ANALYSIS OF STRESS AND STRESS MANAGEMENT INTERVENTIONS AMONG EMPLOYEES IN THE INFORMATION TECHNOLOGY (IT) SECTOR IN INDIA AND IRELAND

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DECLARATION BY CANDIDATE

I hereby declare that this dissertation is entirely my own work, and has not been submitted to any other institution for any award. Where other sources of information have used, they have been acknowledged.

Signed : _______________________

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August 22, 2014
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Abstract:

The health of people in the work place -in all sectors- has been an important issue for sometime, and there is substantial evidence that the workplace can have an impact upon employee health – both positive and negative. As a result, the management of employee well-being has become a priority for all types of organizations. (Arnold et al, 2010 p 433)

The degree of competition in the economy has becomes more intense as a result of the recent recession, therefore no job is stress free. Everyone in the workplace experiences some kind of stress be it in relation to the job or in relation to the general work environment. (Swaminathan and Rajkumar 2013)

Information Technology has created a positive impact on the lives of millions across the globe. Today a country’s IT potential is paramount in its march towards global competitiveness, and is a huge driver of growth. (IBEF, no date)

Stress is an inevitable factor in the life of an employee in the IT sector. It affects the performance of an employee and detracts the ability of the employee to contribute to the organization. The effects of stress at work are an important area of concern among the top management of many business organizations today.

This study analyzes the causes of stress and its impact on absenteeism among IT employees in Ireland and India. It also examines various coping strategies adopted by IT employees in Ireland and India. The study also analyzes the impact of stress management intervention on stress among employees of IT companies in both countries. The study was conducted among 109 employees working in the IT sector in India and Ireland using survey in the form of self administered questionnaires and found a) factors intrinsic to the job b) organizational structure and climate and c) role of the employee in the organization as the major causes of stress among the IT employees in both countries. The study also found that more of the respondents did not have any access to stress management interventions, and that stress did not have any significant impact on absenteeism.

Keywords: Stress, Occupational Stress, Absenteeism, Coping Strategies, Work-Life Balance, Productivity, Stress Management Interventions.
Chapter 1

Introduction

1.1 Background

“Stress is an inescapable reality of most working environments.” (Gladies and Kennedy 2011) “Stress refers to any force that pushes a psychological or physical function beyond its range of stability, producing a strain within the individual.” (Cartwright and Cooper, 1997 cited in Levy 2010, p 291). “Strains on the other hand are undesirable personal outcomes resulting from the combined stressful experiences of various life domains.” (Bhagat et al 1995 cited in Levy 2010, p 291). Stress leads to strains, employees who are particularly stressed at work can experience sickness, low quality performance, increased absence and poor communication and many other strains. (Levy, 2010, p 291)

When stressed, an individual feels that his well being is menaced but at the same time unable to cope with it. (Lazarus and Folkman 1984, cited in Mesko et al 2013 pp 45-47) Stress has implications for both the individual and the organization. In individuals it has a negative impact on work performance and from an organizational perspective numerous working days are lost as a result of stress.(Mesko, 2013 pp 45-47)

“Stress in the workplace occurs when employees try to cope with the duties, responsibilities and other forms of pressure associated with their jobs, but encounter difficulties, anxiety and worry in trying to manage them.” (Stranks 2005, cited in Mesko et al 2013 pp 53-45) “Work stress is a mental state that can cause behavioural disorders in individuals (Looker and Greeson, 1994 cited in Mesko et al 2013 pp 53-45).” It is a result of the imbalance between job requirements and the ability to cope.

It is important that business organizations ensure that its employees develop the ability to control the level of stress. This can lead to higher levels of productivity in a business organization. (Rojas and Kleiner, 2000)

“With tough economic times already producing considerable stress for employees in terms of increased workloads and expectations for greater performance, the physical and mental health of employees is of paramount concern.” (Williams, 2014)

Work stress can occur in all professions, especially in the IT sector as it is competitive, highly target driven and result oriented; therefore IT employees are greatly pressurized at work. The highly competitive business environment that exists at present in the IT sector especially after the recession has further added to the pressures to perform well. There is always a constant demand to update their technical skills because of the threat of technical obsolescence and this could result in higher rate of absenteeism, work burn out, and a desire to change careers. (Uma Devi, 2011)
1.2 Overview of the IT Industry

“Information Technology (IT) is changing the face of the contemporary economy. Economists estimate that the contribution of IT to the growth of the gross domestic product (GDP) in developed countries in the mid 2000s was approximately 20-40 percent with IT determining up to 70-80 percent of the improvement in aggregate factor productivity. Companies spend as much as 9-10 percent of their revenues and 5 percent of their capital on Information technology.” (Jorgensen and Motohashi 2005 cited in Rozanova 2010).

According to Laudon and Laudon, (2012 cited in Jafari 2014) Investment of private businesses in IT grew from 32 percent to 52 percent. IT has become an important driver of business and many organizations today have become increasingly dependent on IT and there is a high percentage of IT investment in all invested capital in the business environment. (Jafari, 2014) Investment in IT should contribute to company value. (McFarlan 1984, Porter and Millar 1985 cited in Jafari 2014)

The Information technology market encompasses the production of equipment (hardware or tangible products), development of software (software or intangible products), support and consulting services, distribution and supply of equipment and software in integration projects, system integration services which enables clients and firms to combine various information and communication technologies in one smoothly operating IT system and network service including electronic trade. For all the diversity in this sphere, IT products have certain features in common that determine the specific nature of competition in this sector. (Rozanova 2010).

1.3 Challenges faced by the IT Industry

IT Industry has always faced challenges. Some of these challenges have changed over time; however some of them still remain today. The business environment of today is changing rapidly. Companies in all sectors including the IT sector face the challenge of increasing competition, expanding markets and rising customer expectations. (Umble et al 2003 cited in Jafari 2014) Organizations increasingly rely on IT to acquire a competitive edge, with this often translating into an increased budget allocation to support their investments in IT infrastructure. (Irani et al cited in Jafari 2014). The purchase and development of Information Technology is a source of increased cost and as a result is a source of concern to the top management in business organizations today. (Heo and Han 2003, Legris et al 2003 ;Joshi and Pant 2008 cited in Jafari 2014)

The global economic recession is driving businesses to cut costs in the face of shrinking revenues and is the top priority of many IT leaders. The biggest challenge faced by IT companies today is to deliver high IT performance in the midst of diminishing budgets and cost conscious CEO’s. (Accenture 2008 cited in Jafari 2014). However according to Noland and McFarlan, (2005 cited in Jafari 2014) most business leaders are in the dark when it comes to IT spending and strategy. Few understand the full degree of their operational dependencies on IT or the extent to which IT plays a role in shaping their firm’s strategies.

Providing high quality customer service is another challenge faced by Corporate IT today. More often than not, IT companies are not able to meet the requirements or expectations of the customer which affect the reputation of the company, or of the industry as a whole. Improving customer service by listening to and meeting customer needs should be the top priority for IT companies. The information technology sector is under increasing pressure to get things done quicker, cheaper and with better service. (Longenecker, 1999)
Making the best use of new technologies and at the same time searching out additional ways to increase productivity is another challenge faced by IT companies.

Turning these challenges into opportunities is the hallmark of successful IT companies. Meeting these challenges is what will eventually separate the successful IT companies from the not so successful companies. (Norton, 2011)

1.4 Overview of the IT industry in India and Ireland

India emerged as major player in the field of software engineering, information technology (I.T) services and web-based services. The Information technology industry in India employs a little more than half a million people. (Uma Devi, 2011)

India is one of the fastest growing IT-services markets in the world. It is also the world’s largest sourcing destination accounting for approximately 52 percent of the US$ 124-130 billion market. The country’s cost competitiveness in providing IT services continues to be its Unique Selling Proposition in the global sourcing market.

The IT sector has not only transformed India’s image on the global platform, but has also fuelled economic growth in the country by energizing the higher education sector and has also contributed significantly to the social transformation in the country.

India’s core IT competencies and strengths have resulted in attracting investments from other countries. Cheap labour, affordable real estate, favourable government regulations, and tax breaks are the other reasons which attract investments from overseas. (IBEF, no date)

The Information, Communication and Technology (ICT) sector in Ireland has successfully attracted 8 out of the 10 top global IT companies to establish a significant presence here. The ICT sector in Ireland is among the top three growth industries in Ireland as companies have taken advantage of the competitive environment, skill base and value propositions.

The ICT sector in Ireland includes an enormous range of technologies and activities and include a) developing hardware and devices b) operating systems and hardware c) digital content d) providing consultancy and services e) service integration f) outsourcing g) data supply and h) storage.

Ireland is the second largest exporter of computer and IT services in the world, with a highly creative and talented workforce, an open economy and a competitive corporate tax environment. Corporate Tax in Ireland is low. The sector’s traditional players with long-established operations have now been joined by newer firms at the vanguard of the internet and social media revolution thus firmly positioning Ireland as the internet capital of Europe. The IT sector accounts for more than €50 billion of exports from Ireland per annum.

In recent years, Ireland’s ICT sector has transformed dramatically. Traditionally the sector was defined along clear lines. ICT companies in Ireland were largely concentrated in the area of hardware manufacturing and associated support services. Irish owned firms were owned in the software subsector, however in the recent years, there has been a fundamental shift in the way these items are produced, distributed and consumed leading to considerable blurring of these lines.
The major incentives to invest in ICT in Ireland include the high productivity and falling labour costs, the proven business environment, a young skilled workforce and a well educated population. (Sources: Enterprise Ireland & Enterprise Europe Network, no date)

1.5 Aim of this Research

1) To analyze the causes of stress and its impact, if any on productivity and absenteeism among employees of the IT Sector in India and Ireland.

2) To analyze stress reduction/management techniques being used in IT companies in both countries.

3) To serve as a possible source for future research on the subject.

1.6 Research Questions

1) What do employees in IT companies in India and Ireland today identify as stress in their life?

2) How do IT employees in both countries currently cope with stress including the various personal and organizational coping strategies?

3) What effect does a stress management intervention have on employee-stress among members of a team within the workplace in IT companies in both countries?

1.7 Hypotheses:

1) There is stress in the lives of IT employees in India and Ireland.

2) Some employees have access/means to cope/manage stress, while others do not.

3) Stress management intervention has an effect on the lives of employees and the way they deal with stress and which in turn has an impact on productivity and absenteeism.

1.8 Interest in the Subject

There are limited studies on stress among employees in the IT sector, in spite of the fact that the IT sector is a high profile industry, and a key driver of economic growth. Most of the studies on work-place related stress focuses on other sectors, especially call centres, financial, telecom and health sectors. This was the main motivation for the researcher to take up this particular topic for the dissertation. The researcher also has many close networks in the IT industry, and as a result always had an interest in the IT industry, especially as a result of the impact it has had on the economy, both in Ireland and India and this study could also serve as a possible source for future research on stress among IT employees in Ireland and India.
1.9 Approach to the dissertation

In the first stage the researcher will do a literature review related to the research topic and try to attain a clear scope of the problem area. The critical review of the literature which is done to understand what the research issue will cover:

a) The definitions of stress along with a review of previous studies done on Stress and Absenteeism.

b) The causes of stress among IT employees in India and Ireland and its impact on productivity and absenteeism.

c) Various personal coping strategies adopted by IT employees in Ireland and India.

d) Analysis of stress reduction/management techniques being used in IT companies in both countries.

The second stage of this dissertation includes data collection and this would be done by adopting a quantitative approach to the research by distributing self-administered questionnaires to employees of IT companies in India and Ireland. The data obtained from the filled-in questionnaires would then be analyzed and then a conclusion would be drawn from the information obtained along with some recommendations if possible.

1.10 Organization of the dissertation: This dissertation is organized into six parts

**Chapter One:** This chapter gives an overview of the issue. The importance of the problem area and the researcher’s interest in the topic

**Chapter Two:** This chapter covers the literature review of stress on productivity and absenteeism among IT employees in Ireland and India.

**Chapter Three:** This chapter covers the research methodology which includes the research philosophy, data collection methods, the design of the questionnaire and techniques used to analyze the data

**Chapter Four:** This chapter covers the analysis of the data obtained from the self-administered questionnaires

**Chapter Five:** This chapter consists of the discussions of the findings based on data analyzed in the previous chapter

**Chapter Six:** This chapter consists of the conclusions of the study and recommendations along with the limitations.
Chapter 2

Literature Review

A Literature Review provides the foundation on which research in built. Its main purpose in to help develop a good understanding and insight into relevant previous research about a particular topic and the trends that have emerged. It is a detailed and justified analysis and commentary of the faults of the literature within a chosen area, which demonstrates familiarity with what is already known about a particular topic. (Saunders et al 2009 pp 59-60; 590)

2.1 Background and Definitions of Work-related Stress


Selye viewed stress as a non-specific response of the body to any demand made on it. (Furnham 2005, p 355) Individuals manifest stress in many ways, including short-term psychological states and psychological reactions, long term psychological responses and physical difficulties and work performance decrements.(Margolis and Kroes 1974, cited in Parker and DeCotis 1983 p164 ) Beehr and Newman (1978 cited in Parker and DeCotis 1983 p160) and Schuler (1980, cited in Parker and DeCotis 1983 p 160) have identified that job stress contributes to health-related problems among workers and to organizational problems such as employee dissatisfaction, alienation, low productivity, absenteeism and turnover. Parker and DeCotis (1983) are of the view that job stress is a particular individual’s awareness or feeling of personal dysfunction as a result of perceived conditions or happenings in the work setting and also suggested the organizational importance of stress .According to a study conducted by Cox, Griffiths and Gonzalez, (2000) it is clear that ill-health related to stress is a major cause of concern in terms of its impact on both individual’s lives and the productivity of organizations and countries.

According to the WHO, “Work-related stress is the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope. Stress occurs in a wide range of work circumstances but is often made worse when employees feel they have little support from supervisors and colleagues, as well as very little control of work processes.” (WHO, no date)

Workplace Stress is a challenge affecting the profits, productivity and overall wellbeing of employees in most business organizations, including companies in the IT sector today. Some
of the sources of stress—such as downsizing, violence, technology, and diversity—are a part of the current business environment. (De Frank and Ivancevich, 1998)

“Stress has become a major issue for organizations. It is unlikely to move off the agenda as international competition increases and organizations are faced with tougher market conditions.” (Arnold et al, 2010 p 491). “A comprehensive framework for studying work stress was developed by Kahn and Byosiere (1992). Their model presents several important factors in the stress process including (1) work stressors (task and role stressors) (2) moderators of the stress process (individual differences, social support) and (3) consequences of stress (burnout, heart disease).” (Landy and Conte 2010, p 449)

Figure 1 Kahn & Byossiere ‘s Theoretical Framework for the Study of Stress in Organizations (1992) Source Landy and Conte (2010 p 449)

Workplace Stress is a common problem worldwide. In a 2011 study conducted by the American Psychological Association, 70% of Americans indicated that work was a significant source of stress. Another study conducted by the National Institute for Occupational Safety and Health (NIOSH) in 1999 showed that 40% of the employees indicated that their jobs were very or extremely stressful. According to a study conducted by Kenny and Cooper in 2003, countries like the Netherlands and the United States place more demand on employees and they are required to work longer hours. Studies conducted by Price (2004), Ryan and Watson (2004) show that stress is a major contributor to employee disease, depression and injury and lowered company productivity. (Lindh, 2013, p2-3)

According to Kosek (2012) adopting a more strategic approach to work-life balance can help promote improved employee performance, better mental and physical health, job satisfaction and reduced turnover. Kellow (2008) highlighted the role of some countervailing interventions that can serve to mitigate occupational stress causes and defined countervailing
interventions as practices focused on increasing the positive experiences of work rather than decreasing the negative aspects and suggested that positive development of the state of the physiological capital of employees in the realms of self-efficacy, hope, trust, optimism and resiliency is essential for health and positive organizational behaviour that is required to validate competitive performances in today’s workplace.

“Stress is widely accepted to have two opposite effects on individuals-positive and negative. Acceptable levels of stress helps to improve the individual’s performance whilst excessive amounts of stress can lead to decreased performance.” (Stevenson and Harper 2006 cited in Ongori and Agolla, 2008). Selye differentiated between positive stress which he called “Eustress” and negative stress which he called “distress.” (Nasir Karim 2009, p 287) A more challenging work environment can be an example of stress at work, especially if the employee does not mind working in such kind of an environment, but once stress goes beyond the coping level of the employee, it will result in negative stress.

2.2 Previous Studies on Work-related Stress

Babatunde (2013, p 79) argues the need for a variety of managerial actions that could reduce job stressors that is imperative for improving employee psychological capital and well being and is of the view that it has become necessary that these proactive interventions be integrated within the structural context of work like job-control, work-schedules, staffing levels, physical work environment and organizational structure and the psychological frame of the employees like job commitment, psychological support, employee engagement and affective well-being initiatives. Babatunde also stated that primary measures such as managerial stress awareness training, workload adjustments, hazard identification, creation of social structures that moderate stress effects and role strategies that are suggested for better organizational outcomes. Babatunde’s identification of managerial actions that can reduce stress is a step in the right direction in the study of stress in organizations as he acknowledges the roles of managers in reducing stress in the workplace and that these interventions be integrated within the structural context of work.

Wan Husin (2008) rightly acknowledged the fact that stress is an inescapable and real part of modern life at the workplace and that it is quite alarming. Employees cannot function effectively unless stress is dealt with wisely and systematically. Therefore according to him, understanding the realities of stress, exploring how it affects the body and mind, the various levels of stress, some practical approaches and adaptive response strategies to stress and its management is a vital part of life. In his study a three dimensional stress management model was developed to explain stress, its management and coping strategies in three dimensions and also provided various recommendations to combat the physical, psychological and occupational consequences of stress. Wan Husin’s work provides a much needed insight into the importance of understanding the realities of stress and the practical approaches and adaptive response strategies to stress and management. His three dimensional stress management model to explain stress is very useful in understanding the various coping strategies adopted to combat. He has also devised various strategies to counter stress.

In a study conducted by Mesko and colleagues in 2012 about the symptoms of stress and the various coping strategies and absenteeism among Slovenian middle management it was discovered that absenteeism is caused as a result of too much stress and stress can result in
poor health. The study also identified that not all stress is negative and that some employees require a certain amount of pressure to perform more effectively. The study also highlights the importance of stress reduction strategies when there is too much stress. According to this study it is essential that the organization follows a specific course of action when dealing with stress. Firstly factors that contributes to stress needs to be identified. Then changes in the micro-environment including improving work morale, motivation and performance should be made. This study which was aimed at identifying symptoms of stress, strategies and absenteeism among Slovenian middle management, provides a useful insight into the various causes of stress and the various stress reduction strategies and also highlights the importance for the organization to follow a specific course of action when dealing with stress, has one major flaw in that it focuses only on middle management and ignores employees from other levels.

A study conducted by Swaminathan and Rajkumar in 2013, has provided further insight into stress and its impact on productivity. It has classified the causes of stress under two major headings 1) General factors causes stress and burnout which includes meeting targets, attending to calls every day, frequent, and irregular travel, irregular hours, meeting all types of clients and frustration due to unmet targets, daily reporting and strict control by top management and 2) Specific organization role related stress which includes a) Role Overload which refers to the state when the role occupant feels that there are too many any expectations relative to those from to others in his role set, b) Role self distance which occurs when there is a conflict between the self-concept and the expectations from that role as perceived by the role occupant and c) Role Stagnation, in which the role changes with advancement of the individual. The need of taking up a new role becomes crucial. The new role demands that an individual outgrows the previous one and takes charge of the new role effectively. This leads to a feeling of stress, when the role occupant feels that he cannot cope with the changing environment. The employee feels stagnated and bored and less secure in the given job environment. This study considers the employee himself/herself reducing his or her own stress level in the organization and ignores the factors that are outside the individual’s control which can cause stress nevertheless it has correctly identified the different sources of stress and provides several other suggestions to counter stress including time management which is one of the important factors for management of stress.

Ongori and Agolla (2008) demonstrated that stressors do exist in organizations and that managers must come up with various interventions to manage occupational stress. They highlighted the need for a paradigm shift in managing occupational stress in order to minimize its impact on employee’s lives. Their study found that occupational stress is mainly caused by the increased work load, uncertainty about the future, poor communication in organizations, insufficient resources. The findings of the study also reveal that the outcomes associated with occupational stress adversely affect the organization, especially in reducing efficiency in organization operations, increasing employee turnover and the expenditure of health costs of employees, low motivation and accidents. Another important finding of this study was that of the high costs of occupational stress and its impact on employees. Failure by the organization to manage stress might erode to organization’s profitability through litigation, morbidity and mortality. According to Ongori and Agolla managers will stand to
gain if they can identify the signs of occupational stress among the employees at its infancy stage as it can help curb the stress before it impact creates a problem on an individual employee. The study found that the signs of stress as emotional anxiety, increase of job dissatisfaction, headache, moodiness and anger. The study also categorized the interventions that are used in most organizations as primary, secondary and tertiary. Primary interventions are the best in managing occupational stress at the infancy stage. If these primary interventions are taken seriously to a certain degree, stress in organizations will be reduced. The organization should also regularly conduct an audit of its practices, policies, procedures and systems to ensure that it provides an enabling working environment that protects the well-being of the work force. Organizations should be able to identify the employees affected by stress and provide them with an appropriate level of support. Although this study has contributed to the existing body of knowledge on the subject, it has various limitations that need to be addressed. The sample size study for this research was not large enough to generalize to other or similar organizations, Secondly this study adopted quantitative methods which has got its limitations in itself. Nevertheless this research will motivate managers to develop appropriate coping mechanisms to manage stress.

F De Vasconcelos (2008) highlighted that there is a similarity between the levels of stress in the environment and in the organization and that this similarity or equilibrium is achieved using institutional mechanisms which are mainly cognitive-cultural. It also implies that this vicious cycle that has been leading to the institutionalization of stress as a normal condition of work, life in general and finally modern society and that a decrease in levels goes through some mechanisms of breaking the cycle. It also indicates that the control of stress in organizations is as complex as the levels of stress in an organization. It curbs all attempts, perspectives or aspirations by management for controlling and using stress as a mechanism for managing and inducing actions. While this study recognizes the fact that control of stress is as complex as the stress itself, which is true more often than not, it major flaw is that is considers that the level of stress is similar all across the organization which is not true as it differs among different levels in an organization.

Nasir Karim (2009) argued the need for the organization to introduce a humane touch. According to him the organization should follow a consultative or participative format of governance rather than an authoritative/totallitarian or dictatorial format of governance which can significantly reduce stress in the organization. He also correctly highlights the need for a proper job description. Lack of proper job descriptions is an important cause of stress in the organization. The employer should pick the right man for the job. This strategy can help in improving the working conditions and reduce the possibility of stress and strains. This study recognizes the fact that many organizations today treat their employees harshly and rightly identifies this as one the main reasons for stress. It also identifies lack of a proper job description as another cause of stress which can be true should the person hired for a particular job not have the right qualities for that particular job.

Satoris (2009) identifies that the relationship between workplace strain and absenteeism even though modest will result in significant annual loses for the organization and that managers need to be concerned about the potential negative outcomes of workplace stress including absenteeism. Another important finding of this study was that stress intervention programmes
seemed to be largely interested in reducing absenteeism and managers wanting to do so need to increase flexibility in work arrangements to achieve this goal. This study is slightly different from earlier studies in the topic as it recognizes the relationship between stress and absenteeism and the fact it results in a huge loss to organizations. It also highlighted the fact the managers who wanted to reduce stress related absenteeism to increase flexibility in work arrangements which is a new approach in the study of stress and its impact on organizations.

A study conducted by Aytac and Dursun in Turkey in 2012 highlighted the fact that violence in the workplace can also result in stress. The study aimed at determining the effects of violent, or a hostile climate on employee’s job satisfaction and stress by understanding how they perceive the hostile environment. Being exposed to a hostile environment can have a negative impact on an employee’s attitude towards his or her organization. According to this study Organizational policies and procedures directed towards preventing and controlling aggression and hostility in the workplace can create a positive environment for the employee. The Organization by introducing training on how to handle a hostile environment in the workplace, can go a long way in reducing stress in an organization. This study correctly brings to light the fact that a hostile workplace especially having an aggressive manager can result in stress for the employee and that it can result in an employee having negative feelings towards the organization, which can in turn result in low morale and productivity of the employee which can affect the performance of the company as a whole.

Jaramillo, Mulki and Boles (2011) acknowledged the fact the conflict between individuals in organizations occurs when the job requires mutual interactions among employees and identified that examining the antecedents and the outcomes of interpersonal conflict may help organizations build an employee friendlyorganizational culture that fosters collegiality and productive work. Findings of this study indicate that interpersonal conflict affects job attitudes though emotional exhaustion. It also showed that role stress affects emotional exhaustion directly as well by creating work overload perceptions and interpersonal conflict at the workplace, which results in lower performance and higher turnover intention. The effect of interpersonal conflict on job attitudes is fully mediated by emotional exhaustion. Interpersonal conflict can also lead to subversive acts means (Liu, Spector and Shi, 2007 cited in Jaramillo et al 2011, p 350) and workplace aggression. (Hershcovis et al 2007) The study also found that negative job attitudes are detrimental to the firm because they encourage extra-role behaviours This study has several managerial and theoretical implications even though it primarily focuses only on sales jobs, it can still be applied to employees from all sectors. From a managerial view, it is important to structure an ambitious but yet not so overwhelming workload for employees. It also highlighted the fact that employees vented their frustration in both overt and covert means (Liu, Spector and Shi, 2007 cited in Jaramillo et al 2011, p 350). However some employees do not have adequate set of skills to deal with interpersonal conflict which can result in low job satisfaction and lower commitment and great defection intentions.

2.3 Causes of Work-related Stress (or Stressors)

Several researchers have attempted to identify and organize the variables that function as stressors (Berry 1998, p 428), but the more prominent sources that have been found to be the
major sources of work stress are those dimensions that have to do with the content and context of work. (Babatunde, 2013, p 75)

“Stressors at work are as varied as they are in other areas of life.”(Berry 1998, p 428) and mainly fall into two major categories: a) physical/task stressors which include demands of a given job and the working conditions and b) psychological stressors, which involve a subtle and not-so subtle factors that an individual may find demanding. (Landy and Conte, 2010 , p 451) According to Fox (1993 cited in Choi 2008 p 879) the requirements to work fast and hard, having a great deal to do, not having enough time and having conflicting demands the work place can be defined as psychological stressors at the workplace.

Landy and Trumbo (1976) identified job insecurity, excessive competition, hazardous working conditions, task demands and long or unusual working hours as five categories of stressors. Cooper and Mar dhal (1976) classified as intrinsic to job, role, career development, relationship to others and organizational structure and climate as five main clusters of work stressors. Ivancevich and Matteson (1980) divided work stressors in four categories like physical environment, role and career development, relationships and organisational structure, climate and job characteristics. Schuler (1982) identified job qualities, relationships, organizational structure, physical qualities, career development, change and role as the main categories of work stressors. Parker and DeCotis (1983) proposed six specific causes of work stress which included job characteristics, organizational structure, climate and information flow ,role, relationship, career development and external commitments and responsibilities. Quick and Quick (1984) proposed task demands; role demands physical demands and interpersonal demands as four major categories of work stressors. Parasuraman and Alutto (1984) identified contextual role-relaxed and personal as three general categories of stressors. Hendrix (1985) identified work overload, work autonomy and control supervision and support, role ambiguity and role conflicts as major organizational stressors. Cummins (1990) suggested role conflicts and ambiguity, work overload, under utilization of skills, resource inadequacy and lack of participation as the main categories of work stressors. Summer, DeCotis and DeNisi (1994) proposed personal characteristics, structural organizational characteristics, procedural organizational characteristics and role characteristics as the main categories of work stressors in their model. Lim and Hian (1999) found that lack of career advancement; work overload, risk taking, decision making and employee morale and organizational culture were identified as the major reasons for stress in the workplace in a study conducted in Singapore. Adguide.com conducted a study in 2001 among 1400 Chief information Officers working in US companies. Rising work overloads, office politics, work/life balance issues, commuting and pace of technology were reported as stressors. In brief four main causes of stress in general can be identified. They are a) individual b) job/organization c) family and environment including social, economic, political and physical environment. (Swaminathan and Rajkumar, 2013 p 79-80)
Based on the above discussions, we can categorize the causes of work related stress or stressors as:

- Factors Intrinsic to the Job
- Role within the organization
- Work-Family relationships
- Organizational climate/structure and Relationships at work.
- Career Development

**a) Factors Intrinsic to the Job**

“There are several elements of the core content of jobs that can be significant source of work stress and these include working at a fast pace, working intensively and having to meet tight deadlines frequently. Employees are often at risk of work stress if their work is often performed under pressure, and if it contains extended periods of hard physical work or concentration with very few breaks or respite” (Arnold et al 2010.p 455) “The demands of a
given job can also contribute to the experience of stress and to subsequent strains.” (Landy and Conte, 2010, p 452-453)

“Two different types of work overload have been described by researchers. Quantitative overload refers simply to having too much work to do. In this case, too much work leads to working long hours and the problems that go with it. Qualitative overload refers to work that is too difficult for an individual.” (French and Kaplan, 1972 cited in Arnold et al 2010,p 455). Yang,Chen Choi and Zou 2000, cited in Choi 2008 p 879) focussed on role overload of employees in terms of time and energy necessary to finish task requirements.

Repetitive routines, boring and under-stimulating work can also be a problem and this is described as underload or not being sufficiently challenged by work. (Weinberg and Cooper 2007 Arnold et all 2010,p 455) According to Teratanavat and Klenier (2001) “employees who have to deal with multiple tasks and roles will likely perceive unusually high levels of demand and experience high levels of stress.”

“The long working hours required by many jobs appear to take a toll on employee health. It is now commonly recognized that beyond 40 hours a week, time spent working is increasingly unproductive and can create ill health.” (Arnold et al 2010,p 455)

b)Role within the organization

When a person’s role in an organization is clearly defined and understood and when expectations placed upon an individual are also clear and non-conflicting, stress can kept to a minimum, but this is not the case in many workplaces. (Arnold et al 1998 p 432) Three critical factors, Role ambiguity, role conflict and role overload are collectively referred to as role stressors. The concept of role stressors is based on the fact that most jobs have multiple task requirements and responsibilities, or roles (Rinzo, House and Litzman, 1970 cited in Landy and Conte, 2010, p 452) and that a job is likely to be particularly stressful if those roles conflict with one another or are unclear. Role ambiguity occurs when employees lack clear knowledge of what behaviour is expected in their job. In such cases, individuals experience uncertainty about which actions they should take in performing their job most effectively. Role conflict occurs when demands from different sources are incompatible. In addition to tasks between different tasks and projects, role conflict may also involve conflict between the organization’s demands and one’s own values or conflicts among obligations to different co-workers. The modern organization is best thought of as an open system in which part of the organization interacts with its environment. This means that there is ample opportunity for role conflict and ambiguity, because every time an entity interacts with an environment, opportunity for confusion exists. (Landy and Conte, 2010, p 452-453)

c)Work-Family Conflict (or work life interface)

Work family conflicts occur when workers experience conflict between the roles they fulfil at work and the roles they fulfil in their personal life. (Bellavia and Frone ;Grzywacz & Butler, 2008 cited in Landy and Conte, 2010, p 452-453). “This conflict can be in either or both of two directions; work interference with family (when the demands of work create difficulties for home life) and family interference with work (where the demands of home life create difficulties for work.)” (Lewis and Cooper 2005 cited in Arnold et al 2010,p 455). Demands
on family have been identified as one of the key stressors at the work place. (Kopelman, Greenhaus and Connolly 1983, Frone et al, Rothbards and Edwards 2003, cited in Choi 2008 p 881). Frone and his colleagues (1992) reported that family demands influence employee distress. (Choi 2008 p 881).

“There is evidence that both men and women are experiencing dissatisfaction with their work-life balance. “(White et al 2004 cited in Henderson 2011 p 69) ‘As dual career families have become the norm rather than the exception, work-family conflict has become a widespread source of work stress.” (Landy and Conte, 2010, p 452-453). “The interference or conflict can be manifested in a number of ways. Most obviously, the sheer amount of time required by roles in one domain (home or work) may make it difficult to give enough time to roles in the other domain.” (Arnold et al 2010.p 457).

“As with all work stressors, a person’s appraisal of their situation is important in determining whether they see it as a problem or not and this might be influenced by whether they are made aware that there are positive benefits to be gained from balancing different work and non-work roles.” (Van Steenbergen et al 2008 cited in Arnold et al 2010.p 458)

d) Organizational structure/climate and relationships at work

Two very important aspects of organizational structure and climate that can be a source of stress to an employee are Interpersonal Conflicts and Managerial support (or the lack of it).

Inter-personal conflicts can occur when resources at work are scarce, when employees have incompatible interests or when employees are not being treated fairly. Interpersonal conflict can distract workers from important job tasks and it can have physical health consequences. (Landy and Conte, 2010, p 452-453) Other negative outcomes of interpersonal conflict range from depression and job dissatisfaction to aggression, theft and sabotage. (Frone 2000, cited in Landy and Conte, 2010, p 452-453).

“There is a huge body of evidence that shows lack of managerial support places employee well-being at risk. However, high levels of support can have significant benefits for employees. “(Arnold et al 2010.p 458). “Management behaviour has a direct impact on staff well being .Managers can prevent or cause stress in those they manage. Managers also act as “gate keepers” to their employee’s exposure to stressful working conditions and are vital to the identification and tackling of stress in the workplace.” (Donaldson-Feilder et al 2008 cited in Arnold et al 2010.p 458)

e) Career Development

Lack of job security, fear of redundancy, obsolescence and numerous performance appraisals can cause pressure and strain. (Arnold et al 1998 p 436) In addition the frustration of having reached one’s career ceiling or having being over-promoted can result in extreme stress. According to Ivancevich and Matteson (1980 cited in Arnold et al 1998 p 436), individuals suffering from “career stress” often show high job dissatisfaction, job mobility, burnout, poor work performance etc.
For many employees, career progression is of overriding importance. Through performance, people not only earn more money, but enjoy increased status and new challenges. After spending a certain amount of time at a particular job, people find that their career progress has been slowed or stopped. Job opportunities maybe fewer and available jobs require longer to master. Old knowledge may become obsolete and energy levels of the employee cab flag. (Arnold and Randall 2010 p 466)

According to Fletcher (2008 cited in Arnold and Randall 2010, p 466) the process of being evaluated and appraised can be a stressful experience for everyone. Performance appraisals can be anxiety provoking, form both the individual being appraised and the person doing the appraisal. The way in which the performance is appraised or evaluated can affect the degree to which the anxiety is experienced. Appraisal of poor performance has a significant potential for increased stress levels for the employee.

2.4 Consequences of Stress

“Organizational costs associated with job stress are substantial. It is estimated that companies lose between US$100 billion to US$300 billion annually’ (Crampton et al 1995 cited in Gladies and Kennedy 2011). These costs include absenteeism, accidents, health care expenses and decline in productivity. High levels of Stress can result in people considering leaving the organization at time when the “brain drain” in many organizations especially IT companies has reached unacceptable, if not dangerous levels. (Longenecker et al 1999)

“Research in organizational settings indicates that work stress at any level, including moderate levels, has a direct, negative relationship with job performance. The effects of stress on performance depend on several factors, including the complexity of the task performed and the personality characteristics of the individual performing the task. Nevertheless it is clear that chronic stress has negative effects on work performance.” (Landy and Conte 2010 p 457). Stress inhibits performance and negatively affects the standards of excellence necessary for long-term survival and success, in all sectors, especially in IT (Longenecker et al 1999)

The link between occupational stress and adverse health outcomes among employees is clear. (Cooper et al 2001 and De Jonge & Dormann 2006 cited in Landy and Conte 2010 p 457). The outcomes or consequences of stress include a range of behavioural and bodily changes such as physical illness, emotional and physiological disturbances and performance problems. These effects may be viewed as the results of physiologically coping with a stressor, i.e. they result from the body’s mobilization. Stressors may be kept under control by these physiological coping efforts, and if they are effective they have a high cost. Stress can result in a variety of physical illnesses that have either an organic or physiological basis. This is thought to occur because prolonged sympathetic nervous system activity tends to suppress the immune system. Thus stress compromises the body’s ability to fight infectious disease organisms. Unlike these illnesses, psychosomatic disorders so not appear to have an organic basis, rather they are physical illnesses result directly from the wear and tear process of prolonged stress. Ulcers and coronary heart disease are examples of psychosomatic disorders. Physiological processes have been noted in the development of these illnesses. Sometimes prolonged stress levels leads to behavioural and emotional disturbances with or without obvious somatic associations. Depression, anxiety, irritability, anger, insomnia, drug
and alcohol abuse are examples of behavioural and emotional disturbances (Berry 1998 pp 439-441)

A major consequence or result and a well researched consequence of stress in the workplace is Job burnout. (Landy and Conte 2010, p 458) “Job burnout is proposed to be a response to stressful work conditions.” (Cherniss 1980 and Maslach 1982), Pines and Aronson (1981) define Burnout as “behaviour shown by individuals who work in emotionally demanding situations.” It is a feeling of being emotionally drained and believing that one does makes no difference. A burned out employee treats his or her clients as objects. Research shows that human service employees do experience burnout in response to work stressors. (Burke 1987, Russell 1987, Almaier & Van Velzen 1987). According to Jackson (1987), work-role conflict, work overload and low involvement in decisions contribute to the development of burnout. Jackson (1987 and Leiter 1988) state that burnout is more likely when other coping resources are not available at work. A lack of social support is more often than not associated with job burnout. (cited in Berry 1998, p 441)

2.5 Models of Stress

Stress has been recognized as a serious problem by most business organization in today’s world. It has become increasingly clear that stress occurs at work as a result of working conditions and job characteristics. (Berry 1998, p 445).

Several theories or models of stress have been developed to organize the relationships among stressors, strains and potential moderators of those relationships. Two theories that have received a great deal of attention are Karesek’s demand control model and French’s person-environment fit model. (Landy and Conte 2010, p 467). In addition to these models, two are model are discussed in this study: Effort-Reward Imbalance Model and the Control Model.

a) Demand Control Model

In 1979, Karesek devised the Demand – Control model which suggests that two factor are prominent in producing job stress; job demands and job control. In this model, job demands are defined according to two different criteria; workload and intellectual requirement of the job. Job control is defined as combination of autonomy in the job and discretion for using different skills. Karesek proposed that the combination of high work demands and low controls results in “high-strain” jobs that result in a variety of health problems. Karasek also found that a combination of low control and heavy job demands correlated positively with mental strain. More recently in 1990, Karasek and Theorell found an increased risk of illness for individuals whose lives or jobs make high demands on them but allow little control. Thus an individual who has a demanding work schedule or environment and does not have much decision latitude or control will have an increased risk for stress related illnesses both physiological and psychological. In contrast, individuals in active jobs that have high demands but high control maintained good health and had high job satisfaction. Individuals in active jobs appear to participate actively in a variety of leisure activities as well, despite their high work demands. This finding is another example of the benefits of developing or designing jobs that allow workers to have control over decisions, resources or skills that they can use. (Landy and Conte 2010, pp 467-468)
b) Person Environment Fit Model

The person environment (P-E) fit model which was initiated by French, Caplan and Harrison in 1982 hypothesises that the fit between a person and the environment determines the amount of stress that a person perceives. “A central proposition of this theory is that the resources and demands of the work environment may or may not fit the needs, goals and abilities of the employee.” (Berry 1998, p 424) The environment makes demands and the person responds. A good person-environment fit occurs when a person’s skills and abilities match the requirements of the job and work environment. The amount of stress a worker feels is influenced by perceptions of the demands made by the environment, and by perceptions of the demands made by the environment, and by perceptions of his or her ability to deal with the demands. Using this model, French and his colleagues found that a poor fit between a person and the environment was frequently associated with increased strains. (Landy and Conte 2010. p 468). “Given that different types of fit have an influence on a variety of work outcomes, organizations should strive to ensure that employees fit well in their jobs and have the necessary skills to complete their job tasks. Fit is often increased through recruitment and selection processes that help applicants and those doing the hiring access the likelihood that candidates will fit well in the job and in the organization. " (Schneider, 1987 cited in Landy and Conte 2010. p 468).

c) Effort Reward Imbalance

The Effort-Reward Imbalance model is a popular view of stress at work. This model places emphasis on subjective perceptions of the environment. The key concept of the Effort-Reward Imbalance model is one of reciprocity, where effort at work should be compensated by suitable rewards, and a mismatch between these will lead to stressful experiences. (Peter & Siegrist 1999). Rewards are defined as money, esteem, career opportunities, and security. Effort is proposed to have two components, intrinsic effort, from the personal motivations of the individual or external pressures such as workload. External demands are also proposed to relate to the status of the labour market and how easily alternative employment can be found. The predictive validity of this model appears to be good, however the role of individual differences is limited to the intrinsic effort dimension and there are no proposed mechanisms by which individual differences may influence for stress perception process. (Mark and Smith 2008).

d) Control Model

Spector and Goh (2001) formulated the control theory of occupational stress and according to it control in the work place may range from complete effective autonomy and personal control over works schedules and workloads to complete servitude with no personal control over work schedules or work loads. The control theory does not provide any characteristics of the stressors that exist, but rather it acknowledges that a set of factors that may influence the interpretation of the individual with regard to how a stressor is personally experienced as stress.
2.6 Coping Strategies

“Stress is clearly a problem for many employees, but fortunately there are many coping techniques that can help. Coping is defined as efforts that help manage or reduce stress. Coping Mechanisms take two general forms a) problem focused coping and b) emotion focused coping. Problem-focused coping involves behaviours or actions targeted towards solving or handling the stress inducing problem itself. Emotion –focused coping on the other hand involves cognitive or through-related, strategies that minimize the emotional effects of stress inducing effects.”(Levy 2010, p 295)

“Individual strategies for coping with stress include cognitive and behaviour modification to help a person learn new ways of understanding existing conditions. People who are effective in coping with stress often say that they do this by trying to get a new perspective on the situation.” (Gilbert & Holahan 1982 cited in Berry 1998 p 442) “Coping strategies also include activities designed to control physiological and emotional reactions such as relaxation, meditation, biofeedback and physical exercise. Any of these activities can be useful at work. Most organizational stress interventions are aimed at helping employees to develop their own individual capacities to resist stress.”(Murphy 1986, cited in Berry 1998 p 442)

In addition to coping styles or strategies, social support can play a huge role in dealing with stress. Social support can be defined as the “comfort assistance or information, an individual receives through informal contacts with individuals or groups” and it has been widely recognized as a means to reduce stress at work. (Landy and Conte 2010, p 479, Cohen & Willis cited in Berry 1990 p 443). It is an exchange of resources that takes place between at least two people, often members of the same social network. (Schumaker & Brownell cited in Berry 1998, p 443). “Distressed employees get specific information and guidance for dealing with a stressful situation or for preventing stress. They also get emotional support and encouragement. (Denton 1989 and Greenglass 1993 cited in Berry 1998)

“Social support has been heralded as a resource that helps employees cope with work stressors, which are the stimuli that induce the stress process and ultimately provoke employee strains. “ (Sosik and Godshalk 2000, Searle , Bright and Bochner 2001; van Dierendock, Haynes, Borill and Stride 2004 cited in Mayo et al 2012 p 3872)

Quite a few studies have demonstrated the importance of social support in dealing with stress, for instance problem-focused coping along with supervisory support of family related issues results in decrease in work-family conflict. (Lapierre & Allen, 2006) problem-focussed coping results in reduced strain. (Searle 2008) Even family support can contribute to lowering stress at work.(Levy 2010, p 296)

“Employers can help build effective social support systems at work. For example, formal mentoring programmes, reward and recognition systems and new comer socialization programmes can make work environments.” (Landy and Conte 2010, p 480). In 1999 Allen, McManus and Russell found evidence for the important role that more experienced peers can serve in mentoring new comers and enhancing socialization. In turn they found a negative correlation between socialization and work stress, indicating that formal peer relationships
can be critical in reducing stress and subsequent strains. The supportive relationships formed in team building have been shown to improve performance and reduce stress. (Svyantek, Goodman, Benz & Gard 1999 cited in (Landy and Conte 2010, p 480).

2.7 Stress Management Interventions

The costs of stress indicate that the case for intervention is strong. If the causes of stress are known, then something should be done about it. Government guidance and legislation in many countries now require organizations to assess and manage risks to psychological well-being. (Arnold and Randall 2010, p 472)

Stress Interventions can focus on the individual, the organization or the individual-organizational interface. (DeFrank and Cooper 1987 cited in Arnold et all 1988 p 446)

There are three different levels of intervention that link work and well being namely primary (which reduces the sources of organizational stress), secondary (stress management training) and tertiary (health promotion and workplace counselling). (Murphy 1988 cited in Arnold and Randall 2010, p 472)

a) Primary Interventions

“Primary interventions change the design, organization and management of work in other words, they tackle the sources of work stress or attempt to “design into the job” the sources of positive well being. Most often they are designed to deal with the problems identified by a significant proportion of employees, targeting the group-level rather than the individual employee. The logic is that this then prevents employee health being damaged by the problem because the problem no longer exists.” (Arnold and Randall 2010, p 473).

Elkin and Rosch (1990, Arnold and Randall 2010, p 473) summarized a useful range of possible organization-directed strategies to reduce stress and they include:

- Redesigning the task
- Redesigning the work environment
- Establishing flexible work schedules
- Encouraging participative management
- Including the employee in career development
- Analyzing work roles and establishing goals
- Providing social support and feedback
- Building cohesive teams
- Establishing fair employment policies
- Sharing the rewards
Many of these strategies are directed at increasing employee participation and autonomy. It is recognized that social support, control, job discretion or autonomy and coping behaviour play an important role in moderating the stress response. (Karasek 1989, cited in Arnold et al p 449)

b) Secondary Interventions

“While organizational-directed interventions attempt to eliminate the source of job or organizational stress, most workplace stress initiatives have been directed at helping employees as individuals learn to cope with any stressors that occur at work. This is achieved by improving the adaptability of individuals to their environment by changing their thinking, behaviour and improving their skills. Inherent in this approach is the notion that the organization and its working environment will not change, therefore the individual has to learn ways of coping that will help them to “fit” better with its demands” Examples of secondary interventions include Relaxation training and job-related skills training on topics such as time management and assertiveness. These can help employees deal with some of the most difficult and stressful aspects of their job roles.”(Arnold and Randall et al 2010, p 478)

c) Tertiary Interventions

“The aim of tertiary interventions is to help those who have already been damaged by their work, In other words, these interventions are designed to rehabilitate. Clearly it is better if employees are not damaged by their work, but tertiary interventions are particularly important when primary and secondary interventions are impractical or when they are unlikely to be totally impractical for every employee. Increasingly these initiatives have been in the form of Employee Assistance Programmes (EAPs) which include offering telephone based or internet based physiological counselling of one type or the other.” (Berrige et al 1997 cited in Arnold and Randall et al 2010, p 478)

It must be noted that tertiary and secondary level interventions may be useful in improving and extending an individual’s coping strategies and social support, but they do not directly address the important issue of control in the workplace. (Arnold et al 1998 p 449)

2.8 Absenteeism

Another equally relevant concept in relation to stress is Absenteeism which can be defined as temporary absence from work (temporary withdrawal from the organization) for reasons such as illness, death in the family or other personal reasons. (Mathis and Jackson 2004 cited in Mesko et al 2013 p 47). The reasons for absenteeism are either a) mainly objective in nature, and therefore harder to influence and b) predominantly subjective (psychological reasons such as occurrence of stress, and consequently cardiovascular diseases or social reasons such as stimulant dependency, anorexia and insomnia, poor concentration etc). (Armstrong 2009, Mathis and Jackson 2004, Torrington et al 2005, cited in Mesko et al 2013 p 47)

Absenteeism poses a problem for organizations, because of negative consequences such as direct compensation costs, replacement costs, lower productivity costs etc. (Mathis and Jackson, 2004, cited in Mesko et al 2013 p 47).

Absenteeism reflects attitudes such as job dissatisfaction, low levels of organizational commitment, and an intention to quit. A worker who is absent from work is consciously or
unconsciously expressing negative attachment to the organization. (Hanisch and Hulin 1991 cited in Chang and Lu 2009 p 593)

Surveys conducted in Europe have shown that workplace absenteeism is accompanied by concurrent increases in work-related stress (Borg et al, 2000, cited in Mesko et al 2013 p 47). In fact, rates of absenteeism has become a global standard by which workers’ health is measured.(Kivimaki et al 2003, cited in Mesko et al 2013 p 47)

“Some of the literature in the causes of stress-related absence has pointed to factors associated with the job or the work environment as leading to stress and therefore, in many cases absence” (Hutchinson, 2013, p 220) Arnold and Randall (2010 cited in Hutchinson, 2013) have summarised them and they include:

- Long hours
- Work overload
- Pressure to meet tight deadlines
- Work which is too difficult
- Lack of clear sense of purpose
- Repetitive routines, boring or under-stimulating work
- Emotional labour

The physical work environment itself has also been associated with absenteeism generally and also with stress and employee well being. There are have been a number of studies showing a link between poor working conditions, poorly maintained equipment and machinery, problems with temperature and lighting and stress or absence. More recent research on occupational ill health carried out in call centres in Scotland found out that as well as the impact of workplace factors, the distinctive nature of the work and the target driven environment had a significant impact on absence and ill-health. Arnold and Randall (2010) also note that there has been a long association between poor physical surroundings and mental and physical health, and that it can considerably vary between different occupations. Some of these problems can be minimized by involving employees in the workplace design. (Hutchinson 2013, pp 220-221)
Chapter 3

Research Methodology

3.1 Introduction

This chapter illustrates the methodology used to analyze stress among IT employees in Ireland and India and also deals with the planning and implementation of this study. Research Methodology refers to the theory of how research should be undertaken, including the theoretical and philosophical assumptions upon which the research is based and the implications of these for the method or methods adopted. It is important for the researcher to have some understanding of this in order to make an informed choice about the research. (Saunders et al 2009, p 3)

The philosophy in relation to the research is laid out first, which will be followed by the examination of the research methods used in this study in contrast with other possible research methods. Thirdly the research design decisions required for employing a quantitative study are set out and finally an account of how the research is implemented is given. Everything described in this chapter is to satisfy the research objective mentioned in Chapter 1 and to address the resultant questions.

Applied Research will be used for this study. The aim of an applied research is to improve understanding of a particular business or management problem. The results of an applied research can offer a (possible) solution to a business problem. It can also provide new information about a particular business problem. (Saunders et al, 2009 pp 8-9) Applied Research has a practical problem-solving emphasis and this plays a very important part in business research. The problem solving nature of applied research means that it is conducted in order to reveal answers to specific questions related to action, performance or policy needs. (Blumberg et al 2011, p 11). Most business research falls under this category (R.B. Burns and R.A Burns, 2008 p 10)

This study aims at identifying the causes of stress among IT employees in India and Ireland, the various organizational and personal coping strategies adopted to tackle stress in both countries and the various stress management interventions adopted by IT companies in India and Ireland, and since this study is being done in an academic context and because of the tight time scale, (Saunders et al, 2009 pp 8-9) the researcher strongly believes that applied research is most suited for this topic.

The purpose of this research is to analyze the causes of stress and its impact, if any on productivity and absenteeism among employees of in the IT Sector in India and Ireland therefore the research was done using primary data obtained through self administered questionnaires which were sent out online to IT employees in Ireland and India and through different kinds of secondary data including academic journals, books, internet etc. The research philosophy adopted was that of Positivism within a deductive approach using quantitative data obtained through self administered questionnaires and the time horizon would be cross sectional.
The reason of each choice mentioned above can be explained using the “research onion” which is used to compare the various layers of research processes (Saunders et al 2009, p 108). There are six layers of the research onion, all of which are vital to a successful research. They are as follows:

- Research Philosophy
- Research Approach
- Research Strategy
- Research Choice
- Time Horizons
- Data Collection Methods

Figure 3 Saunders’s Research Onion source: Saunders et al (2009 p 108)

3.2 Research Philosophy

The manner in which research should be conducted is embedded in the broader philosophies of science. Research is based on reasoning (theory) and observations (data or information). How observations and reasoning are related to each other is an old and still ongoing philosophical debate on the development of knowledge. Although many researchers conduct sound research without a thought for underlying philosophical considerations, some knowledge of research philosophies is beneficial for a researcher as it helps to clarify and facilitate the choice of an appropriate research design. (Blumberg et al 2011, p 16)
Research Philosophy refers to the development of knowledge and the nature of that knowledge in relation to research. The research philosophy adopted for a research study contains important assumptions that underpin the research strategy and methods chosen as part of that strategy. (Saunders et al 2009, p 108)

Johnson and Clark (2006, cited in Saunders et al 2009 p 108) are of the view that business and management researchers need to be aware of the philosophical commitments that are made through a researcher’s choice of strategy since it has a significant impact not only what is done, but it also gives an understanding of what is being investigated.

A number of research philosophies have been identified by Saunders (2009, p 108-119), however the three most distinguished philosophies that stand out (Blumberg et al 2011, p 16) and which will be discussed here are a) Positivism b) Realism and c) Interpretivism.

**a) Positivism**

Positivism, which is the philosophy reflected in this study “is adopted from the natural sciences and its three basic principles are a) the social world exists externally and is viewed objectively b) research is value free and c) the researcher is independent, taking the role of an objective analyst. According to Positivism, knowledge develops by investigating the social reality through observing objective facts. This view has important implications for the relationship between theory and observations, as well as for how research is conducted. Theory development starts with hypothesizing fundamental laws and deducing what kind of observations support or rejects the theoretical predictions of the hypotheses. Consequently the research process starts with identifying causalities forming the base of fundamental laws and to access to what extent detected causalities can be generalized. Positivism implies the following assumptions a) the social world is observed by collecting objective facts and b) The social world consists of simple elements to which it can be reduced. A scientist following this research tradition believes that observable facts are objective, because they are external that is we cannot influence them, and research is conducted value free. This implies that different researchers observing a social phenomenon arrive at the same facts describing the social world can be reduced to simple elements. Distilling its elements and reducing them to fundamental laws is the best way to investigate a phenomenon.” (Blumberg et al 2011 p 17)

This study involves “working with observable social reality” i.e. stress in the lives of employees in IT organizations in Ireland and India, which is characteristic of the philosophy of positivism. Other characteristics of a positivist approach include a) a highly structured method of research and b) having a large number of samples. (Saunders et al 2009, p 118) Since all the aspects mentioned are closely related to this study, it strongly justifies the researcher’s choice of using the Positivist philosophy for this study.

**b) Interpretivism**

“Interpretivists hold the view that it is necessary for the researcher to understand differences between humans in their role as social actors. This emphasises the differences between conducting research among people rather than objects such as trucks and computers” Crucial to the Interpretivist philosophy is the researcher has to adopt an empathetic stance”. (Saunders et al 2009 p 116)
Researchers who adopt the philosophy of Interpretivism believe that reality is socially constructed. This means that the understanding of “reality” is not a simple account of what is, rather, it is something that people in societies and groups form a) their interpretation of reality, which is influenced by their values and their way of seeing the world. b) other people’s interpretation and c) compromises and agreements that arise out of the negotiations between the first two. As researchers who adopt this philosophy cannot claim to be studying an objective reality, they study the different accounts that people give of issues or topics and people’s accounts of the processes by which they make sense of the world. It emphasises plurality, relativism and complexity. It is an attempt to understand the processes by which knowledge is gained. Another important feature of interpretive research is that one cannot understand how others make sense of things unless one has an insightful knowledge of one’s own values and thinking processes. (Fisher 2007, pp 20-21)

Interpretivists, unlike positivists, hold the view that the social world cannot be understood by applying research from the natural sciences and propose that social sciences require a different research philosophy; Interpretivists argue that simple fundamental laws are insufficient to understand the whole complexity of social phenomena. More importantly they claim that an objective observation of the social world is impossible. Knowledge is developed and theory built through developing ideas inducted from the observed and interpreted social constructions. Interpretivists attempt to understand subjective realties and to offer interpretive explanations, which are meaningful for the participants of the research. The involvement of the researcher in the research is the most apparent in an Interpretivist research where the researcher engages in active collaboration with participants to address real-life problems in a specific context and aim to offer and implement feasible solutions to the problem. Interpretivists also reject the notion that research is value free. (Blumberg et al 2011, pp 17-18)

c) Realism

Realism combines principles of positivism and interpretivism. Its exponents believe that social sciences can rely on the research approach dominant in the natural sciences. It also accepts the existence of a reality independent of human beliefs and behaviour, which is the main essence of realism. (Saunders et al 2009 p 114) However it also concedes that understanding people and their behaviour requires acknowledgement of the subjectivity inherent to humans. In the realists view there are social processes and forces beyond the control of humans, which affect our behaviour. These processes and forces operate at the macro level. At the micro level (at the level of individual human beings) subjective individual interpretations of reality are important for a full understanding of what is happening. Still most realists would accept that these subjective interpretations are not unique and that people share similar interpretations, partly because the external forces at the macro level influence everyone. Thus research requires identification of external factors describing general forces and processes influencing humans, as well as the investigation of how people interpret and give meaning to the setting they are situated in. (Blumberg et al 2011 p 18)
3.3 Research Approach

The method chosen for a particular study or the approach is based on whether the intent is to confirm the type of information to be collected in advance of the project, which is the case with the quantitative method, or let it emerge from the participants which is how the qualitative methods works. (Cresswell, 1994 pp 20-23)

Quantitative Approach refers to any data collection technique or data analysis procedure that generates or uses numeric data. (Saunders et al 2009, p 151) If the purpose is to test a theory, or identify or predict factors that influence a factors that influence an outcome then quantitative methods is the best, which is why Quantitative approach will be adopted for this study. “Quantitative research or approach attempts precise measurement of something and requires that the researcher maintains a distance from the research to avoid biasing the results” (Cooper and Schindler 2008, p 164) This concept summarizes the reason why the Quantitative approach has been chosen for this study since its main aim is to identify the causes of stress among IT employees in India and Ireland.

Qualitative Approach refers to any data collection technique or data analysis procedure that generates or uses non-numerical data. (Saunders et al 2009, p 151) and is designed to tell the researcher how and why things happen as they do and aims to achieve an in-depth understanding of a situation. Qualitative Approach is used to study social phenomenon, situations, environments and processes that cannot be studied using quantitative methods. (Hazzan and Lutov, 2014) Qualitative data draws data from a variety of sources which include people, organization or institutions, texts, settings, objects and events. Qualitative approach or research sometimes called interpretive research because it seeks to develop an understanding through detailed description-often builds theory but rarely tests it. (Cooper and Schindler, 2008, p 162).

“It must be emphasised that one cannot decide whether qualitative or quantitative studies are better or more useful. It is also important to note that there are no predeterminates for the appropriateness of either a qualitative or quantitative study. In many social sciences, especially management studies, there is no such predominance of quantitative studies” (Blumberg et al 2011 p 144)

Research involves both description and explanation. If the research starts with specific observations and descriptions followed by analysis that produces explanations and explanations of the observations, it is an inductive process. This develops theory from initial data or a bottom-up approach. This is open-ended and exploratory, which are major characteristics of the qualitative interpretive approach. If the sequence is reversed, starting with a theory or hypothesis from which certain other things should logically follow, these implications can be tested and on the basis of the results the initial theory or hypothesis can be supported or rejected. This process is the deductive process- a top down strategy working from the general to the specific. (R.B. Burns and R.A Burns,2008 pp 22-23) “Deduction is a form of inference that purports to be conclusive- that is the conclusion must necessarily follow from the reasons given. These reasons are said to have led to the conclusions and therefore represent proof. This form of argument calls for a stronger link between the reasons and conclusions than is found in induction.”(Blumberg et al 2011 p 21)
The deductive approach is the most appropriate for quantitative research while the inductive approach is more suitable for qualitative research, where the theory is produced in an inductive way once the data has been collected and analyzed. Quantitative research is usually associated with deductive approach, where the focus is on using data to test theory. Saunders et al (2009, p 124) Deductive theory implies development of a theory that is subject to a rigorous test. As such it is the dominant research approach in the natural sciences, where laws present the basis of explanation, allow the anticipation of phenomena, predict their occurrence and therefore permit them to be controlled. (Collis and Hussey cited in Saunders et al 2009 p 124) Deduction possesses several important characteristics. First there is the search to explain casual relationships between variables. Secondly, it allows controls for the testing of hypothesis. Thirdly it would use structured methodology to facilitate replication. (Gill and Johnson, 2002 cited in Saunders et al 2009 p 125). Another important aspect to note is that deduction dictates that the researcher should be independent of what is being observed. Since this research has been carried out by using self-administered questionnaires, the deductive approach would be most suitable for this study. Other important characteristics for a deductive approach include the fact the concepts need to operationalised and generalized (Saunders et al 2009, p 125) The researcher intends to use the Deductive Research Approach, since the conceptual model and hypothesis is based on theory, and the research strategy is designed to test the formulated hypothesis.

“The inductive approach is radically different from the deductive approach. It does not have the same strength of relationship between reasons and conclusions,” (Blumberg et al 2011 p 21) In the Inductive approach theory follows data rather than vice-versa as is the case with deduction. Research using an inductive approach is likely to be concerned with the context in which such events were taking place. In the inductive approach, a study of a small number of samples might be more appropriate than a large number as is the case with the deductive approach. (Saunders et al 2009 p126) To induce something is to draw a conclusion from one or more particular facts or pieces of evidence. The conclusions explain the facts, and the facts support the conclusion. The task of research in the inductive approach is largely to determine the nature of the evidence needed to confirm or reject hypotheses and design methods by which to discover and measure this evidence. (Blumberg et al 2011, pp 21-22)

3.4. Research Strategy

A Research strategy can be defined as the general plan of how the researcher will go about answering the research questions. (Saunders et all, 2009, p 600). and may exclusively belong either to the deductive or to the inductive approach. Allocating strategies to one approach or the other is unduly simplistic. It must also be emphasised that no research strategy is inherently superior or inferior to any other. The choice of research strategy will be guided by the research questions and objectives, the extent of existing knowledge, the amount of time and resources available as well as the researcher’s philosophical underpinnings. (Saunders et al, 2009, p 139). The most commonly used research strategies include:

- Experiment
- Survey
• Case Study
• Action Research
• Grounded Theory
• Ethnography
• Archival Research  

(Saunders et al, 2009, p 139).

a) Experiment

“Experiments are studies involving intervention by the researcher beyond that required for measurement.” (Blumberg et al 2011 p 308). Experiments owe much to the to the natural sciences and according to Hakim (2000 cited in Saunders et al 2009) the main purpose of an experiment is to study casual links, whether a change in one independent variable produces a change in another dependent variable. An experiment will typically involve a definition of a theoretical hypothesis and selection of samples of individuals from known populations. (Saunders et al 2009, 143)

b) Surveys

The survey strategy which will be adopted in this dissertation in the form of self-administered questionnaires is a popular and common strategy in business and management research and is usually associated with the deductive approach. Surveys are popular as they allow the collection of a large amount of data from a sizeable population in a highly economical way. (Saunders et al, 2009 p 144).The great strength of the survey as a primary data-collecting approach is its versatility. It does not require the need for visual or any other objective perception of the information sought by the researcher. Abstract information of all types can be gathered by questioning others. We seldom learn about opinions, attitudes, intentions and expectations, except through surveys. Information about past events (such as the causes of stress among IT employees in the case of this study) is often obtained though surveying. (Blumberg et all 2011, p 207)

c) Case Studies

Robson (2002 cited in Saunders et al 2009 pp 145-146) and Yin (1989 cited in Blumberg et al 2011 p 256) define case study as “a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence.” These definitions clearly show how case study differs from other research approaches in terms of scope and methods used. Case studies take a broader view on a problem. In a case study, theories are developed and tested in a sequential step-by-step manner; starting with a previously developed theory the researcher compares the result of the case study with the theory. It must be noted that one case study cannot test a theory. There needs to be a series of case studies to permit the assessment of theory (Blumberg et al 2011 pp 256-257). “Case studies place more emphasis on a full contextual analysis of a fewer events or conditions and their interrelations.” (Cooper and Schindler 2008, p 144)
d) **Action Research**

“Action research is a research strategy concerned with the management of change and involving close collaboration between practitioners and researchers” (Saunders et al 2009 p 587) “Action research is designated to address complex, practical problems about which little is known” The scenario is studied, a corrective action is determined, planned and implemented, the results of the action are observed and recorded and the action is assessed as effective or not.”(Cooper and Schindler et al 2008 p 185) It focuses on the individual researcher’s understanding and values relating to the research issue. It further proposes that the only way the researcher can improve and challenge their understanding is by taking action and learning from experience.” (Fisher 2007 p 53)

e) **Grounded Theory**

Grounded theory is a technique in which the analysis of the data takes place simultaneously with its collection with the purpose of developing general concepts or theories with which to analyze data. (Cooper and Schindler 2008, p 704) The main characteristic of the grounded theory approach is that it starts with the data and not with a theory or even predefined research projects. In its purest form, the researcher should neither read the existing previous literature on the topic, nor should the researcher transcribe interviews nor talk with others about the emerging theory during the research process. This is in order to eliminate any influence of preconceptions that distract the researcher from the data collected. This however does not mean that the literature should be ignored entirely. (Blumberg et al 2011 pp 300-301)

f) **Ethnography**

Ethnography focuses on the manner in which people interact and collaborate in observable and regular ways. (Gill and Johnson 1997 cited in Fisher 2007 p 154) The main purpose of Ethnography is to describe and explain the social world the subjects in a research inhabit in the way they would describe and explain it. This is obviously very time-consuming as the researcher needs to immerse in the social world as completely as possible. The research process needs to be flexible and responsive to change since the researcher will constantly be developing new patterns of thought about what is being observed. (Saunders et al 2009 p 148)

g) **Archival Research**

Archival Research makes use of administrative records and documents as the principle sources of data. An archival research strategy allows research questions which focus upon the past and changes over time to be answered. However the ability of the researcher to answer such questions will be constrained by the nature of administrative records and documents. Even where these records exist, they may not contain the precise information to answer the research question or meet the research objective. Alternatively data may be missing or censored or access may be denied for confidentiality reasons. Using the archival strategy therefore necessitates the researcher to establish what data is available and designing the research to make the most of it. (Saunders et al 2009 p 150)
3.5 Research Choice

In choosing the appropriate method for a particular research study, a researcher will either use a single collection technique and corresponding analysis procedure or mono method or more than one data collection technique and analysis procedure or multiple methods to answer a research question. (Saunders et al 2009, p 151) "This choice is increasingly advocated within business and management research where a single research study may use quantitative and qualitative techniques and procedures in combination as well as use primary and secondary data” (Curran and Blackburn 2001 cited in Saunders et al 2009 p 151).

In a **mono method**, a single quantitative data collection technique such as questionnaires will be combined with quantitative data analysis procedures, or a single qualitative data collection technique such as an in-depth interview with qualitative data analysis procedures. However data collection techniques and procedures are combined using some form of multiple methods design. The term **multiple methods** refers to those combinations where more than one data collection technique is used with associated analysis techniques, but this is restricted within either a quantitative or qualitative world view. (Tashakkori and Teddlie 2003 cited in Saunders et al 2009 p 152). Thus a researcher might choose to collect quantitative data using both questionnaires and structured observation analyzing these data using statistical or quantities procedures, which is a multi method quantitative study. Alternatively qualitative data could be collected and analyzed using non-numerical or qualitative procedures which is called multi-method qualitative study. Therefore if multi-methods approach is adopted one would not be able to mix qualitative and quantitative techniques and procedures. (Saunders et al 2009 p 152)

**Mixed methods approach** is the general term used both qualitative and quantitative data collection data collection techniques are used in a research design. This approach uses quantitative and qualitative data collection techniques and analysis procedures either at the same time or one after the other but does not combine them. (Saunders et al 2009 p 152)

Most of the data obtained from this research was quantitative in nature and since a quantitative data analysis technique (i.e SPSS) was used to analyze the data, the choice for this particular study is mono-methods. It must be noted that two questions from the questionnaire yielded qualitative data, however since majority of the data was collected and analyzed using quantitative techniques such as questionnaires and SPSS respectively we can conclude that mono methods approach has indeed been used for this study.

3.6 Time Horizon

An important question to be asked while planning the research is whether the study is to be a “snapshot” taken at a particular time or should it be more akin to a diary or a series of snapshots and be a representation of events over a given period. The “snapshot” horizon can be called Cross-Section and the “diary” perspective called be called longitudinal. (Saunders et al 2009, p 155)
a) Cross Sectional Studies

The Cross-Sectional Time Horizon will be used for this study, mainly because of the time constraints. In a Cross sectional research, the study will be carried out once and will be of a particular phenomenon and at a particular point of time. (Cooper and Schindler 2008 p 144) Cross Sectional studies often employ the survey strategy (Easterby et al 2008:Robson 2002 cited in Saunders 2009, p 155), and use quantitative methods. Because of the time constraints, of the study and since the study has been conducted using surveys in the form of questionnaires using quantitative data, Cross sectional study is more suited for this study.(Saunders et al, 2009 p 155)

b) Longitudinal Studies

The main strength of longitudinal research is the capacity it has to study change and development (Saunders et al, 2009 p 155) Longitudinal studies are repeated over an extended period. The researcher may study the same people over time .While longitudinal research is important , the constraints of budget and time impose the need for cross sectional analysis.(Cooper and Schindler 2008, p 144)

3.7 Data collection methods

“The gathering of data may range from a simple observation at one location to a grandiose survey of multinational corporations at sites in different parts of the world. The method selected will largely determine how the data are collected.” (Cooper and Schindler, 2008 p 90) since the aim of this study is to analyze stress among IT employees in India and Ireland, and the approach being used is deductive using a positivist philosophy, surveys in the form of self-administered questionnaires has been used for this study.

Primary Data which can be defined as new data obtained specifically for (this) particular study. (Saunders et al 2009 p 256) was collected by surveys using self-administered online questionnaires which were sent out to IT employees in India and Ireland, mainly through the researcher’s social networks. Survey Monkey was the chosen platform to prepare and send out the questionnaires. 109 responses were received, which has met the requirement for a valid quantitative data analysis. The data was then analyzed using SPSS.

**Questionnaires** which has been used for this study, collects data by asking people to respond to exactly the same set of questions. They are often used as part of the survey strategy to collect descriptive and explanatory data about opinions, behaviours and attributes.” (Saunders et all 2009 p 401)

“Surveys using questionnaires are popular because they allow the collection of standardized data from a sizable population in a highly economical way.”(Saunders 2009,p 177) and this data can be analyzed in a quantitative manner. There are certain limitations in using a questionnaire to do a study, but nevertheless this method suits well with the purpose of this particular study.

Different kinds of secondary data which can be defined as data that has already been collected for some other purpose (Saunders et al 2009, p 256 ) such as books, academic journals, online resources etc. was also used in this study. A major advantage of using...
secondary data is that this approach saves time and money, as the data is already available, the researcher can already start to analyze the data and try to find the answer to his or her research problem. A major disadvantage of secondary data is that they are not collected with a specific research problem in mind. (Blumberg et al 2011 p 236)

There are several other methods of collecting primary data, some of which are discussed here in brief:

a) **Observation**: Observation involves the systematic, recording, description, analysis and interpretation of people’s behaviour. There are mainly two types of observation a) participant observation, which puts emphasis on discovering the meaning that people attach to their actions and b) structured observation which is quantitative and more concerned with the frequency of those actions. (Saunders et al 2009 p 288)

b) **Interviews**: The Interview is the primary data collection technique for gathering data in qualitative methodologies. Interviews vary on the number of people involved during the interview, the level of structure, the proximity of the interviewer to the participant and the number of interviews conducted during the research. The different types of interviews include unstructured interview in which no specific questions or order of topics to be discussed with each interview customized to each participant and generally starts with a participant narrative or a semi structured interview which starts with a few specific questions and then follows the individuals tangents of thought with interviewer probes or a structured interview which often uses a detailed interview guide similar to a questionnaire to guide the question order and the specific way the questions are asked, but the questions generally remain open ended. (Cooper and Schindler 2008 p 171)

c) **Sampling**: The basic idea of sampling is that by selecting some of the elements in a population, conclusions may be drawn about the entire population. (Blumberg et al 2011 p 167) “Sampling would provide a valid alternative when a) it would be impracticable to survey the entire population b) budget and time constraints prevent surveying of the entire population and c) all data is collected but results are required quickly. Sampling techniques can be divided in two a) Probability Sampling in which the chance or the probability of each case being selected from the population is known and is usually equal for all cases and b) non-probability sampling in which probability of each case being selected from the population is not known and it is impossible to answer the research questions that require the researcher to make statistical inferences about the characteristics of the population.” (Saunders et al 2009 p 212)

### 3.8 Types of Data:

a) **Quantitative Data**:

Quantitative data refers to numeric data or data that could usefully be quantified to help answer research questions or meet research objectives. Quantitative data in a raw form makes little sense and needs to be processed to make them useful. Quantitative analysis techniques such as graphs, charts and statistics allow exploration, presentation and description of data and examination of relationships and trends within the data. (Saunders et al 2009 p 414)
b) Qualitative Data:

Qualitative data refers to all non-numeric data that have not been quantified and can range from a short list of responses to open-ended questions in an online questionnaire to more complex data such as the transcripts of in-depth interviews or entire policy documents, to be useful. These data needs to be analyzed and the meanings understood (Saunders et al 2009 p 480).

Since the questionnaire for this study contains both open-ended and close ended questions,(which will be explained in the next section) both quantitative and qualitative data have been used for this study.

3.9 Questionnaire Design

An important part of any research is the questionnaire design and the validity and credibility of the collected data depend on the design and structure of the questionnaire and the pilot testing. (Saunders et al 2009 p374) According to Bourque and Clark (1994 cited in Saunders et al 2009 p374) when designing individual questions researchers need to

- Adopt questions used in other questionnaires
- Adapt questions used in other questionnaires
- Develop their own questions

Both open and close ended questions have been used in the questionnaire used for this study which was modelled on Cooper’s stress questionnaire, based on the nature and scope of the research question.

3.10 Population and Sample

Given the size of IT employees in both India and Ireland, it was impossible to collect detailed information about stress and its impact on productivity among all IT employees in India and Ireland, therefore a sample had to be taken. To overcome this problem a careful selection of the representative sample of the whole population will be enough to provide the researcher confidence that a true picture can be generalized. Nevertheless detailed information was received from 109 employees in both countries which is sufficient enough for a valid quantitative study. The basic idea of sampling is that by selecting some of the elements in a population, conclusions may be drawn about the entire population. (Cooper and Schindler 2008 p 374) The research population in this study includes IT employees in different locations across India and Ireland, as discussed earlier 109 responses have been obtained through the researcher’s social networks.

3.11 Sampling Techniques

“Probability Sampling (or representative sampling) in which inferences about the population to answer the research questions or to meet the research objectives, which is most commonly associated with survey based research strategies has been adopted in this study. With Probability Sampling, the chance or probability of each case being selected from the population is known as is usually equal for all cases. This means that it is possible to answer research questions and to achieve objectives that require statistical estimation of the characteristic of the population of the sample.” (Saunders et al 2009, p 214)
For Non-Probability sampling or judgemental sampling, the probability of each case being selected from the total population is not known and it is impossible to answer research questions or to address objectives that requires the researcher to make statistical inferences about the characteristics of the population. The researcher may still be able to make statistical inferences about the characteristics of the population, but not on statistical grounds. (Saunders et al 2009, p 214)

3.12 Ethics

All parties in research should exhibit ethical behaviour (Cooper and Schindler 2008 p 34) (Blumberg et al 2011, p 114) has defined Ethics as the “study of the right behaviour and addresses the question of how to conduct research in a moral and responsible way. According to Saunders and his team (2009 p 184) ethics relates to questions to how the research topic is formulated and clarified, research is designed, access is gained and the collection, process, and analysis of data and writing up the research findings in a moral and responsible way. Thus ethics not only addresses the question of how to use methodology in a proper way to conduct sound research, but also addresses the question of how the available methodology may be used in the right way (Blumberg et al 2011, p 114). “The goal of ethics in research is to ensure that no one is harmed or suffers adverse consequences from research activities. (Cooper and Schindler 2008, p 34)

Conducting empirical research, either quantitative or qualitative, often requires a researcher to compromise between what methodological theory recommends and what is feasible from a practical viewpoint. Likewise the researcher needs to resolve whether the way research is conducted is morally defensible towards all parties involved in the research. (Blumberg et al 2011, p 114)

“There is no single approach to Ethics. Advocating strict adherence to asset of laws is difficult because of the unforeseen constraint put on researchers. Alternatively, relying on each individual’s personal sense of morality is equally problematic.” (Cooper and Schindler 2008, p 34)

“Clearly a middle ground between being completely code governed or relying on ethical relativism is necessary. The foundation for that middle ground is an emerging consensus on ethical standards for researchers. Codes and regulations guide researchers and sponsors. Review boards and peer groups help researchers examine their research proposals for ethical dilemmas. Many design-based ethical problems can be eliminated by careful planning and consistent vigilance. In the end responsible research anticipates ethical dilemmas and attempts to adjust the design, procedures and protocols during the planning process rather than treating them as a afterthought. Ethical research requires personal integrity from the researcher, the project manager and the research sponsor” (Cooper and Schindler, 2008, p 34) Thus we can see from the above discussion that Integrity in research is vital. (Blumberg et al 2011, p 114)

3.13 Limitations of the Research

A major limitation of this study was the difficulty in obtaining primary data from IT companies in Ireland. This study was originally intended to focus exclusively on IT employees in Ireland. The researcher had to broaden the scope of the study to include IT employees in India, which is where the researcher is from, because of the low response rate of IT employees in Ireland.
3.14 Reliability of the Research

Reliability refers to the extent to which (a researcher’s) data collection techniques or analysis procedures will yield consistent results. It can be accessed by posing the following three questions:

1) Will the measures yield the same questions on other occasions?
2) Will similar observations be reached by other observers?
3) Is there transparency in how sense was made from the raw data? (Easterby-Smith et all 2008 cited in Saunders et al 2009 p 156)

“Reliability is concerned with the estimates of the degree to which a measurement is free of random or unstable error” (Cooper and Schindler 2008 p 292). “A measure is reliable to the degree that it supplies consistent results” (Blumberg et al 2011 p 350)There are four major threats to reliability which include a) subject or participant error b) subject or participant error bias c) observer error and d) observer bias (Robson 2002 cited in Saunders et al 2009 p 156) “Reliable instruments can be used with confidence that transient and situational factors are not interfering, they are robust and work well under different conditions.”(Cooper and Schindler 2008, p 293)

The data used for this research was mainly primary data. Though it was an important source of information, it was still prone to errors due to the time constraints and because of internal factors associated with the participants, all of which are beyond the control of the researcher undertaking this study.
Chapter 4

Data Analysis and Findings

The purpose of this chapter is to illustrate the results obtained from the primary data which was collected from the survey, in the form of self-administered questionnaires. Survey Monkey was the chosen platform to prepare and send out the questionnaires.

As mentioned in chapter 3, responses were received from 109 participants working in IT companies in India and Ireland, and the data obtained from the questionnaires was analyzed using SPSS.

According to Cooper and Schindler, (2008 p 702) “data analysis is the process of editing and reducing accumulated data to a manageable size, developing summaries, looking for patterns, and applying statistical techniques.”

This chapter on data analysis is divided into three parts:

**Section A** which includes personal information like gender, education, experience etc,

**Section B** which comprises questions about the different stressors

**Section C** which contains two open-ended questions about Stress Management Techniques and Stress related absence from work. These were analyzed using Excel since the information obtained from them was qualitative in nature.

The data in the following page was obtained from respondents in both India and Ireland, since the study undertaken was not comparative in nature.
Section A: Personal Information

Question 1 Gender

<table>
<thead>
<tr>
<th></th>
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<tr>
<td>Female</td>
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</tr>
</tbody>
</table>

Table 1: Gender

Figure 4 Gender

Of the 109 participants in the survey, 74 were male and 39 were female, all employed in IT companies in India and Ireland. In terms of Percentage 67.9 % of the respondents were male and 32.1% were female.
### Question 2  Experience

<table>
<thead>
<tr>
<th>Experience</th>
<th>Frequency</th>
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<th>Valid Percent</th>
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<td>One to Three years</td>
<td>16</td>
<td>14.7</td>
<td>14.7</td>
<td>29.4</td>
</tr>
<tr>
<td>Three to Five years</td>
<td>6</td>
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<td>34.9</td>
</tr>
<tr>
<td>More than Five years</td>
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<td>65.1</td>
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<tr>
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<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Table 2: Experience**

The figure represents the work experience of the participants. 65.1% of the total participants had over five years of work experience. The percentage of participants between 1-3 years of experience and less than 1 year experience was the same (14.7%). 5.5% of the participants had between 3-5 years of experience working in the IT sector.

**Figure 5: Experience**

The figure represents the work experience of the participants. 65.1% of the total participants had over five years of work experience. The percentage of participants between 1-3 years of experience and less than 1 year experience was the same (14.7%). 5.5% of the participants had between 3-5 years of experience working in the IT sector.
Question 3 Education

<table>
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</tr>
<tr>
<td>Undergrad</td>
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<td>43.1</td>
<td>43.1</td>
<td>89.0</td>
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<tr>
<td>Others</td>
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<td>100.0</td>
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<tr>
<td>Total</td>
<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 3: Education

This section covers the educational background of the participants in this survey. 45% of the participants had a Masters degree while 43.1% had an undergraduate degree. The educational background of 11% of the respondents fell into categories not covered/mentioned in the questionnaire used for this survey, and 1 participant had a Phd.

Figure 6: Education

This section covers the educational background of the participants in this survey. 45% of the participants had a Masters degree while 43.1% had an undergraduate degree. The educational background of 11% of the respondents fell into categories not covered/mentioned in the questionnaire used for this survey, and 1 participant had a Phd.
Question 4:

Current Location of the participants

<table>
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<tr>
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<tr>
<td>Ireland</td>
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<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Location of the Participants

This figure represents where the participants are based. Of the 109 participants, 88 (80.7%) were based in India, and 21 (19%) were based in Ireland. As mentioned in chapter 3, this study was originally meant to be exclusively done in Ireland. The researcher decided to broaden the scope of the study to include IT employees in India, because of the low response rate from IT employees in Ireland.
Section B: Questions about the different types of Stressors

Could you please highlight which of the following is a source of stress for you?

1) Work Overload

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<tr>
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<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
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<tr>
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<td>62</td>
<td>56.9</td>
<td>56.9</td>
<td>79.8</td>
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<tr>
<td>Great Deal of Stress</td>
<td>22</td>
<td>20.2</td>
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<tr>
<td>Total</td>
<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 5: Work Overload

Figure 8: Work Overload

62 out of the 109 participants (56.9%) mentioned “work-overload” as causing stress and 22 respondents (20.2%) identified work-overload as causing them a great deal of stress. 22.9% of the participants felt that work-overload was not a cause of stress for them.
2) Work Underload

<table>
<thead>
<tr>
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<th>Percent</th>
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<th>Cumulative Percent</th>
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<tr>
<td>Stress</td>
<td>28</td>
<td>25.7</td>
<td>25.7</td>
<td>91.7</td>
</tr>
<tr>
<td>Great Deal of Stress</td>
<td>9</td>
<td>8.3</td>
<td>8.3</td>
<td>100.0</td>
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<tr>
<td>Total</td>
<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 6: Work Underload

![Bar Chart of Work Underload]

Figure 9: Work Underload

66% of the respondents mentioned that work under load was not a source of stress. 25.7% of the respondents felt that work underload was a source of stress and 8.3 % of the respondents felt that work under load was a great deal of stress for them.
3) Time Pressure and Deadlines

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<td>54.1</td>
<td>54.1</td>
<td>78.0</td>
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<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 7: Time Pressure and Deadlines

![Time Pressure & Deadlines](image)

Figure 10 Time Pressure and Deadlines

54% of the respondents reported Time Pressures and Deadlines as a source of stress. 22% of the respondents mentioned Time Pressure and deadlines as a great deal of stress and 23.9% of the participants reported not being under any form of stress as a result of time pressures and deadlines.
4) Amount of Travel required by my work

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
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<th>Cumulative Percent</th>
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</thead>
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<tr>
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<td>57.8</td>
<td>57.8</td>
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<td>25.7</td>
<td>83.5</td>
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<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 8: Travel required by Work

Figure 11: Travel required by work

57.8% of the respondents felt that work related travel was not a source of stress for them. 25.7% of the respondents felt that business travel was a source of stress for them and 16.5% of the participants identified it as great source of stress (great deal of stress).
5) Long Working Hours

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
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<td>34.9</td>
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<tr>
<td>Stress</td>
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<td>51.4</td>
<td>86.2</td>
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<td>15</td>
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<td>13.8</td>
<td>100.0</td>
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<td>Total</td>
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<td>100.0</td>
<td>100.0</td>
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</table>

Table 9: Long Working Hours

Figure 12: Long Working Hours

51.4 % of the participants felt that long hours at work was a source of stress while 13.8% identified it as giving them a great deal of stress. 34.9% of the respondents felt that working long hours was not at all source of stress for them.
6) Lack of Power and Influence

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<td>47.7</td>
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<td>82.6</td>
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<td>19</td>
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<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 10: Lack of Power and Influence

Figure 13: Lack of Power and Influence

47.7% of the participants felt that lack of power and influence in the workplace was a source of stress. 17.4% of the respondents identified it as giving them a great deal of stress, and 34.9% of the respondents felt that not having power and influence was not a source of stress for them.
7) Attending Meetings

<table>
<thead>
<tr>
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<th>Frequency</th>
<th>Percent</th>
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<th>Cumulative Percent</th>
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<td>100.0</td>
<td></td>
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</tbody>
</table>

Table 11: Attending Meetings

![Attending Meetings Chart]

Figure 14: Attending Meetings

63.3% of the respondents felt that attending meetings at work not a source of stress for them, 29.4% felt that it was a source of stress for them and 7.3% of the participants identified it as a great source of stress.
8) My Beliefs contradicting Organizational beliefs

<table>
<thead>
<tr>
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<td>Total</td>
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<td>100.0</td>
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</table>

Table 12: Beliefs contradicting Organizational beliefs

Figure 15 Beliefs contradicting organizational beliefs

44% of the participants felt that clash of personal and organizational beliefs were not a source of stress for them. 40.4% felt that it was a source of stress for them and 15.6% felt that it provided them with a great deal of stress.
9) Keeping up with new technologies

<table>
<thead>
<tr>
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<th>Percent</th>
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<td>91.7</td>
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<tr>
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<td>8.3</td>
<td>100.0</td>
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<tr>
<td>Total</td>
<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 13: Keeping up with new technologies

Figure 16: Keeping up with new technology

65.1% of the participants felt that keeping up with new technology in the work place was not a source of stress for them. 26.6% felt that it was a source of stress, and 8.3% felt that it was a source of great deal of stress.
10) Threat of losing job

<table>
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<td>Stress</td>
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<td>36.7</td>
<td>85.3</td>
</tr>
<tr>
<td>Great Deal of Stress</td>
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<td>100.0</td>
<td>100.0</td>
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</table>

Table 14: Threat of losing job

![Threat of losing job chart]

Figure 17: Threat of losing job

48.6% of the respondents felt that the threat of losing job was not a source of stress for them. 36.7% felt that it was a cause of stress and 14.7% felt that it caused them a great deal of stress.
11) Competition for Promotion/Promotion Prospects

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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</thead>
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<td>48.6</td>
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<td>Stress</td>
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<td>12.8</td>
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<td>100.0</td>
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</table>

Table 15: Competition for Promotion/Promotion Prospects

![Graph showing Competition for Promotion/Promotion Prospects](image)

Figure 18: Competition for Promotion/Promotion Prospects

48.6% of the respondents felt that matters relating to promotion at work did not cause them any form of stress. 38.5% of the participants felt that it was a cause of stress and 12.8% felt that competition for promotion caused them a great deal of stress.
12) Doing a job beyond the level of my competence

<table>
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<tr>
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<th>Cumulative Percent</th>
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<td>60.6</td>
</tr>
<tr>
<td>Stress</td>
<td>32</td>
<td>29.4</td>
<td>29.4</td>
<td>89.9</td>
</tr>
<tr>
<td>Great Deal of Stress</td>
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<td>109</td>
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<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 16: Doing a job beyond the level of my competence

Figure 19: Doing a job beyond the level of my competence

60.6% of the participants felt that doing a job beyond one’s level of competence or ability was not a source of stress for them. 29.4% felt that it was a source of stress for them and 10.1% of the respondents felt that it was a source of great deal of stress for them.
13) Doing a job below the level of my competence

<table>
<thead>
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<th>Percent</th>
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<th>Cumulative Percent</th>
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<tr>
<td>Stress</td>
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<td>36.7</td>
<td>36.7</td>
<td>89.9</td>
</tr>
<tr>
<td>Great Deal of Stress</td>
<td>11</td>
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<td>10.1</td>
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<tr>
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<td>100.0</td>
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</tr>
</tbody>
</table>

Table 17: Doing a job below the level of my competence

![Doing a job below the level of competence](image)

Figure 20: Doing a job below the level of competence

53.2% of the participants felt that there was doing a job below one's level of competence or ability was not a source of stress for them. 36.7% of the respondents felt that it was a source of stress for them while 10.1% identified doing a job below competence levels as causing them a great deal of stress.
14) Inadequately trained subordinates

<table>
<thead>
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<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<td>47.7</td>
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</tr>
<tr>
<td>Great Deal of Stress</td>
<td>16</td>
<td>14.7</td>
<td>14.7</td>
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<tr>
<td>Total</td>
<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 18: Inadequately trained subordinates

Figure 21: Inadequately trained subordinates

47.7% of the participants felt that having inadequately trained subordinates is a cause of stress for them and 14.7 % were of the view that it is a source of great stress for them. 37.6% felt that inadequately trained subordinates was not a source of stress for them.
15) Unclear Roles

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<tr>
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<td>17</td>
<td>15.6</td>
<td>15.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 19: Unclear Roles

Figure 22: Unclear Roles

57.8% of the participants felt that unclear roles or role ambiguity was a source of stress for them. 15.6% felt that was a source of great deal of stress for them and 26.6% of the respondents felt it was not a source of stress for them.
16) Interpersonal Relations

<table>
<thead>
<tr>
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<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<td>36</td>
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<td>33.0</td>
<td>89.9</td>
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<tr>
<td>Great Deal of Stress</td>
<td>11</td>
<td>10.1</td>
<td>10.1</td>
<td>100.0</td>
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<tr>
<td>Total</td>
<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 20: Interpersonal Relations

Figure 23: Interpersonal Relations

56.9 % of the participants felt that Interpersonal relations or relationships with co-workers was not a source of stress for them. 33% of the respondents felt that it was a source of stress for them and 10.1% felt that interpersonal relations was a source of great deal of stress for them.
17) Hiring and Firing Personnel

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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</thead>
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<td>43</td>
<td>39.4</td>
<td>39.4</td>
<td>85.3</td>
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<tr>
<td>Great Deal of Stress</td>
<td>16</td>
<td>14.7</td>
<td>14.7</td>
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<tr>
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<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
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</tbody>
</table>

Table 21: Hiring and Firing Personnel

45.9% of the respondents felt that the hiring and firing policies of the organization (or employee turnover) did not cause any stress for them. 39.4% felt that it is a source of stress for them and 14.7% of the participants identified it as source of great deal of stress.

Figure 24: Hiring and Firing Personnel

45.9% of the respondents felt that the hiring and firing policies of the organization (or employee turnover) did not cause any stress for them. 39.4% felt that it is a source of stress for them and 14.7% of the participants identified it as source of great deal of stress.
18) Attitude of Boss/Management

<table>
<thead>
<tr>
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<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
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</tr>
<tr>
<td>Stress</td>
<td>41</td>
<td>37.6</td>
<td>37.6</td>
<td>75.2</td>
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<tr>
<td>Great Deal of Stress</td>
<td>27</td>
<td>24.8</td>
<td>24.8</td>
<td>100.0</td>
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<tr>
<td>Total</td>
<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 22: Attitude of Boss/Management

Figure 25: Attitude of Boss/management

37.6% of the participants felt that the attitude of the boss/management was a source of stress for them, which was same figure for those who felt that it was not a source of stress. 24.8% of the respondents felt that that the attitude of the boss/management was a source of great deal of stress for them.
19) Performance related compensation/Rate of Pay

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
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<th>Cumulative Percent</th>
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<td>84.4</td>
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<tr>
<td>Great Deal of Stress</td>
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<td>15.6</td>
<td>15.6</td>
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<td>Total</td>
<td>109</td>
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<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 23: Performance related compensation/Rate of Pay

43.1% of the respondent’s matters relating to pay was not a source of stress for them. 41.3% felt that it was a source of stress for them and 15.6% felt that it was a source of great deal of stress of them.
20) Unrealistic objectives

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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</thead>
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<td>33.9</td>
</tr>
<tr>
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<td>48.6</td>
<td>82.6</td>
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<tr>
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<td>19</td>
<td>17.4</td>
<td>17.4</td>
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<td>109</td>
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<td>100.0</td>
<td>100.0</td>
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</tbody>
</table>

Table 24: Unrealistic objectives

Figure 27: Unrealistic objectives

48.6% of the respondents felt that unrealistic business objectives was a source of stress for them and 17.4% identified it as a source of great deal of stress. 33.9% felt it was not a source of stress for them.
21) Dealing with conservative groups

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<tr>
<td>Stress</td>
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<td>38.5</td>
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<td>89.9</td>
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<tr>
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<td>11</td>
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<td>100.0</td>
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<tr>
<td>Total</td>
<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 25: Dealing with conservative groups

![Dealing with conservative groups](chart.png)

Figure 28: Dealing with conservative groups

51.4% of the respondents felt that dealing with conservative groups (eg: interest groups) in the workplace was not a source of stress. 38.5% of respondents felt that it was a source of stress. 10.1% of the participants felt that it was a source of great deal of stress.
22) Dealing with shareholders

<table>
<thead>
<tr>
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<th>Cumulative Percent</th>
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<td>61.5</td>
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<td>32</td>
<td>29.4</td>
<td>29.4</td>
<td>90.8</td>
</tr>
<tr>
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<td>10</td>
<td>9.2</td>
<td>9.2</td>
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<td>100.0</td>
<td>100.0</td>
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</table>

Table 26: Dealing with shareholders

61.5% of the participants felt that dealing with shareholders was not a source of stress for them. 29.4% of the respondents felt that it was a source of stress for them and 9.2% of the participants felt that it was a source of great stress for them.

Figure 29: Dealing with shareholders

61.5% of the participants felt that dealing with shareholders was not a source of stress for them. 29.4% of the respondents felt that it was a source of stress for them and 9.2% of the participants felt that it was a source of great stress for them.
23) Dealing with Unions

<table>
<thead>
<tr>
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<td>60.6</td>
</tr>
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<td>Stress</td>
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<td>87.2</td>
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<tr>
<td>Great Deal of Stress</td>
<td>14</td>
<td>12.8</td>
<td>12.8</td>
<td>100.0</td>
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<tr>
<td>Total</td>
<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 27: Dealing with Unions

Figure 30: Dealing with unions

60.6% of the participants felt that dealing with unions was not a source of stress for them. 26.6% identified it was a source of great stress and 12.8% of the respondents felt that it was a great source of stress.
24) Demand’s of work in my relationship with my family

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
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<td>32.1</td>
<td>83.5</td>
</tr>
<tr>
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<td>16.5</td>
<td>16.5</td>
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</tr>
<tr>
<td>Total</td>
<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 28: Demand’s of work in my relationship with my family

![Demand of work in relationship with family](image)

Figure 31: Demand’s of work in my relationship with my family

51.4% of the participants felt that work-family interface was not a source of stress for them. 32.1% of the respondents felt that it was a source of stress for them and 16.5% were of the view that demand of work in relationship with family was a source of great deal of stress.
25) Demands of work on my private life

<table>
<thead>
<tr>
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<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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</thead>
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<tr>
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<td>39.4</td>
<td>88.1</td>
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<tr>
<td>Great Deal of Stress</td>
<td>13</td>
<td>11.9</td>
<td>11.9</td>
<td>100.0</td>
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<tr>
<td>Total</td>
<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 29: Demands of work on my private life

Figure 32: Demands of work on my private life

48.6% of the respondents felt that demands of work clashing with their private lives was not a cause of stress for them. 39.4% felt that it was a source of stress for them and 11.9% felt that it was a source of great deal of stress for them.
26) Relationship with colleagues

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
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<th>Cumulative Percent</th>
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<td>13.8</td>
<td>13.8</td>
<td>97.2</td>
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<tr>
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<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 30: Relationship with colleagues

Figure 33: Relationship with colleagues

83.5% of the participants felt that relationship with colleagues was not a source of stress for them. 13.8% of the participants felt that it was a source of stress for them and 2.8% felt it was a source of great stress for them.
27) Relationship with subordinates

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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</thead>
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<td>80.7</td>
<td>80.7</td>
<td>80.7</td>
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<td>Stress</td>
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<td>12.8</td>
<td>93.6</td>
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<td>7</td>
<td>6.4</td>
<td>6.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 31: Relationship with subordinates

80.7% of the respondents felt that relationships with subordinates were not a source of stress for them. 12.8% felt that it was a source of stress and 6.4% felt that it was a source of great deal of stress.

Figure 34: Relationship with subordinates

80.7% of the respondents felt that relationships with subordinates were not a source of stress for them. 12.8% felt that it was a source of stress and 6.4% felt that it was a source of great deal of stress.
28) Making mistakes

<table>
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<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Stress</td>
<td>54</td>
<td>49.5</td>
<td>49.5</td>
<td>49.5</td>
</tr>
<tr>
<td>Stress</td>
<td>43</td>
<td>39.4</td>
<td>39.4</td>
<td>89.0</td>
</tr>
<tr>
<td>Great Deal of Stress</td>
<td>12</td>
<td>11.0</td>
<td>11.0</td>
<td>100.0</td>
</tr>
<tr>
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<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 32: Making mistakes

Figure 35: Making mistakes

49.5% of the participants felt that making mistakes at work was not a source of stress for them. 39.4% felt that it was a source of stress for them and 11% felt that it was a source of great deal of stress for them.
29) Feeling undervalued

<table>
<thead>
<tr>
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<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
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<td>23.9</td>
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</tr>
<tr>
<td>Total</td>
<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 33: Feeling undervalued

Figure 36: Feeling undervalued

38.5% of the participants felt that feeling undervalued was a source of stress, while 23.9% felt that it was a source of great stress for them. 37.6% felt that the feeling of being undervalued in the organization was not a source of stress for them.
30) Office Politics

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
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<th>Cumulative Percent</th>
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<td>33.0</td>
<td>75.2</td>
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<td>24.8</td>
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<td>109</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
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</table>

Table 34: Office Politics

![Office Politics bar chart]

Figure 37: Office Politics

42.2% of the respondents felt that Office politics was not a source of stress for them. 33% felt that it was a source of stress for them and 24.8% felt that it was a source of great deal of stress.
31) Lack of proper communication in the organization.

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
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</tr>
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<td>33.9</td>
<td>80.7</td>
</tr>
<tr>
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<td>19.3</td>
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</tr>
<tr>
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<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 35: Lack of proper communication in the organization.

![Graph showing lack of proper communication in the organization](image)

Figure 38: Lack of Proper Communication in the Organization

46.8% of the participants felt that lack of proper communication in the organization was not a source of stress for them. 33.9% felt that it was a source of stress while 19.3% felt that it was source of great deal of stress for them.
Section C

This section contained 2 open ended questions, one about Stress Management Techniques being adopted in IT companies in India and Ireland and the other about the number of times, the employee had taken leave because of a stress related cause. Because of the nature of the responses, the data obtained from these questions were analyzed using MS Excel.

Question 1

Does your organization adopt any kind of stress-management techniques? If yes, have they been beneficial to you? Please answer in a sentence or two.

Figure 39: Access to Stress Management Intervention among IT employees in India and Ireland

73% of the respondents in this study reported that there was no stress management techniques adopted in their organization and 27% of the respondents said that there was some kind of stress management interventions in their organizations.
Question 2

How often have you taken time off work in the recent past because a stress related cause?

Figure 40: Stress related absence from work among IT employees in India and Ireland

<table>
<thead>
<tr>
<th>Stress related absence from work</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never taken</td>
<td>78%</td>
</tr>
<tr>
<td>Rarely taken</td>
<td>8%</td>
</tr>
<tr>
<td>Frequently taken</td>
<td>14%</td>
</tr>
</tbody>
</table>

Table 36: Stress related absence from work

78% of the respondents never took leave for a stress related cause. 14% frequently took leave because of stress, and 8% reported to have taken leave once in a while (one or twice a year) because of stress.
Chapter 5

Discussion

In this chapter, an attempt is made by the Researcher to interpret and discuss the major findings of this study based on the data which was analyzed in the previous chapter along with its implications.

5.1 Discussion of the findings

Here the researcher will discuss the findings of the questions in Sections B and C in the questionnaire. Section A comprised questions about personal information about the participants hence it is not being discussed in this section as they have been covered in the previous chapter.

Section B: Could you please highlight which of the following is a source of stress for you?

1) Work Overload

Overall more than 75% of the respondents reported work-overload as causing some form of stress (either stress or great deal of stress) this supports the findings of Hendrix (1985), Cummins (1990), Lim and Hian (1999) and Yang, Chen, Choi and Zou (2000) that work overload is a cause of stress among employees in business organizations. It must be noted that both these studies were based on organizations in general, but nevertheless we can see from the findings above that work overload is an important cause of stress in all kinds of organizations, especially IT companies.

2) Work Underload

66% of the participants said work underload is not a cause of stress for them. Weinberg and Cooper (2007) and Arnold (2010) had identified work under load as a work stressor, but however, from the findings of this study we can find that work under load or not having much work to do is not a major source of stress.

3) Time Pressure and Deadlines

76% of the participants indentified that time pressures and deadlines as causing some form of stress. i.e. either stress or great deal of stress, which supports the views of Arnold (1990) and Fox (1993) that working under (time) pressure to meet deadlines is a source of stress for employees in business organizations. Again it must be noted that Arnold’s and Fox’s findings were based on business organizations in general and not on IT companies, but as we can see from the above finding, Time Pressures and Deadlines is a source of stress in IT companies as well.
4) Amount of Travel required by my work

58% of the participants felt that the amount of travel required by work was not a source of stress for them. Swaminathan and Rajkumar (2013) had identified work related travel as a source of stress for employees. It must be noted however that work related travel could still be a source of stress for all employees in all sectors especially for those with families. But from the above findings we can find that work related travel is not a source of stress for employees who participated in the survey for this particular study.

5) Long Working Hours

65% of the respondents identified that long hours at work were a source of stress (or great deal of stress) which supports the findings of Swaminathan and Rajkumar in 2013, and Landy and Trumbo in 1976 that long hours at work is a source of stress for employees. We can see from the above findings that it is true in the case of IT employees as well.

6) Lack of Power and Influence

65% of the participants reported that lack of power and influence within the organization cause either stress or a great deal of stress to them. Lack of power and influence can be attributed to the structure and climate of the organization, and is most prevalent in bureaucratic organisations. Ivancevich and Matteson (1980), Parker and DeCotis (1983) among others had also acknowledged the role of organizational climate and structure as stressors in a work place, and therefore the findings of this study support the findings of the earlier studies.

7) Attending Meetings

63% of participants felt that attending meetings was not a source of stress for them so we can conclude that attending meetings is not a source of stress for employees in the IT industry in India and Ireland.

8) My Beliefs contradicting Organizational beliefs

56% of the participants reported contradiction of personal beliefs with organizational beliefs was a source of either stress or a great deal of stress to them. Clash of personal beliefs to organizational beliefs can be linked to personal and organizational characteristics and therefore this supports the findings of Summer, DeCotis and DeNisi (1994) who identified contradiction of personal and organizational beliefs as a stressor in the workplace.

9) Keeping up with new technologies

65% of participants felt that attending meetings was not a source of stress for them therefore attending in the IT industry in India and Ireland, as they are constantly updated with the new developments in the world of technology.
10) Threat of losing job

51% of the employees surveyed here felt that threat of losing their jobs gave them some kind of stress. Landy and Trumbo (1976) had identified job insecurity as a cause of stress. However based on the findings of this particular study above, we can say that it is inconclusive whether or not the threat of losing job is a stressor or not.

11) Competition for Promotion/Promotion Prospects

51% of the respondents found that promotion related issues were a source of stress for them. Schuler (1982) and Parker and DeCotis (1983) had identified promotion related issues as work stressors, however from the findings of this particular study we cannot say for certain whether competition for promotion is a stressor or not.

12) Doing a job beyond the level of my competence

60.6% of the participants felt that doing a job beyond one’s level of competence or ability was not a source of stress for them. Doing a job beyond (and below) the level of Competence or ability can be described as a personal characteristics. Schuler and Summer, Parker and DeCotis had identified personal qualities or characteristics as stressors. But however based on the findings of this particular study, we can see that that doing a job beyond one’s level of competence or ability is not a source of stress among the employees who participated in the survey for this particular study.

13) Doing a job below the level of my competence

53.2% of the participants felt that there was doing a job below one’s level of competence or ability was not a source of stress for them. So therefore find that job below one’s level of competence or ability is not a source of stress. (Please also refer discussion for the previous section )

14) Inadequately trained subordinates

62% of the respondents identified having inadequately trained subordinates as a source of stress (either stress or great deal of stress) for them. Inadequately trained subordinates can be identified as a characteristic of the physical (work) environment. Therefore the findings for this particular question are in agreement with the findings of Ivancevich and Matteson (1982) and Swaminathan and Rajkumar (2013) who identified physical environment as a stressor in the work place.

15) Unclear Roles

Overall 73% of the respondents identified unclear roles or role ambiguity as a source of stress (stress or great deal of stress) Rinzo, House and Litzman (1970) and Hendrix (1985), Cummins (1990) had also identified role ambiguity as a source of stress, and therefore we can
find that the above finding is in agreement with the findings with the earlier studies mentioned.

16) Interpersonal Relations
56.9 % of the participants felt that Interpersonal relations or relationships with co-workers was not a source of stress for them. Which contradicts the findings of Ivancevich and Matteson (1982) and Schuler (1983) had identified relationships at work as stressors. However according to the findings of this study, Interpersonal relations are not a cause of stress among the employees who participated in the survey for this particular study.

17) Hiring and Firing Personnel (Employee Turnover)
54% of the respondents felt that employee turnover caused stress in the form of either stress or great deal of stress and this supports the findings of Landy and Trumbo in 1976 who also identified job insecurity which can result from employee turnover as a cause of stress in the workplace.

18) Attitude of Boss/Management
62% of the respondents felt that the attitude of the boss/management towards them as a source of stress and this is in agreement with the findings of Donaldson-Feilder in 2008 that the behaviour of management has a direct impact on well being of the employees.

19) Performance related compensation/Rate of Pay
57% of the respondents felt the rate of pay was a cause of stress (either stress or great deal of stress) Performance related pay is a factor intrinsic to a job. This supports the findings of Cooper and Mar Dhal, Arnold, Landy and Conte, who acknowledged factors intrinsic to a job as a source of stress.

20) Unrealistic objectives
66% of the participants identified Unrealistic objectives as a source of stress in some form. The findings from this study above unrealistic objectives is in agreement with earlier studies conducted by Ivancevich and Matteson, Schuler, Parker and DeCotis and Donaldson-Fielder. Unrealistic objectives can be as a result of pressure from management. It can also be as a result of the organizational structure/climate.

21) Dealing with conservative groups
49% of the respondents felt that dealing with conservative/interest groups within the organization was a source of stress of some kind. The presence of interest groups in organizations largely depends upon the organizational structure, climate and political environment. The same is applicable in the case of dealing with shareholders and unions.
Ivancevich and Matteson, Swaminathan and Rajkumar among others had identified the organizational structure, climate and political environment as stressors. However the findings from this study suggest that dealing with interest groups is not a source of stress.

22) Dealing with shareholders

61.5% of the participants felt that dealing with shareholders was not a source of stress for them. (Please refer to the above discussion on dealing with conservative groups.)

23) Dealing with unions

60.6% of the participants felt that dealing with shareholders was not a source of stress for them. (Please refer to the earlier discussion on dealing with conservative groups)

24) Demand’s of work in my relationship with my family

49% of the respondents felt that balancing demands of work with family requirements was a source of stress in some form for them. White (2004), Landy and Conte and Arnold had identified work-life interface as a source of stress, but we cannot say for certain from the findings of this study whether work-life interface is a stressor or not.

25) Demands of work on my private life

51% of the respondents felt that demands of work on private life caused stress in some form or the other. Therefore from the findings of this study, we cannot say for certain whether demands of work on private life is a stressor or not. (Please also refer to the discussion in the previous section about demands of work on family life)

26) Relationship with colleagues

Cooper and Mar Dhal (1976) and Ivancevich and Matteson (1980) had identified relationships as stressors. However as per the findings of this study we can find that this is not a cause of stress as 83.5% of the participants felt that relationship with colleagues was not a source of stress for them.

27) Relationship with subordinates

80.7% of the respondents felt that relationships with subordinates were not a source of stress for them. (please refer the above discussion about relationships with colleagues.)

28) Making mistakes

50% of the participants felt that making mistakes or the pressure to perform with minimal errors was a cause of stress in some form or the other. Pressure to work error free is a factor intrinsic to the job. Arnold and Landy and Conte had identified factors intrinsic to the job as a cause of stress. However from the findings of this study we cannot say for certain whether the pressure to work without errors is a stressor or not.
29) Feeling undervalued

62% of the overall participants felt that being undervalued caused some kind of stress (either stress or great deal of stress) to them. Feeling undervalued can be a result of low employee morale. Lim and Hian (1999) had identified low employee morale as a cause of stress in organizations. Feeling undervalued could also be as a result of the organizational culture, structure and climate. Ivanecivc, Parker and DeCotis, Swaminathan and Rajkumar had also identified organizational culture, structure and climate as causes of stress. Therefore the findings of this study on being undervalued in the organization being a stressor supports the earlier findings.

30) Office Politics

58% of the participants felt that office politics was a source of stress (either stress or great deal of stress) for them, and this supports the findings of Swaminathan and Rajkumar (2013) about politics in the work place being a stressor.

31) Lack of proper communication in the organization.

53% of the participants identified lack of proper communication in their organization as a source of stress for them. This supports the findings of Parker and DeCotis in 1983 about information flow in an organization being a source of stress.

Section C

Question 1

Does your organization adopt any kind of stress-management techniques? If yes, have they been beneficial to you? Please answer in a sentence or two

In spite of strong arguments in favour of stress management interventions in organizations especially in light of reports of increased stress levels in the literature (Cooper and Cartwright 2001 and Arnold and Randall 2010) it is surprising to note that 73% of the respondents in this study reported that there was no stress management techniques adopted in their organization. This is something that needs to be looked into urgently by top management in IT companies in order to reduce stress levels in their organizations thereby increasing productivity.

27% of the respondents said that there was some kind of stress management interventions in their organizations. Most of them were Work from Home policies (WFH) which help relieve stress to a certain extent. Other stress management techniques adopted which have been reported include Stress management courses, and extracurricular activities like games and team outings.
Question 2

How often have you taken time off work in the recent past because a stress related cause?

78% of the respondents never took leave for a stress related cause. Therefore the findings of this particular study show that stress does not have an impact on absenteeism this is contrary to the findings of Arnold and Randall (2010) Mesko (2012) and Hutchinson (2013) who found a link between stress and absenteeism. Nevertheless it must be highlighted that these studies like most of other studies on stress (and absenteeism) were done in other sectors and not in IT. We cannot say for certain whether stress has an impact on absenteeism in IT companies, and more research needs to be done in this area.

5.2 Findings related to Research Question One: Principle Stressors

A host of issues can act as potential stress factors throughout the working life of an individual. (Arnold et al, 1998, p 436) Cooper et al 1988 (cited in Arnold et al 1988 p 429) identified five major categories of stress namely a) factors intrinsic to the job e.g.: Work Overload, Long Working Hours b) Role of the employee in the organization e.g.: Role ambiguity and Role Conflict) c)relationships at work e.g.: relationship with supervisors and subordinates d)career development e.g.: job security and e) organizational structure and climate.

The principle stressors present among IT employees in India and Ireland identified from this survey can be categorized as a) factors intrinsic to the job (Work Overload, Long Working Hours, Time Pressures, inadequately trained subordinates, and Performance Related Pay) b) Organizational structure and climate (Lack of Power and Influence, Clash of beliefs, Employee Turnover, Attitude of Boss/Management, Unrealistic Objectives Office Politics and Lack of Communication) and c)Role of the employee in the organization (Unclear Roles) The above findings supports the Demand-Control model of Occupational Stress developed by Theorell & Karasek (1998) which states that stress is the result of high job demands and low decision latitudes. (Landy and Conte 2010 pp 467-468)

The findings of this study in relation to Career Development (Competition Prospects and Threat of Losing Jobs) is inconclusive, with 51% of the participants mentioning it as a source of stress of some kind as opposed to 49% who felt it was not a source of stress in both cases.

Bellavia & Frone (2005)Gryzwacyz and Butler (2008) and Swaminathan and Rajkumar (2013) proposed Work family interface or conflict as a major source of stress in the workplace. The findings of this study in relation to Work family interface is also inconclusive, with 49% of the participants mentioning it as a source of stress of some kind as opposed to 51% who felt it was not a source of stress.

However it is worth mentioning, that Relationships at work was not a source of stress for the IT employees in India and Ireland who participated in the survey for this study. This does not necessarily mean that relationships at work are not a source of stress in the work place,
especially since the work place consists of individuals with different backgrounds and interests there is always a bound to be a clash of interests or personalities.

Nevertheless from the above discussion we can see that there is stress among IT employees in India and Ireland and we can find the different stressors prevalent among the IT employees, hence the findings of research question one **supports the proposed research hypothesis**

5.3 Findings related to Research Questions Two and Three: Coping Strategies/ Stress Management Techniques and Interventions and its impact on Productivity and Absenteeism.

As mentioned in the previous chapter, three-fourths of the participants in the survey did not have access to any stress management techniques in their respective organizations which is very strange given that work-related stress and its impact is a well known fact. Of the 27% of the respondents that said that there was some kind of stress management interventions in their organizations ,like Work from Home policies (WFH),Stress management courses, and extracurricular activities like games and team outings, which help relieve stress to some extent.

It is critical for the organization to think about the issue of stress on a long term basis and the consequences of job-related stress. Managers must be aware of the potential work stressors on the employees and should take appropriate measures to reduce stress. They must develop and implement solutions to the work environment that will result in happier and more productive employees. (Longenecker 1999)

Training employees to help them deal with unavoidable challenges at work has good outcomes but training must be delivered by competent practitioners and draw upon the latest advances in research in stress management interventions. The assessment and management of employee well being are not simple tasks. There are many factors to consider and these interact with each other in complex ways. Enough is already known for work psychologists to offer clear advice to organizations about the processes that they should follow to help them develop a healthier workforce within a healthy organization. (Arnold and Randall 2010, p 492)

We find from the above discussion that not all IT employees surveyed had access to Stress Management Intervention and therefore, the impact of Stress Management Intervention on Productivity and absenteeism is uncertain .Hence the findings of research question two **supports the proposed research hypothesis** and the findings of research question three is inconclusive.

5.4 Impact of Stress on Absenteeism among IT employees in India and Ireland

Many researchers in the past had identified a very strong link between workplace strain and absenteeism like Satoris (2009), Mesko (2012) Swaminathan and Rajkumar (2013) and Hutchinson among others.

Absenteeism is one of the obvious costs of stress to employers, and general indications are that absenteeism is a widespread and accelerating problem in many occupations. (Arnold et al
1998 p 427) and it obstructs profits and organizational performance. According to Longenecker (1999) unhealthy stress can manifest itself in increased turnover and absenteeism.

However, this particular study conducted among IT employees in India and Ireland found that 78% of the respondents never took leave for a stress-related cause, thus indicating that there is no link between stress and absenteeism. Johns (1997), Johns and Xie (1998) cited in Chang and Lu (2009) are of the view that absenteeism is associated with characteristics specific to the occupation, thus implying that there may be differences in absenteeism across different occupations.

It must be noted that because of the very nature of the IT sector which is highly competitive, there is always a demand on IT employees to update their technical skills and this could result in higher rates of absenteeism, work burnout, and a desire to change careers. (Uma Devi 2011) Thus we cannot say for certain whether stress has an impact on absenteeism in the workplace for IT employees or not and more research would be required in future in this area.
Chapter 6

Conclusions and Recommendations

In this, the concluding chapter, the Researcher has summarized the findings of this study, highlighted the limitations of the study and has made an attempt to draw general conclusions and provide recommendations based on the findings of this study.

“A conclusion is an arguable statement. It is either a statement about the relationship between the premises or it is an inference about the likely consequences given the circumstances and the premises.” (Fisher 2007 p 94) According to Saunders et al (2009 p 589) conclusion is the section in which judgments are made rather than just facts reported.

6.1 Summary of Findings and Limitations of the Study

As mentioned in the previous chapter, this study found a) Factors intrinsic to the job b) Organizational structure and climate and (c) Role of the employee in the organization as the main stressors among employees as the principle stressors among IT employees in India and Ireland. It should also be noted that there was ambiguity about whether Career development and balancing work and personal priorities were sources of stress as the findings were inconclusive.

The study also found that a majority of the employees surveyed did not have access to any stress management techniques/interventions and that stress had only a minimal impact on absenteeism among the IT employees in India and Ireland. This does not necessarily mean that IT employees do not have access to any stress management intervention and that there is no link between stress and absenteeism. Thus we can say that this is inconclusive and more research would be needed in this area. Also as mentioned in the previous chapter, the study found that some factors such as relationships at work i.e with colleagues, subordinates etc. did not cause stress to the participants. This does not necessarily mean that a relationship at work is not a stressor. More research would be required in this area as well.

As mentioned earlier, this study was initially meant to be exclusively focussed on IT employees in Ireland, but because of the low response rate from IT employees in Ireland, the researcher had to broaden the scope of the study to include IT employees in India as well. There is limited research available on stress in IT companies in Ireland. This is an area that needs to be looked into in future, and more research needs to be done in this area.

Time constraints in completing this research meant less time than what would have been ideal for an extensive study of the causes of Stress among Employees in IT companies, and the way they cope with stress.

Since predominantly quantitative techniques were used for doing research for this study, there are bound to be aspects of Stress among Employees in IT companies and the methods these Employees cope with Stress that were not revealed to the researcher. This calls for
more qualitative research to be done in this area in future especially in regard to personal and organizational coping strategies.

6.2 Impact of Stress and Stress Management Interventions in the IT Industry in India and Ireland.

Stress in the workplace has become the black plague of today. This is likely to increase as international competition increases as a result of globalization. (Arnold et al 1998) Globalization of the economy presents a new challenge in understanding and preventing stress in the workplace. (Landy and Conte 2010 p 482). Peterson and colleagues (1985, cited in Landy and Conte 2010) found that Western countries had significantly higher role ambiguity than non-Western countries. This raises the possibility of injecting stress into non-Western cultures from the West as a result of Globalization thus resulting in a great cost to the individuals and the organizations. Work stress is a universal phenomenon that has been found to raise adverse health, performance and general well-being concerns in diverse organizational and behavioural settings. (Babatunde 2013)

Different jobs have different sources of stress that affect different people in different ways. (Arnold and Randall 2010 p 491) Working long hours, rushing to meet unrealistic objectives and deadlines and ever changing user demands are some of the factors that make IT jobs stressful, and employees in the IT sector seem to have accepted the growing stress levels in the workplace as an inherent part of the job. (Longenecker 1999) but it must be noted that too much stress among employees results in poor health and many complications will arise if the stress is intense or prolonged.(Mesko 2012)

Unhealthy levels of stress create frustration which can negatively impact a job that requires high levels of discipline, focus and systematic thinking. Stress can also cause the emergence of negative attitudes and anger which can be very harmful in a service oriented business that requires teamwork and patience. Stress can result in feelings of helplessness that can cause people to be demotivated which can cause both organizational/personal performance to slip. Finally stress can manifest itself in a fashion that negatively impacts individual and group performance and morale. It can be stated that excessive stress inhibits performance and negatively affects the standards of excellence necessary for long term survival and success in the IT industry. These negative outcomes simply underscore the fact the excessive job-related stress can have a debilitating effect on IT professionals and a profound negative effect in a work environment in the IT sector when stress levels are not adequately managed. (Longenecker 1999)

Stress can result in organic disease, psychosomatic disorders and a variety of behavioural disturbances including problems with work performance. There are a number of remedies for the problems of stress at work. Physical Stressors can be removed, or workers can be protected from the stressors. Jobs can be redesigned and workers can be provided with social support. (Berry 1998, p 445)

It is imperative for managers to initiate action to extenuate stressors in the workplace for improving employee well being (Babatunde 2013 and Longenecker 1999). It is also
necessary that these interventions be integrated within the structural context of work and the psychological frame of employees. (Babatunde 2013)

According to Henderson (2007 cited in Arnold and Randall p 433) and Berry (1998 p 444) there are two productive approaches to reducing workplace stress a) To teach people to deal with the stressful situations in the workplace and b) to change the workplace in a way that decreases job demands.

Primary measures such as managerial stress awareness training, creation of social structures that moderate stress effects and role clarification are effective strategies that are suggested for better organizational outcomes. It is also of practical importance that working conditions are adapted based on the differences in people’s physical, mental and contextual situations of life. Consequently, organizations should pay more attention to the work-life balance of their employees by seeking to implement a variety of practices and policies such as flexitime, job sharing, home telecommuting, adequate recreational activities amongst other family friendly policies and these can help promote improved employee performance, better mental and physical health, and job satisfaction. (Kosssek 2012 cited in Babatunde 2013)

Modifications intended to reduce stress such as increases in flexible employment as well as changing organizational structures and work process are likely to lead to new stressors. (Landy and Conte 2010, p 482) According to DeFrank and Ivancecich (1998, cited in Landy and Conte 2010, p 482,) several additional influences are predicted to be stressful in future years, including global competition and downsizing. There is little doubt that opportunities for the experience of stress at work are increasing rapidly. It is important to understand how these changes in the nature of work will influence the health and well-being of workers and their families. (Landy and Conte 2010 p 482)

Organizations must begin to manage people at work differently, treating them with respect and valuing their contribution, if the psychological well being and health of the workers are to be enhanced in future. (Arnold et al 1998 p 439)

It should be worthwhile noting that stress can cause further problems in the IT sector if not monitored continuously and stress levels can increase if it is not addressed. Effective Stress Management should be more out of concern of the welfare of the employee rather than just an introduction of measures to counter effects and causes of stress.

6.3 Recommendations: Organizational Responsibility for Stress Management

It would also be useful in this context to mention about what business organizations, in all sectors including those in the IT sector could do for better management of human resources by developing creative ways which can result in reduced stress levels which in turn would satisfy employee needs which would result in improved performance in the workplace in turn increasing productivity.

Stress is a reality that needs to be addressed by both the IT organizations and the individual to create and maintain a healthier, productive staff and working environment. Acknowledging the need to address the causes of stress is the first and most important step in the stress reduction process. (Longenecker 1999)
According to Boselie (cited in Hutchinson, 2013 p 267), Organizations need to pay more attention to what employees want, by focussing on employee well being, including work life balance and job security, autonomy and fixed pay. Boselie argued that this greatly reduced undesirable effects on employees such as undue pressure and stress.

The most direct way to deal with stress is to change the source of the problem, or in other words, to remove the stressor. Stressful physical conditions can often be modified so that they are no longer harmful. (Berry 1998, p 442)

The assessment and management of employee well-being are not simple tasks. There are many factors to consider such as organizational structure and climate, the laws of the country in which the organization operates etc, and these factors interact with each other in complex ways. Employee well being is protected when there are systems in place within the organization to ensure that work is well designed and well maintained. (Arnold and Randall 2010 p 491)

Organizations attempt to remedy employee stress by means of primary and secondary preventive interventions. (Berry 1998 p 477) While more research is required to establish the relative effectiveness of different interventions, a closer inspection of primary interventions shows that many of them are features of good management practices. Involving employees in decision-making about primary interventions is particularly important as is providing training to the employees to overcome negative challenges at work. (Arnold and Randall 2010 p 491)

It is a well known fact that working conditions in organizations contribute to employee health problems like stress. (Berry 1998 p 477). Jobs can be re-designed to increase meaningfulness at work and this can result in increased satisfaction for the employee which results in improved productivity thereby reducing stress which will be beneficial for both the employee and the organization. (Arnold et al 2010 p 476). The employee must be considered when the job is being designed, including in matters like work schedules. (Berry 1998 p 514)

It can be seen from this discussion what can be done by organizations for improved practices that can increase satisfaction thus reducing the levels of stress and therefore improved performance. These typically emphasise the need for the organization to pay more attention to employee well being, the importance of primary and secondary interventions to reduce stress and the involvement of the employee in decision-making about primary interventions and lastly the design of work to meet the needs of the employee.
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Appendix A

Self Reflection

This section outlines the Researcher’s approach to learning during the MBA program and particularly during the dissertation, discussing and highlighting the skills developed and knowledge attained by the researcher as a result of the process, which could help the researcher’s professional and career development.

1 Learning Style

The Researcher’s approach to this dissertation and learning style in general is very similar to Kolb’s four staged experimental learning cycle which has been very influential in the developments in thinking about experimental learning. (Cotrell 2010 p, 204)

Kolb’s cycle consists of four stages

a) Active Experimentation: This involves learning through doing. Previous ideas are applied into a practical situation when trial and error gives rise to further thoughts and ideas which can be followed through the whole cycle

b) Concrete Experiences: Concrete Experiences in terms of development of feelings follow the active experimentation stage. These feelings are then used as a reference point for future actions.

c) Reflective Observation: Reflecting upon previous experiences and feelings is very important. Watching, listening and actively thinking through issues ensure that careful consideration is made before taking action.

d) Abstract Conceptualizations This is where theories for the future are developed. Using reflections, an analysis is undertaken which conceptualizes in the abstract. The individual thinks through the repercussion and applies what has been learnt in similar situations in order to increase the success of the idea. Logical thought and modelling ideas in the air gives rise to new things to try out.

Figure 41: The Kolb’s Learning Cycle (Source Lee- Davies 2007 p 34)
Kolb went on to define four types of learners within this cycle:

a) Diverger - learns best through feeling and watching  
b) Assimilator - learns best through watching and thinking  
c) Converger - learns best through thinking and doing  
d) Accommodator - who learns best through doing and feeling

Figure 42: The Kolb’s Learning Cycle and Kolb’s Learning Styles (Source Lee- Davies 2007 p 35)

Peter Honey and Alan Mumford (1986) simplified this further and created four learning types that carried out one main attribute from each of the four stages on the learning cycle:

a) Activists: Activists learn best by jumping straight into things acting first and considering the consequences later. They like immediate experiences and have an open mind towards anything new. Activists are not the best at longer-term implementation, activists will look for something else to do once the initial excitement has died down. Activists like the limelight.
b) Reflector: Reflectors will think things very carefully before making a decision. They like to have all the facts and comments from different experiences together first and will go on and make an “educated” decision in their own time. They will think strategically and try to incorporate the views of others.

c) Theorist: Theorists like logic and will think matters in a linear way. With a tendency to perfectionism they like to apply sound theories to their observations. They prefer to be intellectually stretched and work in a structured environment. Theorists are not comfortable with the subjective or flippancy.

d) Pragmatism: Pragmatists just want to put idea into practice and experiment. With a dislike for open ended discussions they will roll up their sleeve and have a go to see if something works. They like being given previous examples of success. (Lee-Davies 2007, pp34-37)

Figure 43: The Kolb’s Learning Cycle and Honey and Mumford Learning Style (Source Lee-Davies 2007 p 36)

With regards to the learning process, the researcher’s learning style is generally close to the Reflective Observations mode from Kolb’s learning cycle throughout the MBA program, which means that situations are viewed from multiple perspectives and conclusions are reached only after carefully analyzing the situation. This is greatly influenced by the fact that the researcher hails from India but was born and raised in Kuwait, and was educated and has worked both in India and Kuwait, and has so as a result, gained a great deal of experience
from living and working in both countries (i.e. Kuwait and India), and interacting with different kinds of people. Therefore the researcher has learnt to take decisions and come to conclusions in all areas of life, only after carefully analyzing the situation and weighing the pros and cons, and most importantly taking the views of others into consideration.

2) Review of Learning

Following the completion of this dissertation and the MBA, the researcher is at the active experimentation stage of Kolb’s learning cycle, which will be explained further in this section. In order to ensure an improved experience in future in any situation be it in an academic or work setting, it is important that the skills that the researcher has acquired during the MBA program be reviewed so that any weaknesses can be identified and rectified. The most important skills are discussed below:

2.1 Research Skills

The researcher has a Masters Degree (M.A) in Political Science from the University of Kerala, India, which was completed in 2003. The researcher had to submit a dissertation for the award of the M.A degree in Political Science. So the researcher had some prior knowledge about how to write a dissertation at the time of joining the MBA program in Dublin Business School/prior to commencing the research for this study on the “Analysis of Stress and Stress Management Techniques among IT employees in India and Ireland”

The dissertation which was submitted by the researcher for the M.A degree was titled “Arab-Israeli Conflict” (which is still ongoing at the time of writing this particular dissertation, 11 years on), and as the researcher was based in India in 2003 at the time of doing the dissertation for the MA degree and since it would have been impossible to visit the affected areas in the Middle East to collect primary data and do research on that particular topic, only secondary data had been used for that particular dissertation.

The researcher was not aware of how to collect, utilize, and analyze Primary Data for research purposes, and since this particular study on Stress among IT companies in India and Ireland required the use of Primary data which was collected by conducting surveys in the form of questionnaires, this was “uncharted territory” for the researcher. Therefore this provided enormous challenges for the researcher, at the same time it was an opportunity to learn something new.

The questionnaire for this study was formulated using Cooper’s Stress Questionnaire. As mentioned earlier, the title for this study was entitled “Analysis of Stress and Stress Management Techniques among IT employees in India and Ireland” therefore a significant amount of data was required from the questionnaire, in order to gain a deep insight into the subject. As a result the questionnaires were a bit lengthy containing over 30 questions. Survey Monkey was used for sending out the questionnaires to the respondents, which was a new experience for the researcher. The number of respondents and the data obtained from the survey was satisfactory.

Data analysis was an important part of the research and data obtained from the questionnaires was analyzed using SPSS which again was a challenging experience for the researcher. The
analysis of the data was complex and time consuming process. The open ended questions were analyzed using Excel. The researcher had limited working knowledge of Excel, so analyzing data using Excel was a new experience for the researcher which will help the researcher in future in a professional/work context.

So we can see from the above that the process of conducting the survey has gone a long way in improving the research and data analysis skills of the researcher.

2.2 Interpersonal Skills

The structuring of the MBA programme meant that there were a number of group assignments, group discussions and presentations during the course. This meant working with different groups and interacting with people from different countries. This has greatly enhanced the social and interpersonal skills of the researcher, including the art of teamwork and team building. These skills will significantly contribute to the professional development of the researcher in areas such as people management and also in the researcher’s personal life.

2.3 Time Management Skills

Having been in full time employment for seven years, the researcher already had experience in time management, especially in meeting deadlines. Working on this dissertation and the MBA programme as whole further solidified the researcher’s time management abilities.

My previous experience in time management and meeting deadlines meant that planning for this dissertation along with all other coursework including assignments were done by breaking up tasks into smaller ones, thus having more realistic and achievable targets, rather than having big, unrealistic and unachievable targets which enabled completing this dissertation (and other assignments during the MBA) on time. As a result of adopting such a policy, it is highly unlikely that deadlines will ever be missed even if there is a high workload.

Conclusion

In conclusion, the MBA and this dissertation was a major challenge for the researcher, especially considering the fact that the researcher was doing full time study after a gap of 10-11 years and after being in full time employment for seven years. How challenges are encountered and overcome is what distinguishes successful people from less successful or ordinary people. By God’s grace, hard work, determination and self belief, the researcher managed to rise to the challenge, and this extraordinary learning experience will remain a valuable asset for the researcher especially in terms in professional and career advancement.
QUESTIONNAIRE

Hello,

My name is Colin Oommen Joshy, and I am doing MBA in Business Management from Dublin Business School (DBS), Dublin 2, Ireland. I am doing a study on “Analysis of Stress and Stress Management Techniques among IT employees in India and Ireland” for my dissertation for the award of my MBA degree.

This survey is being conducted as part of my dissertation on the above mentioned topic

I would highly appreciate it if members of your staff agree to participate in the survey.

It should take around 5-10 minutes to complete the questionnaires which I am using for my survey. Your responses are important in enabling me to obtain as full an understanding as possible of this issue.

Please find below the link to the survey

https://www.surveymonkey.com/s/7RNBTYQ

I will treat all information obtained from the filled-in questionnaires in the strictest confidence. All responses to the questionnaires will only be seen and used by me. Respondents will not be asked for their name on the questionnaire. The questionnaire will only ask for limited personal data about each participant.

I hope you find completing the questionnaire enjoyable and thank you for your time.

If you need further information, please feel free to contact me by email colinoommen@gmail.com.

Kind Regards,

Colin Oommen Joshy
Please mark “X” wherever applicable

GENDER: [ ] Male [ ] Female

EXPERIENCE: Less than 1yr [ ] 1-3 yrs [ ] 3-5yrs [ ] More than 5 yrs ( )

EDUCATION Phd ( ) Masters ( ) Undergrad ( ) High School ( ) Others ( )

1) Could you please highlight which of the following is source of stress for you at work?

<table>
<thead>
<tr>
<th>Source of Stress</th>
<th>No Stress at all</th>
<th>Stress</th>
<th>A Great Deal of Stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Overload</td>
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<tr>
<td>Work Underload</td>
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<tr>
<td>Time Pressure and Deadlines</td>
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<tr>
<td>The amount of travel required by my work</td>
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<td>Long working hours</td>
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<td>Lack of Power and influence</td>
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<td>Attending Meetings</td>
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<td>My beliefs conflicting with those of the organization</td>
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<td>Keeping up with new technology</td>
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<td>Threat of losing job</td>
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<td>Competition for Promotion/Promotion Prospects</td>
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<td>Doing a job beyond the level of my competence</td>
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<tr>
<td>Doing a job below the level of my competence</td>
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<td>Inadequately trained subordinates</td>
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<td>Unclear roles</td>
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<td>Interpersonal relations</td>
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<td>Hiring and Firing personnel</td>
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<td>Attitude of boss/management</td>
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<td>Performance related compensation/Rate of Pay</td>
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<td>Unrealistic objectives</td>
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<td>Dealing with conservative groups</td>
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<td>Dealing with unions</td>
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<td>Demand’s of work in my relationship with my family</td>
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<td>Demands of work on my private life</td>
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<td>My relationship with my colleagues</td>
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<td>My relationship with my subordinates</td>
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<td>Making mistakes</td>
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<td>Feeling undervalued</td>
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<td>Office Politics</td>
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<td>Lack of proper Communication in my organization.</td>
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<tr>
<td>Any Other (Please state)</td>
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</tbody>
</table>
2) Does your organization adopt any kind of stress-management techniques? If yes, have they been beneficial to you? Please answer in a sentence or two

3) How often have you taken time off work in the recent past because a stress related cause?