overwhelmed in trying to meet patient expectations was 'sometimes a cause of stress for 37% while 44% indicated they were 'never or 'rarely stressed by this Question 8 related to stress caused by not being able to use ones abilities to the fullest Diagram 7 illustrates the

findings. 33% were 'sometimes' stressed by this while 49% were 'often' or 'frequently' stressed by this.
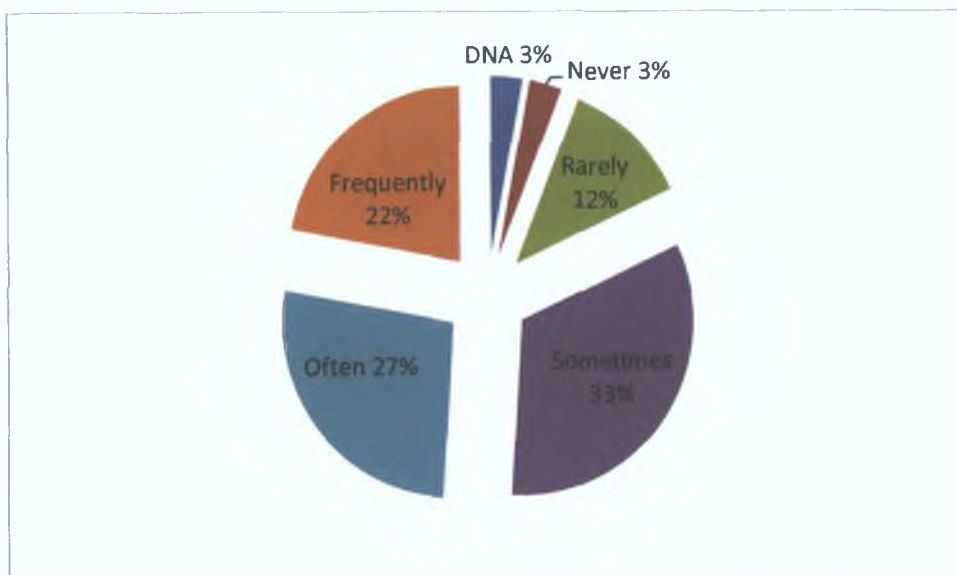
Diagram 7: Pie chart of frequency of stress experienced due to not being able to use ones abilities to the fullest

These figures were similar for both males and females. When compared with year of registration, 10% of those registered since 2007 said they were 'frequently' stressed due to not being able to use their abilities to the fullest compared to 4% of those registered before 2002. These findings are supported by the views of Interviewee 3 who stated;

'Paperwork, stock control and HR would take from the function of the pharmacist, unfortunately its part and parcel'.

He stated that pharmacists now *'have to perform those roles'.* It appears that the business management aspect of running a pharmacy may be a potential reason for the high stress levels evident here. This view is further supported by two questionnaire free-text responses;

'A ridiculous amount of paper work takes far too much time and completely takes from our role so we can't fulfil potential I spend more time with paperwork than dispensing some days'

'Increased workload re paperwork mainly in trying to adhere to all the new PSI regulations It leaves little time for what you're qualified to do'

'Time to speak with patients has reduced dramatically'

It appears that community pharmacists consider time spent dealing with patients to be very important and various factors are preventing them from doing this which may be leading to stress

Work appraisal does not appear to be a significant issue that causes stress for many pharmacists as lack of feedback on performance was never' or 'rarely' a cause of stress for 44% of respondents with 8 2% indicating that this is a 'frequent' cause of stress

4 6 Managing Workload

56% of respondents were either sometimes or 'often stressed due to excessive or increased workloads while 25% were 'frequently stressed because of this as shown in Diagram 8

Diagram 8: Pie chart showing DNA 3%, Never 4%, Rarely 12%, Sometimes 30%, Often 26%, Frequently 25%
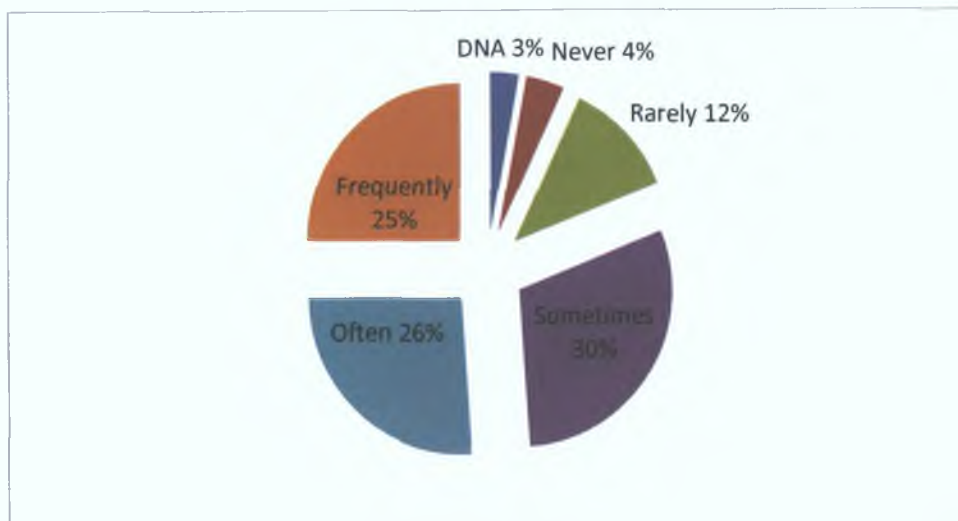
Diagram 8: Pie chart of frequency of stress experienced due to excessive or increased workloads

27% of those working between 30 - 45 hours per week experienced stress 'frequently' due to excessive workload compared with 32% of those working 45 or more hours per week. This indicates that longer working weeks may be contributing to stress levels.

This supported by the views of the interviewees. Interviewee 1 explained;

> *'I was in at 9am, was finished at 7 but didn't get to leave until quarter past 8 and was working solid for the 11 hours without much of a break. You don't get to eat so you get more stressed as you go through the day'.*

When asked to describe how busy he is in a normal day, Interviewee 3 remarked that *'whether or not I managed to eat a lunch'* was in indication of how busy he was and his duties consisted of *'doing everything and anything'*. He went on to explain;

> *'Complex prescriptions from hospitals increase workload, having a few of these prescriptions will have a significant impact of your workload' 'you get stretched and stress levels go up'.*

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Interviewee 1 described how *'it always feels like there is stuff to do and catch up on'*. This data indicates that work overload may be a significant cause of stress and lack of adequate breaks may also a major contributory factor. Stress levels in this instance were similar between males and females as 12% of both reported experiencing stress 'frequently' due to excessive workload.

Stress experienced due to being interrupted by phone calls or other staff while performing work duties was notably high. Diagram 9 illustrates the findings.
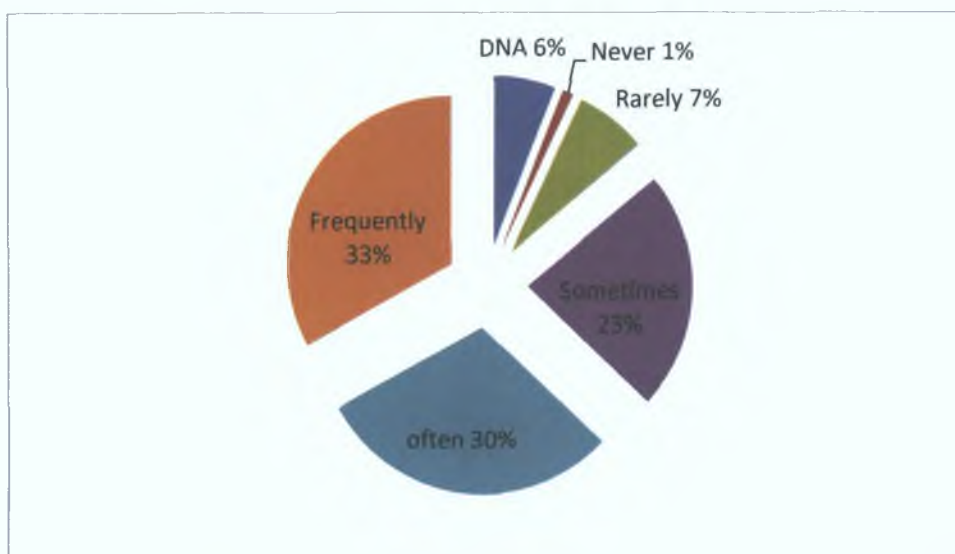
Diagram 9: Pie chart of frequency of stress experienced due to being interrupted by phone calls or other staff while performing work duties

One third of respondents were 'frequently' stressed due to interruptions while only 1% were 'never' stressed by interruptions. These findings are supported by Interviewee 4 who described the pressure that can be involved when trying to dispense medication and handle other issues simultaneously;

'It arises every night, a staff member could tell you that someone wants to talk to you, you could be in the middle of a big prescription and parents with babies are staring at you wondering why their single antibiotic is taking so long'.

One free-text questionnaire response also remarked that they were *'on call on the phone 24/7'* which further strengthens the view that interruptions due to phone calls and other staff members may be a significant cause of stress. Incidence of stress among females was marginally higher as 37% experienced stress 'often' and 'frequently' compared to 26% of males. 53% of those registered since 2007 experienced stress 'often' or 'frequently' which was similar to those registered before 2002 at 56%.

Just under half of respondents (47%) indicated that they 'rarely' or 'never' experience stress due to not being challenged at work. 25% experience stress in this situation 'frequently' or 'often'. 21% of respondents were found to be 'frequently' stressed due to workload affecting the amount of work that could be done well. The full data breakdown is given in Diagram 10.
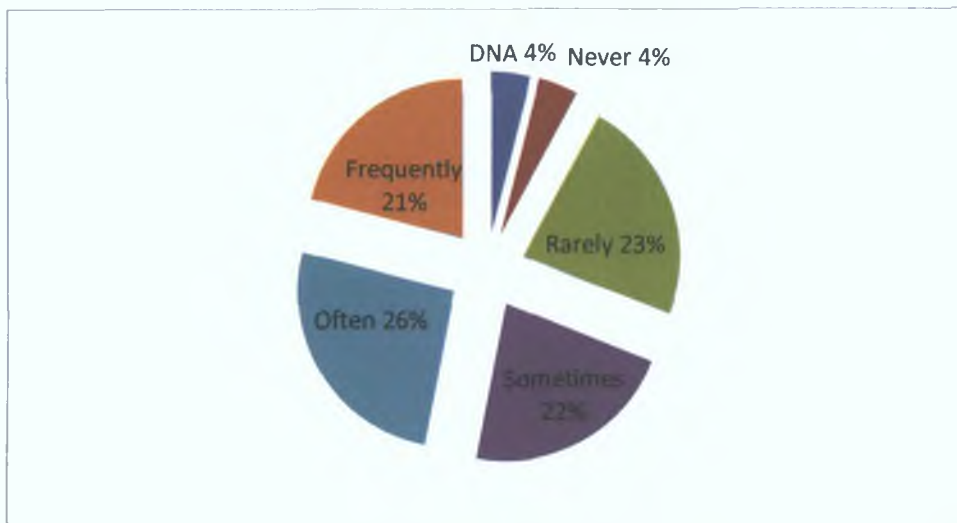
Diagram 10: Pie chart of frequency of stress experienced due to having so much work to do that everything cannot be done well

Interestingly, in 50% of cases those working in single (independent) pharmacies experienced stress 'often' and 'frequently however for those working in small multiples (2-5 pharmacy chain) this figure was 36% When considered in light of the results from stress due to work overload these results are what would be expected as excessive workload means less time can be spent completing each task The comments of Interviewee 1 support this as he states,

'You would be rushed a lot of the time, you try and ask what you think are the relevant questions'

The incidence of stress due to lack of control over workload was also significant as 68% of respondents were 'sometimes' , 'often' or frequently stress by this Interestingly 42% of those in single pharmacies experienced stress in this situation 'often' or 'frequently This compares to the lower figure of 28% for those working in small multiples This indicates that pharmacists working in independent pharmacies may be more stressed than those working for a pharmacy group When cross referenced with the data concerning the number of items dispensed the results were unexpected 67% of those who dispense 0-150 items per day experienced stress 'frequently', 'often or 'sometimes compared to 56% of those who dispense 150-300 items per day This is unexpected as one would expect the busier pharmacist to experience more stress in this instance

Question 6 in this section addressed the issue of stress caused by performing management duties for which one had not been trained 27% were found to be 'frequently' or 'often' stressed by this while 44% 'never' or 'rarely' experienced stress in this instance As was previously mentioned, stress was experienced due to delegating to other staff members 'frequently' or 'often among 24% of pharmacists This indicates that this may be an area which is causing high levels of stress Of those registered before 2002, 22% were 'often or

'frequently' stressed compared to 26% of those registered since 2007. These results are similar to those for stress caused by entrusting work to other staff. Question 7 in the 'Managing Workload' section addressed whether not having enough staff to provide necessary services adequately is a cause of stress. The results are outlined in the Diagram 11.
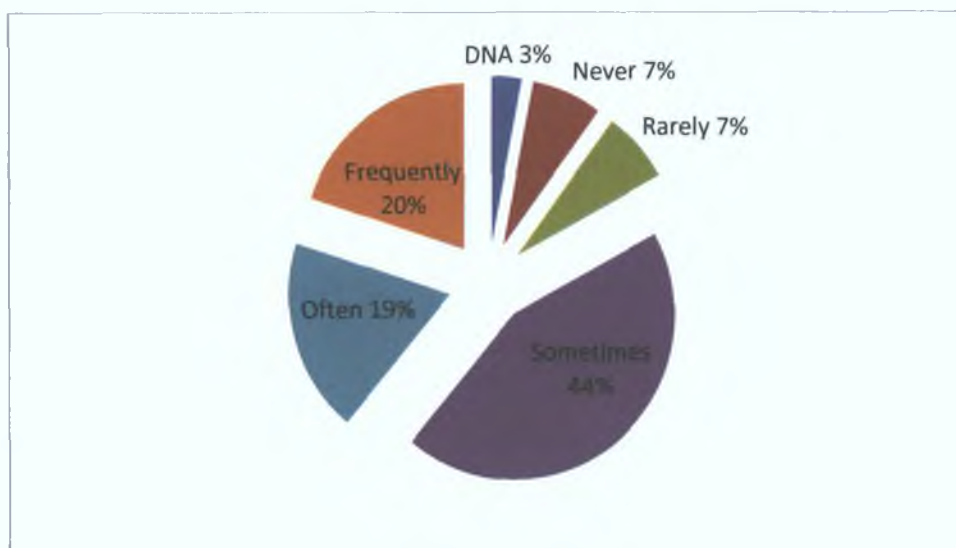
Diagram 11: Pie chart of frequency of stress experienced due to not having enough staff to provide necessary services adequately

The results are very interesting and are reflected in the data from the interviews. One fifth of respondents were found to experience stress 'frequently' due to understaffing. 76% of those registered since 2007 experienced stress 'sometimes', 'often' or 'frequently' compared to 86% of those registered before 2002. Interestingly, 8% and 12% of pharmacists working in single pharmacies experienced stress 'frequently' and 'often' respectively. This is contrasted with figures of 6% and 3% respectively for small multiples. This is further evidence that those working in single pharmacies experience stress more than those in small multiples indicating a possible trend. Support pharmacists appear to demonstrate a higher level of stress than supervising pharmacists, with 10% 'frequently' experiencing stress and 16% 'sometimes' experiencing stress compared to 6% and 10% of supervising pharmacists respectively.

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These findings are supported by data from the semi-structured interviews and questionnaire free-text responses Interviewee 2 stated,

'It can be a lot more stressful if not enough staff on If not enough other staff you can be easily distracted and can be more stressful in terms of getting everything done inside (in the dispensary) *and having to deal with customers at the same time Mistakes happen more frequently'*

Interviewee 4 also indicated that understaffing can have a significant impact, *'if we had more staff it would make dispensing less stressful'* Several free-text questionnaire responses also addressed this issue,

'Stress for me is directly related to workload and lack of qualified staffing'

'Too many items, not enough staff'

'Support and more support is the most important thing, I believe especially when working in a busy pharmacy

A related issue that arose from the free-text responses related to a lack of qualified staff,

The biggest stress comes from working with staff that are not properly trained'

'Lack of qualified staffing

This issue also arose in the interviews with Interviewee 1 stating *'inexperienced people can make it much more difficult'* These responses indicate that it is an area which may warrant further investigation

4 7 Professional Uncertainty

The majority of respondents (69%) were found to 'never or 'rarely' experienced stress because of significant change in their place of work In contrast to these figures 58% of pharmacists experienced stress 'sometimes' or 'often due to having to balance new roles with existing responsibilities When these results are cross-referenced, it can be seen that 29% of superintendent pharmacists 'often' feel stress due to balancing new roles compared to just 12% of support pharmacists These results are as expected when one considers the additional responsibilities given to superintendent pharmacists as a result of the Pharmacy Act 2007

The following response from Interviewee 4, a superintendent pharmacist, supports these findings

'There will be a lot of pressure to fulfil the obligations of the Pharmacy Act which might be to the detriment of our work'

One free-text response also provides evidence to support this view, stating

The biggest stress is the increased workload re paperwork in trying to adhere to the new PSI regulations'

The need to keep up with new developments in order to maintain professional competence was found to be a cause of stress for over three quarters of questionnaire respondents as 7% were frequently stressed while 61% were sometimes or often stressed by having to attend classes or complete study modules in order to fulfil Continuing Professional Development requirements

Since the economic downturn in 2008, the HSE has implemented a range of reductions in fees paid to pharmacies and in the cost of drugs. This was examined in relation to stress levels and the results are illustrated in Diagram 12.
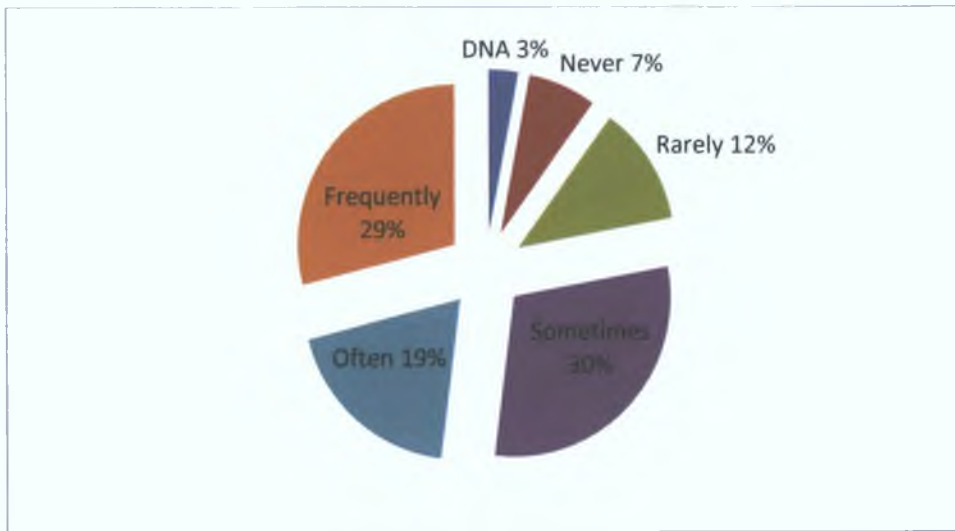
Diagram 12: Pie chart of frequency of stress experienced due to on-going uncertainty regarding HSE reimbursement prices and fees paid to pharmacies

As can be seen, the majority of pharmacists are experiencing some level of stress due to the actions of the HSE in relation to payments to pharmacies with 29% experiencing stress 'frequently'. Further analysis indicates that superintendent pharmacists experience stress 'frequently' in 58% of those sampled while the corresponding figures for supervising and support pharmacists were 37% and 15% respectively. These results are as expected as the superintendent is very often the managing or owner pharmacist therefore the financial stress would most likely be felt by them. 33% of pharmacists working in single pharmacies were found to be 'frequently' stressed compared to 21% of those in small multiples and 12% in large multiples.

Deregulation has meant that competition in the community pharmacy sector has increased dramatically in the last ten years. The impact of this on pharmacists was examined. The majority of pharmacists were found to experience stress due to increased competition with 18% 'frequently' and 25% 'often' experiencing stress. This data is illustrated in Diagram 13.
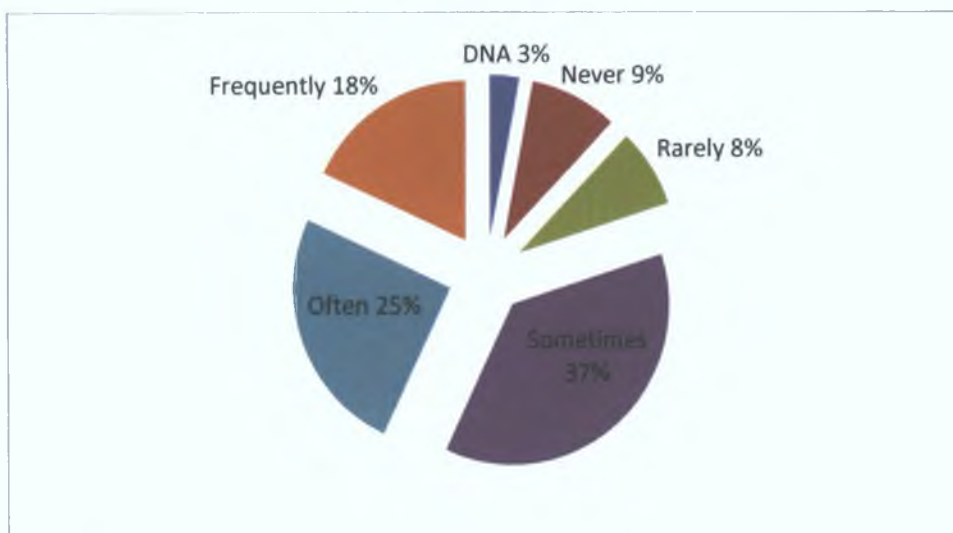
Diagram 13: Pie chart of frequency of stress experienced due to increasing competition in the community pharmacy sector

When the data is cross-referenced with level of seniority, 50% of superintendent pharmacists were 'frequently' stressed compared to just 8% of support pharmacists and 10% of locum pharmacists. These results are similar to those found for stress caused by uncertainty regarding fees paid to pharmacists and are likely to be related to the fact that that many superintendent pharmacists are pharmacy owners and must protect their business from threats such as increased competition. There may be evidence of a trend here towards increased stress levels among supervising pharmacists which may warrant further investigation. Support pharmacists or locum pharmacists, in contrast, are not as likely to be concerned by increased competition. Interview responses support these findings as Interviewee 4 remarked *'It's worrying. There is a lot of competition. Profits have taken a hammering'*. Interviewee 1 was

deeply concerned regarding the level of increased competition and its impact on his profession

I would think every day about the future It has changed so much since I finished

college, wondering if you made the right decision (to study pharmacy)'

'Is it a race to the bottom?'

The interviews also provided an insight into how increased competition combined with the recession has changed the community pharmacy landscape Interviewee 3 explained that,

'Up to 2008, the primary function was dealing with every customer, purchasing was

less significant, now you are expected to be able to still deal with everyone and yet

still balance your books

Interviewee 4 further supported these views in relation to the recession stating *'It has made a*

big difference we would have more staff members' The impact of the recession was not dealt with specifically in the questionnaire however these responses indicate that it may also be a factor in the stress levels of pharmacists since as discussed understaffing is likely to be a cause of stress

The issue of stress management training and techniques was discussed in the interviews and the responses indicated that while the interviewees were not aware of any stress management techniques, they would certainly welcome training or education in this area Interviewee 3 was very forthcoming on this issue as he explained,

'Stress management should be incorporated into something that we do Pharmacists

under stress leads to mistakes poorly performing shops and unhappy staff A degree

in pharmacy doesn t teach you anything about day to day running of a pharmacy'

There are too many pharmacists working in what is a relatively stressful environment and have no coping mechanism I certainly would welcome some element of that in terms of CPD'

Interviewee 4 supported this view stating that knowledge about stress management techniques *would be very relevant, there is definitely a gap for it*

4 8 Summary of Key Findings

Work-related stress is experienced by community pharmacists who participated in this study Stress was experienced by participants across each of the five areas examined by the questionnaire and the four interviewees were found to experience work-related stress also

Table 6 lists the top six factors which questionnaire participants said caused them stress frequently'

Situation	%
Interruption by phone calls or other staff when performing work duties	33%
On-going uncertainty over HSE drug prices and fees paid to pharmacists	29%
Excessive or increased workloads	25%
Not being able to fulfil ones abilities to the fullest	22%
Having so much work to do that everything cannot be done well	21%
Not having enough staff to provide necessary services adequately	21%

Table 6 Top 6 situations which questionnaire participants said caused them to be 'Frequently' stressed

Both supervising and superintendent pharmacists experience higher levels of stress than support pharmacists in relation to non-clinical, business management issues The level of

responsibility pharmacists have for the patients under their care is a source of stress for the vast majority of pharmacists who took part in the study Pharmacists working in single, independent pharmacies experience stress more frequently than those working in small multiples or large multiples

The non-clinical roles of the pharmacist such as work delegation and staff management were found to be a considerable cause of stress and may be affecting the time pharmacists have to spend with patients Understaffing may also be contributing to this situation Balancing various roles such as dispensing medication and stock management was found to be a significant cause of stress There is evidence of lack of job satisfaction as many pharmacists were found to be stressed due to not being able to use their abilities to the fullest Awareness of stress management techniques among community pharmacists appears to be low however pharmacists are interested in being educated in this area The recession the on-going uncertainty with regard to the income of pharmacies from state contracts and frequent changes in drug prices are significant causes of stress among the community pharmacists who took part in the study

While the limitations of the study mean that no inferences can be made regarding the total population of community pharmacists in Ireland the results indicate that this phenomenon is worthy of further research

5 DISCUSSION

5 1 Introduction

The aim of this study was to explore the levels of work-related stress experienced by community pharmacists in Ireland An overall response rate of 33% was achieved for the questionnaire This response rate was acceptable for a self-administered web-based questionnaire The results suggest that work-related stress does exist among the community pharmacists who took part in the study The findings of the study will now be discussed with reference to the literature This will be done in sections which correspond to the themes identified by the questionnaire and interviews

The findings of this study are consistent with those of McCann et al (2009) (a) who found that a moderate level of work-related stress existed among community pharmacists in Northern Ireland While the exact levels of stress in this study could not be determined due to questionnaire limitations, stress could be seen to exist in the sample of Irish community pharmacists studied The findings are also consistent with a similar study in New Zealand which found work-related stress exists among community pharmacists at moderate levels (Dowell, Westcott, McLeod & Hamilton, 2001)

5 2 Patient Care Responsibility

This is an area which contributes significantly to stress among community pharmacists as almost all pharmacists surveyed (92%) were found to experience some level of stress due to being ultimately responsible for patient outcomes As the number of items dispensed per day gets higher the frequency of stress is also seen to increase This may be linked to increased

likelihood of an error occurring 75% of pharmacists were found to experience stress due to fear of making a mistake When compared with other studies, this figure is quite high Lapane and Hughes (2004) found that only 33% of pharmacists reported stress because of fears of mistakes in patient treatment A possible explanation for this difference may be that dispensing processes in different countries differ The use of automated dispensing is more widespread in some countries compared to Ireland The high number of pharmacists who work as the sole pharmacist on duty (67%) may also contribute to high stress levels as having each item double checked is not possible The issue of lack of qualified staff may also be important in this situation The presence of a qualified pharmacy technician means a system of double checking of items may be used This would lead to reduced likelihood of mistakes occurring and therefore less stress for pharmacists

Incidence of stress compared to year of registration was similar for all groups and excludes the possibility that level of experience affects the stress experienced Data from the interviews suggests that the more items a pharmacist is dispensing, the more they can feel stress due to fear of making a mistake The change in pharmacy practice and expanding role of the pharmacist since the study by Lapane and Hughes (2004) may account for the difference in findings between this study and that of Lapane and Hughes (2004) This difference in findings is one which requires further investigation in order to establish why Irish pharmacists appear to be under more stress than their counterparts abroad

The vast majority of participants indicated that a lack of adequate information regarding a patient's condition caused them stress This supports the findings of Wolfgang (1988) (b) who found that this issue was a significant cause of stress among pharmacists This is possibly due to communication barriers between pharmacists and other healthcare professionals It may also be due to the amount of time pharmacists spend with patients as the research indicated

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that pharmacists are increasingly constrained in the time they spend with patients Ideally, pharmacists would spend more time dealing individually with patients rather than dispensing, thereby improving their knowledge of patient's individual conditions

5 3 Work Conflicts

Stress caused by having to entrust work (delegate) to other members of staff was found to be a major cause of stress from the questionnaire respondents and interviewees The supervising of other staff members was also noted to cause stress but not as frequently As mentioned previously, the primary functions of a pharmacist are clinical duties however delegation of work is a managerial responsibility

The issue of managerial duties causing stress was a recurring theme throughout the questionnaire and interviews As mentioned, a large proportion of pharmacists indicated they were stressed due to entrusting work to others While stress due to patient care responsibilities was very evident, issues surrounding pharmacy management also appeared to be causing stress This is reflected in the literature as insufficient training in communication and management skills is recognised as a major factor which can negatively affect workers (Ramirez et al 1996) The interviews allowed participants to be more open about this issue and when their responses are combined with the evidence from the questionnaire data, it is clear that the non-clinical duties such as stock, personnel and financial management are taking up an increasing amount of time and leading to stress for some pharmacists One striking quote from Interviewee 3 stated,

'A degree in pharmacy doesn't teach you anything about day to day running of a pharmacy'

This evidence implies that the role of the pharmacist may be assuming more and more managerial responsibilities which must be done in addition to the clinical duties This is consistent with evidence from the literature as the research of Ottewill et al (2000), which had a direct focus on community pharmacists in the U K , highlights the fact that management skills can be as important as medical skills in a community pharmacy Studies in Germany have also found that there is an increasing focus on the commercial aspects of the pharmacist's duties at the expense of the healthcare aspects (Pioch & Schmidt, 2001)

The managerial style of the pharmacist is also important as this can affect both the pharmacist and their staff According to Friedman et al (2000) managers that use a more integrative style experience lower levels of task conflict and lower stress whereas those who use a more dominating style experience more tack conflict and, subsequently, more stress Management style was not examined in this study however it is relevant in the context of managerial skills and is an aspect of community pharmacy that may warrant further investigation

5 4 Professional Recognition

Not being recognised as a true health professional by other health professionals was found to be a major cause of stress experienced by pharmacists as was not receiving recognition from the general public Evidence that a lack of adequate information is available to pharmacists is also suggestive of communication difficulties between pharmacists and other healthcare professionals

Being able to use one's abilities to the fullest proved to be an important issue for many pharmacists as just under half (49%) of questionnaire respondents were found to be 'frequently' or 'often' stressed by this Spending more time on non-clinical roles may mean more stress as pharmacists cannot use the clinical knowledge and skills at their disposal This

finding was supported by the interview findings and also several questionnaire free-text responses, many of which identified 'paperwork' as major cause of stress

Further evidence in support of these findings is abundant in the literature Jacobs et al (2011) refer to the phenomenon of combining clinical and managerial roles as Professional-Business role dichotomy Pines (1993) found that administrative tasks, such as paperwork, are inconsistent with professional activities and take human service professionals away from their primary focus which is working with and helping clients Furthermore, Guest (2009) and Cramton et al (1995) found role overload and dealing with multiple tasks to be important factors in increased stress levels among pharmacists

Taking a broader view on these findings it appears that there is a frustration among pharmacists that current work practices mean they cannot meet and interact with patients as much as they would like and this is leading to stress and lack of self-fulfilment The findings of Smith et al (2004) indicate that work overload which was found to exist among the pharmacists sampled in this study, led to a decrease in the amount of time spent by pharmacists counselling patients While dispensing and administration duties had been to some extent, preventing pharmacists from taking a more active role in patient care business management duties are now becoming more important and are acting as a further barrier between pharmacist and patient This appears to be having a knock-on effect on the quality of patient care and on the stress levels of pharmacists

5 5 Managing Workload

The majority of respondents (82%) experienced some level of stress due to work overload These findings are supported in the literature by Gidman (2011) who found that pharmacist workload in the U K has increased and pharmacies are becoming more stressful places in

which to work McCann et al (2009) (a) also found work overload to be an important factor in community pharmacist stress levels in Northern Ireland

Increased stress due to increased workload is what would be predicted using the Demand-Control Model created by Karasek (1979) as the amount of work performed under pressure was identified as a cause of stress Karasek's model also predicted interruption rate and conflicting demands to be a major contributor of work-related stress The results of this study give support to this model as the majority of pharmacists surveyed indicated that interruptions due to phone calls or other staff members was a cause of stress for them 33% or respondents reported that this 'frequently' causes them stress This was the highest 'frequently' response obtained from all the questionnaire questions indicating that this may be an issue worthy of further research This was mirrored m the McCann et al (2009) (a) study as frequent interruptions by phone calls or other staff were found to be an important source of stress Further support for these findings comes from Wolfgang (1988) (b), who also found dealing with interruptions to be an important source of stress for pharmacists Data from the interviews also suggests that conflicting demands such as dispensing and dealing with other issues simultaneously can be a source of stress

Adler and Benbunan-Fich (2012) explored the relationship between multi-tasking and performance and found that increased levels of multi-tasking led to an increase in errors Multi-tasking appears to be commonplace for pharmacists as they juggle clinical and managerial roles 74% of respondents were found to experience stress due to fear of making a mistake and since multi-tasking can increase error, this may be contributing to pharmacist stress levels

5 5 1 'Long Hours' Culture

A 'long hours' culture, where there is a lack of adequate work breaks, was found to exist among the participants Some interviewees spoke at length on this issue and remarked how it led to increased stress These findings are supported by the literature as a 'long hours' culture was also identified by Hassell (2009) Further evidence comes from McCann et al (2009) (a) and (b) who both cited 'long hours' as a potential source of stress for community pharmacists The strong support for the findings of this study in the literature indicates that this is an area which warrants further research in Ireland

5 6 Lack of Challenge

Just over half the respondents reported experiencing stress due to not being challenged by their work These findings mirror those of Wolfgang (1988) (b) who demonstrated that a lack of challenge was an important source of stress for pharmacists However, this figure was large compared to the McCann et al (2009) (a) study which found that a relatively low number of pharmacists were stressed due to not being challenged by their work A study by Mott, Doucette, Gaither, Pedersen and Schommer (2004) also found relatively few pharmacists to be stressed due to not being challenged by their work These findings are also unusual when compared to the findings on entrusting work to other members of staff Both the interviews and questionnaires indicated that the majority (77%) of pharmacists experience significant stress when dealing with managerial issues such as delegating work

When figures relating to stress due to delegation and supervising difficulties are considered in light of the results on being challenged at work, it appears that it may be in the clinical rather than the managerial roles that pharmacists find themselves 'unchallenged' Legislation differs greatly between countries in relation to prescription requirements for medicines and the tasks

that a pharmacist can legally carry out Pharmacists in Northern Ireland can, for example, prescribe certain medications on completion of a prescribing course This is currently not possible in Ireland and factors such as these may be contributing to the high stress levels due to not being challenged by work

5 7 Understaffing

Understaffing in pharmacies was found to be a major cause of stress for community pharmacists 21% of all respondents experienced stress frequently' because of staffing levels McCann et al (2009) (a) also found lack of adequate staff to be an important source of stress Terantanavat and Kleiner (2001) identify understaffing as a major source of stress in small businesses These findings are also supported by Lapane and Hughes (2004) who reported that short-staffing was the most frequently reported source of stress among pharmacists Both the interviews and questionnaire free-text responses provide plentiful data to support these findings One particular free-text response summed up the overall findings when they wrote *'Support and more support is the most important thing, I believe, especially when working in a busy pharmacy* Stress resulting from understaffing may be due to increased likelihood of errors taking place as Interviewee 2 remarked *'If not enough other staff you can be easily distracted'* Potential for making an error was already identified as a likely source of stress and understaffing may be exacerbating the situation

An interesting trend emerged from the data in relation to whether the pharmacist worked in a single pharmacy or a group of pharmacies 8% and 12% of those working in single pharmacies experienced stress 'frequently' and often' respectively compared with 6% and 3% respectively for small multiples A possible reason for this is single pharmacies may be under more financial pressure and thus have fewer staff or perhaps independent pharmacies

do not have the same level of managerial expertise and support available to ensure staff are organised more effectively Lack of managerial skills has already been discussed in relation to delegation of work and this may be relevant in this situation also

In addition to this, 42% of those in single pharmacies experienced stress due to lack of control over workload 'often' or 'frequently' This compares to the lower figure of 28% for those working in small multiples Also, in 50% of cases, those working in single pharmacies experienced stress 'often' and 'frequently' due to having so much work to do that everything cannot be done well however for those working in small multiples this figure was 36% It appears that pharmacists working in single pharmacies may be experiencing more stress than those working in small multiples, large multiples or pharmacy chains This is an area which warrants further investigation as pharmacists working in these single pharmacies may be more at risk from the negative outcomes of stress than those working for larger chains

A separate but related issue which arose from the both the interviews and the questionnaire free-text responses related to an apparent lack of qualified support staff working in pharmacies One free-text response stated 'The biggest stress comes from working with staff that are not properly trained' There are currently no requirements for any staff member, other than the pharmacist, to hold a recognised qualification in order to work in a community pharmacy in Ireland This may be a possible reason for these findings however this is certainly an area which should be investigated in future studies as lack of qualified staff may be contributing to stress just as much as understaffing

5 8 Professional Uncertainty

Over half of pharmacists who completed the questionnaire experienced stress due to having to balance new roles with existing responsibilities however more superintendent pharmacists

than support pharmacists were found to experience stress in this instance This theme also emerged from the interviews and free-text responses This is possibly related to the increased level of responsibility they have due to the increased regulations in the Pharmacy Act 2007 and the increased powers given to the pharmacy regulatory body (the Pharmaceutical Society of Ireland)

Terantanavat and Kleiner (2001) contend that lack of experience is one of the five main sources of stress in small businesses This did not appear to be borne out by the findings as the less experienced participants (those registered since 2007) did not appear to have any higher overall stress levels than their more experienced colleagues It was the more experienced pharmacists who appeared to experience more stress A possible explanation for this is that less experienced pharmacists may have to deal with business management issues less frequently as they may not be the managers or owners of the pharmacy business

5 9 Financial Uncertainty

The issue which appeared to cause most stress to pharmacists in relation to professional uncertainty related to on-going uncertainty over HSE reimbursement prices and fees paid to pharmacists 29% of questionnaire respondents were 'frequently' stressed because of this issue while 19% were 'often' stressed by it McCann et al (2009) (a) found that 30% of pharmacists experienced stress due to a similar issue relating to community pharmacy contracts with the state These figures illustrate how financial issues such as these can cause significant stress for pharmacists Further analysis also indicates that, as before, pharmacists in single pharmacies experienced stress more frequently than those in small multiples or large multiples which fits in with the trend already identified This problem may be exacerbated due to the impact of the recession in the past few years The research of Brock and Evans (1989)

supports the findings that single pharmacies may be under increased financial pressure as the authors assert that liquidity dries up faster for smaller firms than larger firms during a recession

5 10 Increased Competition

The increased level of competition in the community pharmacy sector has resulted in stress for many pharmacists Similar to stress due to financial issues, this appears to be highest for superintendent and supervising pharmacists The interviews were quite revealing in relation to this issue One pharmacist described how he worried about the future of community pharmacy, describing the industry at present as a *'race to the bottom'* in terms of drug prices and salaries He also questioned whether he made the right choice to choose a career in pharmacy as the industry is now experiencing so much change The interviews also revealed evidence of a possible shift in emphasis for some pharmacists away from the clinical aspect of their job towards a more financially orientated role with issues such as cost savings through closer stock control central to this These findings indicate that the change taking place in the industry may not benefit either the patient or the pharmacist as pharmacists may become more stressed and spend less time dealing with clinical issues Further research is required to explore this issue

5 11 Continuing Professional Development

The need to keep up with new healthcare developments to maintain professional competence has been found to be a cause of stress for pharmacists (Lapane & Hughes, 2006) The research findings support this assertion as 67% of respondents were found to experience stress 'frequently', 'often' or 'sometimes' due to CPD requirements Since work overload was

found to be a leading cause of stress it is possible that having to attend additional classes outside of normal working hours is acting as yet another stressor for community pharmacists

Interviewee responses did however indicate that CPD on stress management would be very much welcomed Indeed management of occupational stress was a theme which emerged from the interview process and which some interviewees spoke at length about Of the four interviewees, none were aware of any possible ways to reduce or manage their own stress levels or those of their co-workers It appears that a knowledge gap exists in relation to stress management techniques among community pharmacists The interviewees in this study acknowledged both a gap in their knowledge in this area and also a desire to bridge this gap through CPD

5 12 Key Findings

The responsibility that pharmacists have for patients was a source of stress for the majority of pharmacists who took part in the study

Pharmacists working in single, independent pharmacies experienced more stress than those working in small multiples, large multiples or pharmacy chains

Senior pharmacists (supervising and superintendent) are more likely to experience work-related stress than support or locum pharmacists in relation to staff management and business/ financial issues

There appears to be an acknowledgement that the more business-oriented duties of pharmacists are beginning to encroach on the time they spend with patients as the business environment becomes less favourable for pharmacies Increased competition is also contributing to this trend

Managerial duties which must be carried out in addition to clinical duties are a constant source of stress for many pharmacists as they are struggling with a growing workload and often lack the managerial skills to cope with management duties

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6 CONCLUSIONS

Work-related stress is experienced by some community pharmacists in Ireland This work-related stress is having a negative impact on pharmacists, their patients and their businesses Owing to research limitations, the scale of this phenomenon in Ireland cannot be accurately determined however several factors have been identified which account for work-related stress amongst this sample Some of the more significant reasons for this stress are frequent interruptions when performing work duties, increasing workloads and financial uncertainty These are some of the same stressors that Wolfgang (1988) (b) described, indicating that work environments for community pharmacists have changed little in the past twenty five years

The daily workload of pharmacists is increasing This increase in workload is related to a possible shift in emphasis from clinical responsibilities to managerial responsibilities Clinical responsibilities have not diminished however managerial tasks such as stock and personnel management have now assumed greater importance for many pharmacists The marriage of these two roles is proving difficult due to a lack of management skills Additional management roles mean that pharmacists have less time to spend with patients which may be having a negative impact on pharmacist-patient relationships

Staffing levels are viewed by many as being insufficient however the impact of the recession and reductions in fees paid to pharmacists may mean this issue is likely to continue

Education in the area of business management may allow pharmacists to assume more control over their workload It may also assist in addressing the issue of understaffing as a more thorough understanding of personnel management may mean more effective use of the human resources available

While the limitations of this research must be acknowledged, the findings present strong

evidence for the presence of work-related stress among community pharmacists in Ireland

Further research is required in order to more fully understand this phenomenon

7 RECOMMENDATIONS

Managerial roles are a frequent cause of stress and should be examined in terms of further education and training The introduction of management modules to the curriculum for pharmacy students would help to improve this situation The pharmacy representative body, the IPU, should work towards facilitating CPD for pharmacists to help bridge a possible knowledge gap relating to business management This would be especially beneficial in the areas of stock, personnel and financial management and staff training

The IPU should also facilitate education of all pharmacists in the area of stress management Similarly, pharmacy managers / owners should be encouraged to facilitate employee pharmacists in developing awareness about this issue

Evaluating dispensing processes and reviewing the work environment may help in identifying and reducing stress causing practices Pharmacist involvement in any stress reduction process is important and management must be aware of this Practical solutions to some issues may involve screening phone calls or moving telephones away from the dispensing area to minimise interruptions when the pharmacist is dispensing

The development of a 'Stress Policy' by pharmacy owners / managers would be beneficial as it would outline the steps taken to prevent stress and also the most appropriate action to take when dealing with stress once it is acknowledged A sample policy which can be adapted to suit any organisation can be found in Appendix 3 (Health and Safety Executive, 2012)

Pharmacy owners/ managers must examine ways to allow pharmacists to take breaks during the day Legislative and financial restrictions will mean that this may be difficult to organise

as employing two pharmacists in order to allow for alternative lunch breaks would be very costly Simply encouraging pharmacists to take regular breaks during less busy times may help this situation as evidence indicates that many pharmacists choose not to take breaks even when they have no patients to attend to immediately

Increased recognition on behalf of the HSE of the clinical skills that pharmacists have could lead to the introduction of more clinical responsibilities for pharmacists Further emphasis on this area of a pharmacist's expertise may help to move pharmacists away from the dispensing and managerial roles into a more active role in patient care Recent developments have seen pharmacists take part in vaccination programmes The success of this programme has served to highlight the huge positive impact that giving pharmacists more clinical responsibilities can have Pharmacist prescribing is a good example of an area where pharmacist's skills can be further utilised The evidence presented here indicates that this is likely to benefit pharmacists through increased professional fulfilment, as well as patients

8 FUTURE STUDIES

The findings of this study raised several issues which future studies may seek to address Lack of qualified staff emerged as an important issue for many pharmacists Future research may identify whether this is true for Irish community pharmacies and the impact it may be having

High levels of stress were found among Irish pharmacists compared to those in other countries regarding dispensing errors Research in this area would indicate possible reasons for this and highlight ways to improve community pharmacy in Ireland

The managerial aspect of community pharmacy was a theme which emerged throughout the research Future research may examine the value of including business management modules into both third-level curriculums for pharmacy students and CPD modules

The levels of work-related stress experienced by pharmacists working in independent pharmacies warrants further investigation This was found to be greater than for pharmacists working in pharmacy multiples indicating that this particular group may be at significant risk from stress

The role of community pharmacists is changing The nature of this change is likely to have a significant impact on both patients and pharmacists The role of community pharmacists and their place in the healthcare system should be examined in future studies of the industry

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APPENDICES

Appendix 1 Cover Letter / Email Sent to Potential Respondents

Dear Colleague,

My name is Michael Doody (M.P.S.I.) and I am currently carrying out a study to explore pharmacist's attitudes towards stress in the workplace. This study is to be used as research for a thesis which I am completing as part of a Master's degree in the National College of Ireland. I studied pharmacy at University College Cork and currently work full-time as a pharmacist in Rathmines Pharmacy, Dublin 6.

As part of this study, I would like to invite fellow community pharmacists to complete an online questionnaire to obtain their views on this issue. The questionnaire should take no more than 7-10 minutes to complete. Your response will be anonymous and all information will be treated confidentially. To ensure results are uniform, please complete the questionnaire on a Tuesday or Wednesday morning between 10am and 11am.

If you wish to participate, please click on the link below to access the questionnaire:

https://www.surveymonkey.com/s/pharmaciststresssurvey

Once finished, please click on the 'Done' button at the end of the questionnaire to ensure your responses are saved!

If you would like to view the findings of this research or receive any further information on the study then please fill in your details in the relevant section of the questionnaire. The research findings are due to be finalised in August of this year.

Please feel free to forward the link to any other pharmacists you think may be interested in taking part in the questionnaire.

Thank you for taking part in this study. If you have any further questions or any difficulties in accessing the questionnaire, please do not hesitate to contact me at the contact details below.

Yours sincerely,

Michael Doody M.P.S.I. PSI #9661

thomasmichaeldoody@gmail.com tel: 087-6290965

Appendix 2 Semi-Structured Interview Schedule

1 Describe your role within the pharmacy?

2 How would you describe your workload?

3 Describe your daily and weekly work schedule?

4 How do you feel about the non-clinical duties of a pharmacist?

5 Studies in Britain have found that a culture of 'long hours' exists for community pharmacists How would you describe the situation in Ireland?

6 How comfortable is your work environment?

7 Are you comfortable with the level of responsibility you have for patients

8 Do you think that pressure at work causes you to perform less well?

9 Has your work environment changed since you qualified as a pharmacist as if so please describe how?

10 Have regulatory changes brought about by the Pharmacy Act 2007 impacted your work?

11 Do you feel that the recession has affected your work duties and work environment and if so, how?

12 How would you describe the working relationship between you and your non-pharmacist support staff?

13 Do you, as a supervising/superintendent/support/locum pharmacist think it is important that community pharmacy owners/ managers should be familiar with stress management techniques for employee pharmacists?

14 How do you feel about the future of community pharmacy?

Appendix 3 Stress Policy

Introduction

We are committed to protecting the health, safety and welfare of our employees We recognise that workplace stress is a health and safety issue and acknowledge the importance of identifying and reducing workplace stressors

This policy will apply to everyone in the company Managers are responsible for implementation and the company is responsible for providing the necessary resources

Definition of stress

The Health and Safety Executive define stress as "the adverse reaction people have to excessive pressure or other types of demand placed on them" This makes an important distinction between pressure, which can be a positive state if managed correctly, and stress which can be detrimental to health

Policy

- The company will identify all workplace stressors and conduct risk assessments to eliminate stress or control the risks from stress These risk assessments will be regularly reviewed

- The company will consult with Trade Union Safety Representatives on all proposed action relating to the prevention of workplace stress

- The company will provide training for all managers and supervisory staff in good management practices

- The company will provide confidential counselling for staff affected by stress caused by either work or external factors

- The company will provide adequate resources to enable managers to implement the company's agreed stress management strategy

Responsibilities

Managers

- Conduct and implement recommendations of risks assessments within their jurisdiction

- Ensure good communication between management and staff, particularly where there are organisational and procedural changes

- Ensure staff are fully trained to discharge their duties

- Ensure staff are provided with meaningful developmental opportunities

- Monitor workloads to ensure that people are not overloaded

• Monitor working hours and overtime to ensure that staff are not overworking Monitor holidays to ensure that staff are taking their full entitlement

• Attend training as requested in good management practice and health and safety

• Ensure that bullying and harassment is not tolerated within their jurisdiction

• Be vigilant and offer additional support to a member of staff who is experiencing stress outside work e g bereavement or separation

Occupational health and safety staff

• Provide specialist advice and awareness training on stress

• Train and support managers in implementing stress risk assessments

• Support individuals who have been off sick with stress and advise them and their management on a planned return to work

• Refer to workplace counsellors or specialist agencies as required

• Monitor and review the effectiveness of measures to reduce stress

• Inform the employer and the health and safety committee of any changes and developments in the field of stress at work

Human resources

• Give guidance to managers on the stress policy

- Help monitor the effectiveness of measures to address stress by collating sickness absence statistics

- Advise managers and individuals on training requirements

- Provide continuing support to managers and individuals in a changing environment and encourage referral to occupational workplace counsellors where appropriate

Employees

- Raise issues of concern with your Safety Representative, line manager or occupational health

- Accept opportunities for counselling when recommended

Safety representatives

- Safety Representatives must be meaningfully consulted on any changes to work practices or work design that could precipitate stress

- Safety Representatives must be able to consult with members on the issue of stress including conducting any workplace surveys

- Safety Representatives must be meaningfully involved in the risk assessment process

- Safety Representatives should be allowed access to collective and anonymous data from HR

- Safety Representatives should be provided with paid time away from normal duties to attend any Trade Union training relating to workplace stress

• Safety Representatives should conduct joint inspections of the workplace at least every 3 months to ensure that environmental stressors are properly controlled

Safety Committee

- The joint safety committee will perform a pivotal role in ensuring that this policy is implemented

- The joint safety committee will oversee monitoring of the efficacy of the policy and other measures to reduce stress and promote workplace health and safety

Signed by

Managing Director   Date

Employee Representative Date

Appendix 4. Questionnaire

The purple bar (above) indicates the percentage of the survey you will have completed by the end of the current question page

For the purpose of this research the definition of stress is The psychological and physical state that results when the resources of the individual are not sufficient to cope with the demands and pressures of the situation Stress can come from any situation or thought that makes you feel frustrated angry nervous or anxious

1. Please provide the following information about yourself and the pharmacy that you work in by choosing the appropriate option:

◯ Male

◯ Female

2. Year of registration

[   ]

3. Sector of work

◯ Community

◯ Hospital

◯ Industry

◯ Academia/Regulatory Body

4. How many hours on average do you work per week?

☐ 0 15

☐ 15 30

☐ 30-45

☐ 45+

5. If you work in the community pharmacy sector, please tick the position in which you currently work:

◯ Support pharmacist

◯ Supervising pharmacist

◯ Superintendent Pharmacist

◯ Locum pharmacist

6. Please tick the type of community pharmacy in which you work the majority of the time:

☐ Single

☐ Small multiple (2 5 pharmacies)

☐ Medium multiple (6 10 pharmacies)

☐ Large multiple (11+ pharmacies)

7. In the pharmacy where you spend the majority of your time, how many other pharmacists work with you at the same time?

[   ]

8. Approximately how many prescription items do you personally dispense on an average day in the pharmacy in which you work the majority of the time?

- [ ] 0 150
- [ ] 150 300
- [ ] 300-450
- [ ] >450

1. How often do you feel stressed because you are ultimately responsible for patient outcomes?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

2. How often do you feel stress when dealing with 'clinically challenging' patients e.g. patients with rare conditions or those with multiple disease states whose medication requirements may be highly complex?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

3. How often do you feel inadequate in meeting the needs of patients?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

4. How often do you feel stressed because you do not have adequate information regarding a patient's condition?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

5. How often do you feel stressed because you allow personal feelings/emotions to interfere with the care of patients?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

6. How often do you feel stressed because you are uncertain about what to tell a patient or family about a patient's condition and/or treatment?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

7. How often do you feel stressed because you have job difficulties that conflict with your personal life?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

8. How often do you feel stressed fearing that you will make a mistake in the treatment of a patient?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

1. How often do you feel stressed because other health professionals determine the way you work? (e.g. supervising/ superintendent pharmacists, pharmacy owners, HSE)

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

2. How often do you feel stressed entrusting work to other members of staff under your supervision?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

3. How often do you feel stressed supervising the performance of co-workers/ pre-registration students?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

4. How often do you feel stressed because you disagree with other health professionals concerning the treatment of a patient?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

5. How often do you feel stressed because you experience conflicts with co-workers/management?

◯ Never

◯ Rarely

◯ Sometimes

◯ Often

◯ Frequently

4. Professional Recognition

YOU RE NOW MORE THAN HALFWAY THROUGH THE SURVEY!

1. How often do you feel stressed because you are not being recognised or accepted as a true health professional by other health professionals?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

2. How often do you feel that someone less qualified than you could do your job?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

3. How often do you feel stressed because you do not receive respect or recognition from the general public?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

4. How often do you feel stressed because you feel that opportunities for advancement in your job are very poor?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

5. How often do you feel overwhelmed trying to meet patients expectations?

◯ Never

◯ Rarely

◯ Sometimes

◯ Often

◯ Frequently

6. How often do you feel stressed because you do not know what type of job performance is expected from you?

◯ Never

◯ Rarely

◯ Sometimes

◯ Often

◯ Frequently

7. How often do you feel stressed because you feel that you are not being paid enough?

◯ Never

◯ Rarely

◯ Sometimes

◯ Often

◯ Frequently

8. How often do you feel stressed because you are not able to use your abilities to the fullest?

◯ Never

◯ Rarely

◯ Sometimes

◯ Often

◯ Frequently

9. How often do you feel stressed because you do not receive adequate feedback on your job performance?

◯ Never

◯ Rarely

◯ Sometimes

◯ Often

◯ Frequently

5. Managing Workload

YOU RE NEARLY THERE JUST 14 QUESTIONS LEFT¹

1. How often do you feel stressed because of excessive/ increased workloads?

◯ Never

◯ Rarely

◯ Sometimes

◯ Often

◯ Frequently

2. How often do you feel stressed because you are interrupted by phone calls or other staff when performing work duties?

◯ Never

◯ Rarely

◯ Sometimes

◯ Often

◯ Frequently

3. How often does NOT being challenged by your work make you feel stressed?

◯ Never

◯ Rarely

◯ Sometimes

◯ Often

◯ Frequently

4. How often do you feel stressed because you have so much work to do that everything cannot be done well?

◯ Never

◯ Rarely

◯ Sometimes

◯ Often

◯ Frequently

5. How often do you feel stressed because you have no control over your own workload?

◯ Never

◯ Rarely

◯ Sometimes

◯ Often

◯ Frequently

6. How often do you feel stressed because you have to perform management duties for which you have not been trained e.g. mediating in conflicts between staff members?

☐ Never

☐ Rarely

☐ Sometimes

☐ Often

☐ Frequently

7. How often does not having enough staff to provide necessary services adequately make you feel stressed?

◯ Never

◯ Rarely

◯ Sometimes

◯ Often

◯ Frequently

8. How often do you feel stressed due to the possibility of dealing with a robbery at work?

☐ Never

☐ Rarely

☐ Sometimes

☐ Often

☐ Frequently

6. Professional Uncertainty

1. How often do you feel stressed keeping up with new developments in order to maintain professional competence?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

2. How often do you feel stressed because of significant change in your place of work?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

3. How often do you feel stressed because you have to balance new roles with existing responsibilities?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

4. How often do you feel stressed because of the ongoing uncertainty regarding HSE drug reimbursement prices and fees paid to community pharmacies?

○ Never

○ Rarely

○ Sometimes

○ Often

○ Frequently

5. How often do you feel stressed because of increasing levels of competition in the community pharmacy sector?

☐ Never

☐ Rarely

☐ Sometimes

☐ Often

☐ Frequently

6. Please add any additional comments on your personal work stress in the space provided below:

You have now completed the survey Thank you for your time! If you are interested in viewing the findings of this research then please provide your contact details in the space provided

You can contact me at thomasmichaeldoody@gmail com or tel 087 6290965