Identifying external influences and understanding factors creating pressure on hospital systems

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STATEMENT OF ORIGINALITY

DECLARATION

I certify that the work in this thesis titled "Identifying external influences and understanding factors creating pressure on hospital systems" has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree to any other university or institution other than Macquarie University.

I also certify that the thesis is an original piece of research and it has been written by me. Any help and assistance that I have received in my research work and the preparation of the thesis itself have been appropriately acknowledged.

In addition, I certify that all information sources and literature used are indicated in the thesis.

Jadranka Dominkovic-Cook

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ETHICS APPROVAL FOR RESEARCH

The research presented in this thesis was approved by the Macquarie University Human Research Ethics Committee (HREC9Medical Sciences) at its meeting on 30 July 2015. Reference number:

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ABSTRACT

Background:

In today's fast changing environment, one of the major challenges for hospitals is to adapt to external demands while ensuring quality, safety and positive patient outcomes. It is not yet clear how the external environment affects the delivery of care. Health care research is currently following a normative approach when studying how environments affect hospital outcomes. External influences are theoretically conceptualised, which leads to inconclusive and non-comparable results. Research has yet to be conducted into how hospital staff experience external influences or external pressure. Thus, this qualitative study aims to assess how external influences are perceived by health care professionals in hospitals.

Method:

Open-ended, in-depth, semi-structured interviews were used to obtain a first impression of the topic. A total number of 8 interviews with health care professionals were conducted between April and June 2016 at a local public district acute hospital. Representation was sought across a variety of roles, fields and departments levels. A general inductive approach was used to identify the main themes and develop categories from the qualitative data.

Results:

Each hospital professional created their own subjective meaning of external influences. The perception of pressure was relative and shaped by identity and personality. There was no consistent understanding of 'internal' or 'external'. The interpreted boundaries were subjective and dynamic, depending on perception, professional accountability and work responsibility. The overall context and circumstances, the work-load, and time constraints also were connected to the perception of influences.

Conclusion:

Hospital staff experienced the external environment according to their own identity. External pressure and organisational boundaries, as understood by organisational theorists, had very limited relevance for most people working in the hospital.

1. Introduction

1.1. Background

Health care systems encounter increasingly complex and uncertain environmental challenges due to the dynamics of technological and medical innovations as well as significant changes in population demography and disease patterns (Armstrong, Gillespie, Leeder, Rubin, & Russell, 2007). In today's information society, stakeholders are more sophisticated and technology has empowered them to express their concerns and demands, which has led to increased accountability (Argenti, 1998). The need for more productivity and efficiency combined with greater patient expectations adds to the pressures on hospital systems. As hospital organisations have become inherently more complex, it is increasingly difficult to adapt to this rapidly changing environment (Argenti, 1998).

Despite significant medical advances over the past decades and the implementation of quality improvement strategies, concern about the quality and safety of health services remains one of the biggest problems in health care (Braithwaite, Runciman, & Merry, 2009). Deviations in the quality of health care delivery and the dynamics of organisational factors and patient outcomes continue to be investigated but are not yet fully understood (Groene, Kringos, & Sunol, 2014). For instance, the Deepening our Understanding of Quality Improvement in Europe (DUQuE) project examined the relationships between hospital processes and quality outcomes in 183 European hospitals. The study indicated that external accreditation, certification and 'perceived pressure' from hospital leadership are related to performance outcomes (Secanell et al., 2014). There is no knowledge, however, of how the external environment impacts on hospital performance due to a lack of understanding of which environmental factors cause pressure for hospital staff (Ramamonjiarivelo, Weech-Maldonado, Hearld, & Pradhan, 2014; Yeager et al., 2013). While there is an underlying assumption of external pressure in health care research, it is not clear what specifically constitutes external pressure for different parts of the health system or how it is actually perceived by hospital staff. Researchers are still trying to find out, which external influences are related to productivity, quality and safety outcomes.

1.2. Can normative research approaches explain perception?

Why don't we know more about the perception of external pressure and its impact on organisations? Part of the answer lies within methodological issues. Health care research applies a rationalistic, normative approach to study external influences and 'perceived external pressure'. Organisational and management theories specify what is observed but struggle to capture the complexity of the hospital environment (Chia, 1995). The underlying problem is that health care professionals and perceptions cannot be studied with models of economic growth, connections between inputs and outputs, or quantitative analysis of market movements (Foucault, 2002). People in hospitals do not follow rational, scientific logic and sociological constants (E. Hollnagel, Wears, & Braithwaite, 2015).

Currently theoretical frameworks, such as resource dependency theory (Pfeffer & Salancik, 1978) and institutionalism (DiMaggio & Powell, 1983; Meyer & Rowan, 1977) provide guidance for the research of hospital environments (these theories will be outlined more in chapter 3). Many researchers' perceptions of 'external pressure' are drawn from these approaches, which have an inherently materialistic view on the world. Normative approaches assume that there is an 'ultimate truth' and therefore expect that everything is measurable and theoretically explainable (Campbell, 2011). Organisational analysis is shaped by "theoretical activity" and focused on "empirical origins" of observations (Foucault, 2002, p. 10). Research on hospital environments typically uses organisations as a unit of measure, rather than investigating the experiences of people working in the hospital. As a result, studies use variables found in statistical data such as network size, scope of operations or population demographics to assess environmental impacts on hospital performance. However, human perception of external pressure cannot be measured with theoretically conceptualised external influences such as environmental complexity, environmental turbulence and market, hospital, technology and resource competition.

1.3. Perception is a cognitive experience

The rationalistic perspective has been challenged in postmodern, philosophical discussions on the nature of scientific knowledge. Foucault (2002) proposed that research has reached its scientific limits, by persisting to explain everything theoretically and logically. Postmodernism questions the ability of theoretical frameworks to reflect reality, since there is no universal truth (Campbell, 2011). Meanings are created by cognition and social exchange.

According to postmodernism, knowledge and thoughts are the product of social discourse and individual interpretation, and are therefore being contextual and constructed (Aylesworth, 2015). Postmodernism represents an attitude of scepticism and distrust towards explanations that claim to be valid for all groups, since each person has their own 'truth' and 'reality' (Campbell, 2011). Thus, if we want to research perception, we need to look at the cognitive process of the people working in hospitals. An increasingly influential school of thought in cognitive science argues that the world has become a cognitive extension of the human mind. Accordingly, the boundaries of the mind are not "brain bound" (Nowell, 2015) but are interlocked with the material world. This perspective raises questions about the relationship between cognition and the material world. Therefore philosophies such as relativism (O'Grady, 2002) or social constructivism (Detel, 2015), which try to explain the interconnection between 'perception' and 'reality', need to be considered when researching perception.

1.4. Exploring the hospital environment

It is evident that more research is required to investigate external hospital environments (Mark et al., 2008), but theoretically defined environmental variables cannot sufficiently explain the impact of external influences on hospital staff. To understand the importance of external influences we need to find out how people working in the hospitals experience their environment. Rather than studying the health care system at a macro-level with an emphasis on organisational interactions, this study is focused at the micro-level; assessing individuals' perceptions of external influences. The goal of this research is to discover which external influences impact directly on hospital staff and to determine which factors are perceived as external pressures with a subsequent effect on decision-making. This will contribute to a better understanding of what constitutes external pressure and to what degree the external hospital environment influences productivity, quality and safety. Investigating the role of external pressure will help develop new approaches to quality improvement interventions.

2. Literature Review

2.1. Introduction

This chapter reports the outcomes of the systematic literature review. The review was designed to look for "published evidence identifying external influences and understanding factors creating pressure on the hospital system". The purpose of the review was to look for definitions of external pressure, to provide insight into the existing research on hospital environments, and to discover key determinants of the topic. This chapter recapitulates, rather than reports, the key findings since only limited data was available in relation to the literature review question.

2.2. The literature search process

The literature search began by identifying terms connected to 'external pressure'. From this, the keywords 'external influence', 'factor', 'trend', 'force', 'pressure' and 'determinant' were established. The systematic review was performed in accordance with the PRISMA guidelines (Moher, Liberati, Tetzlaff, & Altman, 2009) and searched for empirical studies examining external influences on hospitals. The search was conducted for peer-reviewed, English language studies using medical science databases (Ovid Medline, Scopus and Embase) between 1st January 1995 and 1st July 2015. A total of 895 papers were found. Title and abstract screening were undertaken and studies were eligible for inclusion if they had been peer-reviewed and assessed the impact of external factors in the hospital context. After this 57 articles remained for a full text review. Empirical studies or comprehensive literature reviews that considered hospitals or their staff were eligible for inclusion. The process identified 14 included studies for which a qualitative synthesis was performed. To assist with this synthesis, study objectives, applied theories, and organisational aspects (strategy, performance, outcomes) used in the research were extracted into a table. Following data extraction, a narrative synthesis summarised the factors associated with the external hospital environment.

2.3. Systematic literature review results

No empirical data on external influences or the definition of external pressure was found, since no study researched external pressures or influences directly. The included studies discussed some external influences, such as market, financial and competitive pressures and stakeholder expectations. Researchers had used resource dependence or institutional theory to generate environmental constructs, which enabled them to examine organisational strategies or performance. Table 1 gives an overview of the research topics. Only 2 out of 14 studies took the hospital professionals' perception of the external environment into consideration. Salyer (1996) examined environmental uncertainty from the perception of nurses; Payne and Leiter (2013) investigated organisational constraint from the perception of managers. In the remaining studies, variables such as community or structural characteristics (e.g. for profit status, membership, population and geographical data or scope of hospital operations) were chosen to represent external influences.

Table 1: Overview research topics

Focus of research	Reference
Relevance of environmental uncertainty for the timing of medical technology	(Friedman, Goes, & Orr, 2000)
Factors affecting hospital's adoption of a market orientation	(Lin, 2011)
Organizational context and structure as predictors of medication errors and patient falls.	(Mark et al., 2008)
Determinants of hospital financial performance	(Narine, Pink, & Leatt, 1996)
Examining health care management using organisational theory	(Payne & Leiter, 2013)
Correlates of hospital provision of prevention and health promotion services	(Proenca, Rosko, & Zinn, 2003)
Factors associated with financial distress	(Ramamonjiarivelo et al., 2014)
Internal and environmental impacts on hospital X-inefficiency	(Rosko, 1999)
Impact of HMO penetration and other environmental factors on hospital X-inefficiency	(Rosko, 2001)
Perception of uncertainty in the hospital environment	(Salyer, 1996)
Effects of certification and accreditation on quality management	(Shaw et al., 2014)
Hospital service duplication	(Trinh, Begun, & Luke, 2008)
Strategic adaptation	(Trinh & Begun, 1999)
Environmental factors and quality improvement	(Yeager et al., 2013)

In all of these studies, external influences (i.e. environmental pressures, environmental uncertainty, and environmental complexity) were theoretically conceptualised and the results failed to provide any useful insight into factors creating pressure on hospitals. There was a significant variation in the choice of operationalised variables representing the external environment (e.g. population or geographical data, network size) and a lack of agreement on how to measure it. The results showed that the topic of external influences remains relatively unexplored in health care research (Yeager et al., 2013). Importantly, no study specifically investigated the impact of external influences on hospitals, comprehensively considered all external factors, rigorously explored sources of external pressure or explicitly assessed how external pressure is perceived by hospital professionals.

2.4. Interpretations of external influences in the research

The systematic literature review exposed inconsistent use of terms such as 'external pressure' or 'external forces'. Vague descriptions such as 'demanding external environment' and 'environmental uncertainty and complexity causing pressure' made it hard to understand the meaning of external pressure. Concepts including "environmental complexity" (Ramamonjiarivelo et al., 2014), "environmental turbulence" (Friedman et al., 2000), and "environmental uncertainty" (Lin, 2011; Payne & Leiter, 2013; Salyer, 1996) were used to hypothesise the hospital environment in the research. Proenca et al. (2003), Rosko (1999), Shaw et al. (2014), and Trinh, Begun & Luke (2008) mentioned 'external pressure' in their studies but did not provide a definition of the term.

The application of theoretical frameworks to describe the hospital environment generated inconclusive and incomparable results. No consistency was evident when terms like 'financial', 'market', 'competitive', 'regulatory' or 'institutional pressure' were used in the studies. For instance, Rosko (1999, p. 63) referred to external pressure as "cost-containment and regulatory pressure effecting inefficiency". Shaw et al. (2014) linked perceived external pressure to accreditation, certification and external assessment; without providing further information. Payne and Leiter (2013, p. 60) pointed to stakeholder demands such as "conforming to physician, patient, regulator or media expectations" as one of the main environmental challenges. Other studies used market, competitive, technology and resource competition as variables of the hospital environment. Because each author had chosen a different theoretical framework, for instance resource dependence theory versus institutionalism, there was no obvious pattern in the factors characterising external

influences. Environmental dimensions of resource dependency theory, such as munificence, dynamism and complexity or the environmental uncertainty principle, were used as frameworks, but the findings revealed little consensus about what constitutes environmental influences on hospital organisations (Oliver, 1991).

2.5. Methodological limitations of current research approaches

The literature review showed that no robust environmental measures were available as the external environment is based on normative theories rather than measure. Current theoretical models of organisational environments date from the 1970s and 1980s and have lost relevance for the way in which health systems are currently structured (Flood & Fennell, 1995). For example, Narine et al. (1996, p. 151) did not find any "simple explanations of hospital distress" in their study. Authors, frequently recommended future research should validate, test and develop new environmental measures for health care organisations (Salyer, 1996; Yeager et al., 2013). The studies also found that environmental and organisational factors on hospital performance were inseparable, and that more research was needed on the interactive nature of organisation-environment relationships (Flood & Fennell, 1995; Ramamonjiarivelo et al., 2014; Yeager et al., 2013). The authors noted, that this would be a difficult task due to the complexity of the topic (Proenca et al., 2003; Salyer, 1996; Yeager et al., 2013).

2.6. Summary of key findings

1. Although there seems to be an underlying assumption of external influences creating pressure, no study was found that researched the 'perception of external pressure' by hospital staff or how external influences impact on decision-making.
2. The research of hospital environments is grounded in organisational and management theory, which was based on a normative approach. Existing research has explored only the theoretical nature of external influences. As a result, it is still unclear what constitutes the hospital environment, and where the boundary lies between that environment and the hospital organisation itself.

2.7. Conclusion

The results of the literature review demonstrated that the topic of external pressure is methodologically underdeveloped (Proenca, 2003). There is an array of theoretical concepts exploring connections between organisations and their environments (e.g. an organisation's size, scope of operation, and economic circumstances) but no understanding of how external influences affect productivity, quality and safety in hospitals. Despite the acknowledged linkages between environmental characteristics, organisational strategy, structure and organisational processes, researchers have struggled to fully describe the complex relationship between environmental and organisational factors and their impact on outcomes (Yeager et al., 2013). Existing literature also neglects how external factors impact on hospital staff and potentially affect decision-making and performance. It is questionable if approaches from organisational analysis can be applied to health care research, since the impact of external influences on public organisations such as hospitals has not been sufficiently analysed (Boyne & Meier, 2009). It is unknown how health care organisations, especially hospitals, differ from other organisations. Thus, it is problematic that paradigms of organisational analysis, which are derived from economic disciplines, are applied to the field of health care research (Flood & Fennell, 1995). The need emerges to research the complexity of hospital environments (and their impact on health care delivery) from a new perspective, which is crucial for "designing and maintaining care delivery systems" Salyer (1996, p. 34).

3. Context and problem statement

3.1. Introduction

As shown in the previous chapter, the systematic literature review found methodological issues in the application of theories to model external influences on the hospital environment, and that limited empirical data is available on the research topic. This chapter discusses whether organisational and management theories, which are based on rational economic models, can provide sufficient support to capture the multi-faceted inter-connections between hospitals and their environment. A challenge is made at the validity of trying to explain and quantify environmental variables using frameworks such as resource dependence, institutional, neo-institutional and structural contingency theory, or environmental determinism. In the final part of this chapter, the problem statement, research gap and aim of the study are stated and explained.

3.2. Theoretical origins of conceptualised external influences

The idea that the external environment has an influence on organisational performance is widespread in the organisational and management literature (Boyne & Meier, 2009). Several ways in which the environment influences an organisation are described in organisational theory; whether the environment is stable or unstable, homogenous or heterogeneous, concentrated or dispersed, simple or complex, the extent of turbulence, and the amount of resource ability (Howard Aldrich, 2008). From this, two perspectives have emerged on how organisations are impacted by their environments (Dauber, Fink, & Yolles, 2012). The first is an organisation's need for information and the second is its need for resources. Subsequently, models in organisational and management theory focus on these two perspectives when exploring linkages between the environment and organisation (Dauber et al., 2012; Lilach Sagiv, 2007). When investigating hospital organisations and their behaviour, some researchers focus on the information aspects of the environment, which are represented by the concepts of environmental uncertainty, environmental complexity and environmental turbulence (DiMaggio & Powell, 1983; Handy, 1993; Hira & Hira, 2000).

Others use environmental dimensions from resource dependence theory (H. Aldrich & J., 1976; Hillman, Withers, & Collins, 2009; Oliver, 1991) such as munificence (measure of resource abundance in the environment), dynamism (measure of the rate of change in the

environment) and complexity (level of intricacy necessary for decision-making within the environment) to explore external influences. Romanelli and Tushman (1986) focused on external control, suggesting that organisational responses are limited by environmental constraints, whereas other perspectives stated that an "organization's response is affected by its ability to recognize and interpret environmental changes" (Duncan, 1972) and that the recognition of environmental issues is linked to the "visibility of such issues and the organisation's exposure to them" (Milliken, 1987; Oliver, 1991, p. 148). Neo-institutional theory addresses external power exerted by expectations of stakeholders, such as equipment manufacturers, pharmaceutical companies, physicians, and insurance companies (Payne & Leiter, 2013). All of those models base organisational activity on "bureaucratic paradigms" (Cooper & Burrell, 1988, p. 106) such as the structuring of activities, standardisation of procedures, or dimensions of authority.

More contemporary perspectives see organisations as complex, adaptive, information processing systems. They are comprised of a large number of human agents, who are defined as "people who perform activities and/or control resources within a certain field" (Pouloudi & Whitley, 1997, p. 4), and where complex behaviour emerges from individual interaction (McCann & Baum, 2007). To understand these non-linear, multi-agent systems, it is important to consider history and attributes such as tasks, knowledge, resources, human cognition, behaviour and interactions (McCann & Baum, 2007).

3.3. The impact of historical differences

The development of organisational analysis and theory was originally driven by the aim to understand key influences shaping the financial performance of businesses, but more recently has been adapted to analyse organisational structures and environments to improve effectiveness and efficiency. This organisational analysis sees organisations as systems with specific structures and goals which act "rationally and coherently" (Cooper & Burrell, 1988, p. 102). When theoretical paradigms which are derived from economic disciplines are applied to the field of public health systems research, is problematic because health care organisations are not just profit-driven entities characterised by economic processes, they are complex multi-faceted organisations (Braithwaite et al., 2009). Business organisations are shaped by market dynamics, such as competition, demand, price and commodity availability, whereas health care organisations are influenced by various schools of thought promoting social values such as humanism, philanthropy, charity, paternalism and socialism (Chauveau, Dinet-

Lecomte, Guilhot, Jackson, & McWatters, 2014). Historically, the early foundations of hospitals were influenced by the military and its hierarchical "command and control patterns" as well as a range of political and bureaucratic forces (Saltman, Durán, & Dubois, 2011). The emergence of a variety of stakeholders, the dependency on public funding, government legislation, regulation and accountability have all shaped modern health care into an interdependent and highly complex adaptive system (Erik Hollnagel, Braithwaite, & Wears, 2013).

This assumed homogeneity of structure, behaviour, culture and output, as applied by some organisational theorists (Dill, 1958; DiMaggio & Powell, 1983; Duncan, 1972; Hrebiniak & Joyce, 1985; Keats & Hitt, 1988; Meyer & Rowan, 1977; Miles, Snow, Meyer, & Coleman, 1978; Milliken, 1987), cannot be applied to this organisational diversity. Today, the complex systems approach recognises that organisations are affected in different ways according to their diverse institutional environments and exhibit complex processes of nonlinear behaviour (McCann & Baum, 2007).

3.4. Why are hospital organisations unique?

The difference between political and economic determinants shaping an organisation leads to the fundamental question of how and if hospitals differ from other organisations (Yeager, 2012). One of the major issues in using the dimensions of munificence, dynamism and complexity from resource dependency theory to aid the understanding of hospital environments is the assumption that hospitals are the same as business organisations. Although market forces play an increasing role in the health care system, the role of political power remains a substantial determinant for hospital organisations (Evans, 1985). Hospitals are not self-sufficient entities but are embedded in complex networks, processes and structures. Fennell (1980, p. 506) observed that hospitals are more responsive to "norms of social (rather than economic) legitimisation".

To understand their similarity and dissimilarity to other organisations it is crucial to investigate what role political, commercial, community, clinical, legal and patient accountability play in shaping hospital structures and behaviour. As pointed out by Waring, Marshall, and Bishop (2015, p. 36), hospital systems involve a "large number of dynamic, non-linear interactions between a diverse range of heterogeneous actors, units and system components". There is a need to create an evidence base of how all the various stakeholder

groups and networks such as international bodies, governments and regulatory bodies, industry groups, professional groups, NGO's and consumer groups, health provider organisations, individual health professionals, professional network clusters and consumers affect the hospital system (Braithwaite, Healy, & Dwan, 2005).

In this context, the absence of a clear definition of organisational boundaries appears as "another major obstacle for theory and research" (Flood & Fennell, 1995, p. 155). Organisational boundaries can be considered as "imaginary partitions" that separate an organisation from external influences and provide a "source of differentiation" (Fiol & Romanelli, 2012, p. 99). However, with hospitals being part of networks, alliances and multi-hospital systems, it is difficult to distinguish between the hospital and its environment (Flood & Fennell, 1995). According to White, Weschler, and McGown (1980, p. 86), the inability of theorists to reach consensus on organisational boundaries and environmental factors for hospitals is due to the fact that organisational determinants of behaviour are not applicable to all types of organisations. Whilst traditional organisational research treats individuals, organisational tasks, and resources as entities with concrete and immutable boundaries, newer approaches suggest boundary definitions are dependent upon the person defining them (McCann & Baum, 2007).

3.5. Challenging perspectives

A further issue is that theories such as resource dependency or institutionalism are not aimed at shedding light onto the role played by an individual's behaviour, social processes or power configurations in the relationship between external forces and organisational outcomes. Orthodox organisational research focuses on organisational contexts, input-output characteristics and performance evaluation based on the model of a "productive economy" (Cooper & Burrell, 1988, p. 99; Fennell, 1980) with no room for human agents. Hence, how individual professionals working in an organisation will perceive external influences or pressures remains relatively unexplored in organisational behaviour research. Salyer (1996, p. 35) points out, "environmental uncertainty can be either a characteristic of the objective environment or a subjective characteristic of the individual": therefore, the role of perceptions cannot be neglected.

Besides, current research perspectives presume collective behaviours in an environment of rationalised processes, which are based on a theoretical assumptions (Hillman et al., 2009, p.

1418). Despite hospitals and businesses sharing some homogeneity and similarity in bureaucratic or organisational forms, the rationalised approach needs to be expanded into a more holistic perspective (DiMaggio & Powell, 1983). It is doubtful whether models of organisational environments can fully accommodate or explain the impact of external influences on hospital systems. Flood and Fennell (1995, p. 154) questioned the extent to which research paradigms limit our capacity to observe formal and informal structures and processes in hospitals, since they were "inspired by observations used to examine other types of organisations" and have influenced the questions that were addressed in health care research.

3.6. Problem statement

The widespread application of outdated theoretical approaches in health care research fails to capture formal and informal structures and dynamic interactive processes within health care organisations. With researchers drawing their observations from business organisations, the hypothesised constructs are unsuitable to explain external influences in health care contexts without further empirical investigation at every level of the organisation. The hospital, as a complex adaptive system, is composed of "intelligent but constrained agents" (Baum & Carley, 2002, p. 220). As the literature review showed, the terminology of external pressure in health care system research is also problematic since it neglects the importance of human agents. Some reflection is needed on the question how and if an organisation itself is able to perceive something as intangible as pressure.

The Oxford Dictionary (2015) describes the term pressure as "continuous physical or psychological force exerted on or against an object by something in contact with it" or "a constraining or compelling force or influence". According to this definition, pressure is something intangible and therefore cannot occur without the awareness of a receiver. Given that a receiver is essential to perceive external pressure, this leads to the conclusion that the conscious experience of a person working within the hospital organisation is required to enable the observation of external pressure (Chalmers, 1997). As a result, external pressure in this study was considered as a force, which causes an effect from a source (external environment of the health system) to a cognitive experience for a receiver (professional within the hospital system). From this perspective, the hierarchical, behavioural and power configurations of organisational members, as well as the role of an individual's information processing, in relation to the experience of environmental influences needs some clarification.

3.7. Identified issues and gaps in the research

Several issues in the research (as illustrated in Table 2) indicate that current approaches may be inadequate to capture the complexity of hospital systems and their environment. Since there are no robust measures of the external hospital environment, there is a need for more empirical data to help develop a definition of external pressure. Because the inter-connections between the external hospital environment and hospital outcomes are not clear, future research is required to clarify the topic of external pressure and to empirically identify which external influences impact hospital performance.

Table 2: Identified issues and gaps in research

Issues	Gaps
External pressures are based on theoretical frameworks	Empirical data on external influences and pressure is needed
Current theories only broadly capture the complexity of hospital environments	The boundaries (physical and perceived) between environments within hospitals and between hospitals and the external health system should be defined
Hospital organisations may not be comparable with business organisations	Research is necessary to verify if organisational and management theories are applicable to health care systems research
Lack of empirical and consistent measurements for environmental influences (currently variables representing the organisational context are conceptualised)	New frameworks and consistent measurements of external influences are needed
There is no coherent definition of external influences or external pressure	More research is required on external pressure in order to establish appropriate definitions
The perception of external pressure by hospital professionals has not been researched	Understanding is needed of how external pressure is experienced by hospital staff

3.8. Aims

This study aims to assess how health care professionals across different levels and departments within the hospital experience external influences. The purpose of this study is to:

1. Assess if external influences on the hospital system create pressure on staff
2. Identify which external factors are perceived as pressure by staff
3. Assess if the perception and experience of external influences differ at different levels of the hospital system.

Gaining empirical insight into what external influences mean for individuals in the hospital system will contribute to the identification of factors creating external pressure, shaping internal responses and subsequently affecting quality, safety and patient outcomes. Considering the stakeholder perceptions of external influences is the first step towards developing new perspectives of organisational behaviour, which will help to formulate an adequate description of the hospital environment. This study will form the basis of a subsequent PhD project which will investigate the topic further. The outcomes of the study will enhance the overall understanding of the current and future challenges posed by external pressure to hospital systems and to help to support the development of future quality and safety improvement interventions.

4. Methods and Methodology

4.1. Introduction

The previous chapter discussed how, following the tradition of management studies, health care system research relies on organisational theories to conceptualise external influences. It identified issues and gaps in the research, outlined the problem and described the aims of this study. In the first part of this chapter the research methodology and method are explained and the benefits of a qualitative approach are discussed. In the second part, a description is given of the research setting, the instruments used and the choice of study population. Later, the data collection and extraction process, data analysis method and strategy are explained in detail. The data coding and theme identification processes are also outlined.

4.2. Rationale for research approach

Related research on the topic has been based on orthodox organisational analysis, which adopted a normative approach to examining organisational environments. From this perspective, organisations are described as rational entities following bureaucratic logic. The frameworks developed through this approach view the organisation as a formal system of "instrumental rationality" with hypothesised needs which are shaped by the ideas of "progress and performance" (Cooper & Burrell, 1988, p. 91). Organisational activities are interpreted as expressions of planned thought and calculated action. This approach relies on "knowledge that is essentially theoretical" (Cooper & Burrell, 1988, p. 93) and only assumes what constitutes the hospital environment rather than to research the reality. In this unitary system, organisational environments are defined in terms of environmental uncertainty and environmental constraints following an "economising mode" (Cooper & Burrell, 1988, p. 96). The literature review found that the application of this normative approach to health care research does not sufficiently explain influences in the hospital environment and that the theoretical frameworks need to be rethought (McCann & Baum, 2007). In contrast, postmodernism rejects this 'mechanisation' of social order and argues that systems have a life of their own and are fundamentally independent of human control. From this viewpoint organisational analysis can only be interpreted as having " no absolute status" (Cooper & Burrell, 1988, p. 94). Thus, a postmodern approach was chosen to frame this study, rather

than follow the methodological and theoretical concepts applied to the research of organisational environments to date.

The advantage of postmodernism is that it supports the exploration of subjectivity and questions current interpretations of a topic (Braun, 2013). A postmodern methodology also encourages the researcher to review assumptions and start anew without preconceptions, and this enables new discoveries. The idea of relativity in postmodernism queries the validity of collective explanations and describes the truth as a "situational construct of the human mind" (Braun, 2013, p. 15), and reality is seen as an interpretation of individual conceptions. This allows the researcher to take contextual factors of individual cognition into account and leaves room to consider participants' attitudes, ideas and interpretations in the research. On this basis, the decision was made to not explicitly follow any theoretical frameworks on the topic during data analysis.

According to Chalmers (1997, p. 50) perception is a "mental experience of human consciousness". He described, perception as a psychological process "whereby cognitive systems are sensitive to environmental stimulation" and the outcomes impact further cognitive processes. Considering that individuals create their own perception and meanings, it is essential to take the role of human consciousness and its interactions into account when studying the experience and perception of external influences by hospital staff (Liamputtong, 2012). It is also important to assess how the perspective of the external environment is shaped by beliefs, values and social experiences, and if it varies in different contexts. Therefore, a qualitative research method was chosen for this study as it permits the analysis of "conscious experiences" (Liamputtong, 2012, p. 8). Examining which key ideas and paradigms inform and shape the theme of external pressure will help to decide if current theoretical perspectives of external pressure should be re-interpreted.

4.3. Benefits of a qualitative research approach

While quantitative research seeks precise measurement and analysis of the object of study, qualitative techniques are more suitable to identify a range of views on the research topic, as they are a useful method to observe and interpret complexities (Hood, 2010). Qualitative evidence can enhance the understanding of "subjective perceptions and opinions to a degree that quantitative methods cannot achieve, and thus is able to offer more detailed insights into the topic" (Liamputtong, 2012, p. 13). In the early stages of research, qualitative studies can

give descriptive accounts and can help to find more information on a specific theme (Britten, 2011). Since perception is closely linked to an individual's experience, a qualitative study can provide valuable data to identify the key variables of the research topic. Consequently, qualitative interviews seemed the most appropriate method to gather detailed answers to the research questions (Leedy, 2010). According to the postmodern view, the perception of reality is different for each person. Using a general thematic approach helps to understand what external influences mean for different professionals within the same environment (Swanson, Morse, & Kuzel, 2001). This approach allowed for 'bottom-up access" (Liamputtong, 2012, p. 8) to the topic by capturing participants' individual perceptions. The themes identified in the data can be used to establish a body of knowledge related to the topic, and the synthesis of interview data creates an opportunity to build up some evidence which can then be used in future investigations (J. Thomas & Harden, 2008).

4.4. Research setting and ethics approval

Macquarie University Human Research Ethics Committee (Medical Sciences) approved this study (MQ 52015006300) as a low or negligible risk undertaking (a copy of the approval is available in Appendix A). The scope of the study was restricted by the nine-month duration of the Masters of Research. Consequently, the scope of this research was carefully considered and then purposefully limited to one hospital to have consistency in the environmental variables such as, the network size, membership status, organisational scope, patient demographics and geographical data of the organisation. This enabled the exploration of whether and or not perceptions vary within similar environmental circumstances. A local public district hospital, with 217 beds and an emergency department was chosen. The hospital is a member of a metropolitan health service system and belongs to a training network.

4.5. Engagement and consent of participants

In selecting the participants, it was crucial for the research to explore how the same setting was perceived by a diverse mix of staff. Contrasts in data were more likely to be found within a wider range of employees rather than just at one single hospital level (e.g. executive level). For this reason, diversifying the sample was appropriate for the research question. As all hospital staff were stakeholders who might be impacted by external pressure, all members of the hospital organisation were identified as potential participants (Francis et al., 2010).

To achieve an adequately representative sample, interviewees were selected ensuring they occupied a variety of professions, positions, work roles in different departments and levels (Francis et al., 2010). This sampling approach was also chosen to mitigate similarities across cases and to capture a variety of comprehensions to reflect the complexity of the topic (Guest, Bunce, & Johnson, 2006). The research participants were selected meaningfully and purposefully to address the research question sufficiently (Liamputtong, 2012).

Potential participants were identified through a review of the organisational chart, which was obtained through an enquiry to the hospital management. Additionally, an internet search on the hospital website was performed to identify names or emails of various employees. First contact was established via the switchboard. After indicating interest in participation, invitations were sent via email to potential participants introducing the interviewer and the study. Every participant was approached individually and provided with the participant information sheet, the interview questions, the consent form and withdrawal form. The interviewees were asked to nominate a convenient time for a face-to-face interview at a place of their choosing. Opportunity for questions was given through provision of the researcher's contact details and explicitly offered before and after the interview. There was also an element of "accidental sampling" (Guest et al., 2006, p. 75) since the choice of some participants was influenced by their accessibility. There were no further specific inclusion or exclusion criteria.

4.6. Interview method employed and validation of interview questions

Semi-structured, open-ended, in-depth interviews were chosen, as these offered the best potential to explore the meanings of external influences. This ensured that the interview process was not bound by any expectations or prior assumptions (Leech, 2002). The interview method facilitated focused, conversational two-way communication and made it possible to discover new insights into the research topic. Development of the questionnaire (Appendix B) was informed by the literature review and a set of 15 guiding questions was formulated. The questions were chosen to capture participants' perception of external influences and to assess the impact of these perceptions on decision-making. After the interview questions were established, they were trialled in a sample interview with a hospital professional (a former member of the management team of the selected hospital). Misinterpretations and confusing questions were identified, amendments were discussed with the associate supervisors, and the final set of questions were agreed.

4.7. Data collection and interview process

Data collection was planned to be conducted within a three-month timeframe. The interviews commenced with an introduction of the researcher and the research topic before starting the recording. The recorded interview began with the collection of demographic data such as gender, age, profession, work role and time in organisation, before it continued with introductory questions (Appendix B). During the conversation, the interviewer aimed to create a rapport and put the participant at ease (Leech, 2002), in order to create the opportunity to explore the topic in depth and detail where thoughts could emerge (Rapley, 2001). Each interview was carefully prepared. Using a general thematic analysis approach permitted reflection on earlier responses for a deeper exploration of the topic in the following interview (Hansen, 2006). Insights from each interview informed subsequent interview processes. While interviews were loosely directed by the questions, the participants were encouraged to speak their mind, and not be directed towards any expectations of the interviewer. The interviewer followed topical directions when it seemed beneficial to investigate the theme and probe for details to discuss the issue (Rapley, 2001).

4.8. Data transcription

The interviews were recorded digitally and transcribed using a professional transcription service. Transcribed data was entered into a Microsoft Word document for analysis. The interview recordings were anonymised by using the automatic numbering system of the recorder; allowing no links to any names. Quotes reported in the thesis were not attributed in a way in which the interviewee could be identified. The electronic transcripts were also not named in a way where the participant could be identified. They were stored in a password-protected folder on the AIHI server at Macquarie University.

4.9. Data analysis strategy

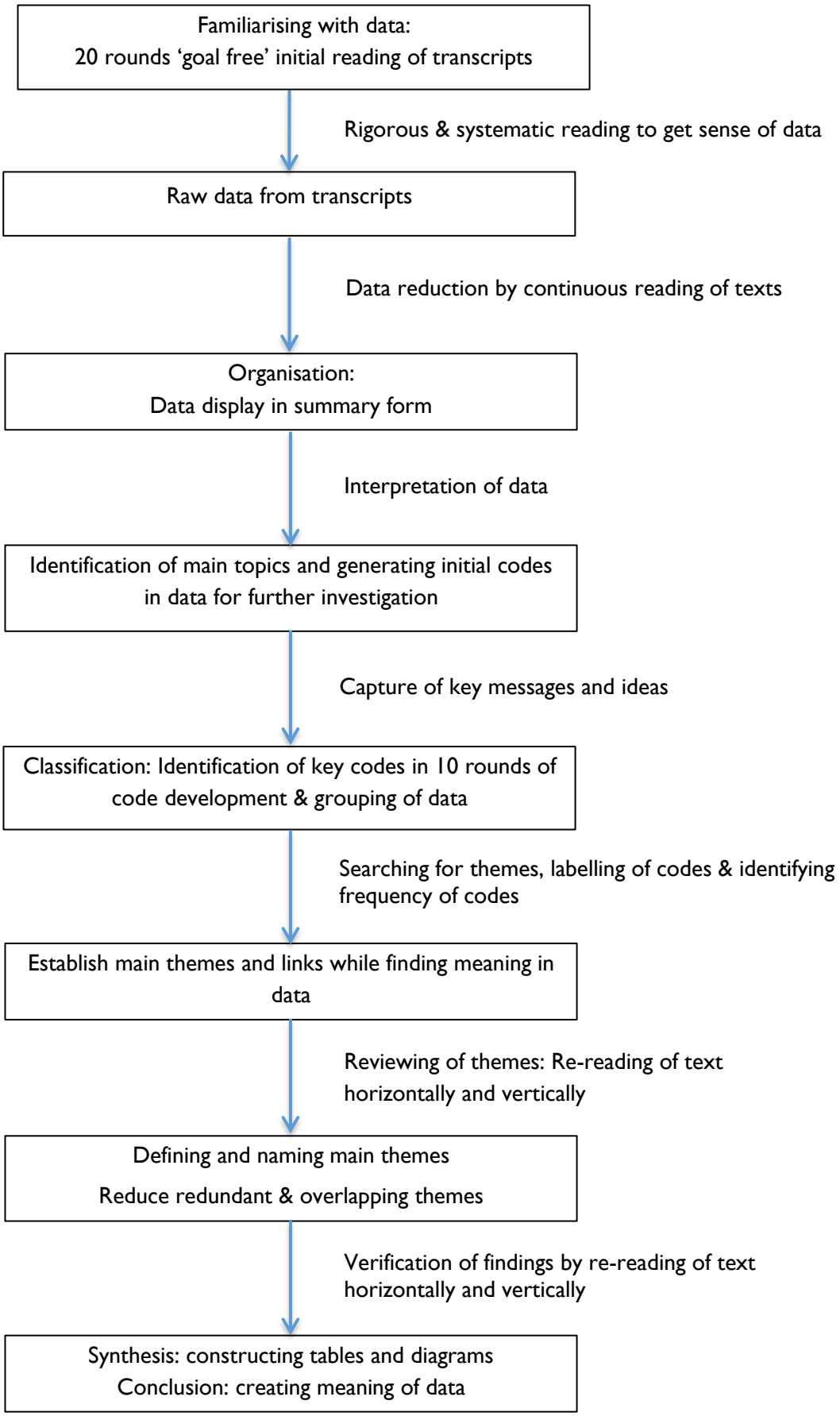
Following the postmodern approach, a general inductive thematic analysis was applied to identify themes (patterns of meaning in the data) connected to the research objective across various interviews (Braun, 2013). Since the study did not aim to validate any frameworks, no prior assumptions were made and no theory was used as a framework to guide "conceptual categories" (Braun, 2013, p. 175) during data extraction. The investigator aimed at a "goal-free approach" (Thomas, 2006, p. 238) throughout the detailed readings of the transcripts to

draw topics, codes and ideas from the data. The thematic analysis helped to find topics from the data and to build a network of associations to discover meanings in the data (Francis et al., 2010). Themes in this study are considered as abstract constructs that link expressions either found in the data or that emerged from the data, while codes are labels for individuals expressing the same idea and are applied to the data (Ryan & Bernard, 2003). Codes can consist of themes and topics, ideas and concepts, terms and phrases or key words (Guest et al., 2006). The analysis was performed by multiple, detailed, repeated, vertical and horizontal readings of the transcripts. The evaluation objective was to discover shared perceptions of the interviewees by recognising dominant themes and codes in the interview data. The outcomes from the data analysis process were discussed during two rounds of meetings with the associate supervisors and a qualitative research specialist.

4.10. Data extraction process

The aim of the data extraction was to discover what the terms 'external influences' or 'external pressure' meant to the participants. After an initial familiarisation with the transcripts, analytic induction as described by Thomas (2006) was applied to identify codes emerging from the data. The transcripts were repeatedly re-read to detect topics and patterns of meaning. Raw text data was condensed into summary form while reading the data rigorously and systematically (Thomas, 2006). The data reduction process was facilitated by extracting the main topics from each transcript and organising the information into frequency groups to allow for the investigation and interpretation of the data (Francis et al., 2010). The rigorous, systematic examination of the transcripts included reading horizontally between the transcripts and led to the discovery of the main topics and the capture of key messages and ideas. This led to the coding of categories while reducing redundant or overlapping categories (Thomas, 2006). The themes were developed during the coding and classification of the data. This process was validated through repetition. As a final step, the key findings were verified by vertical and horizontal re-reading of the text segments representing the themes. At the end, the meaning of the data was constructed and the most important themes were described in a narrative synthesis. The data analysis and coding activities were documented in a flow chart (Figure 1).

Figure 1: Diagram on data analysis and extraction process



Source: Adapted from (Leedy, 2010, p. 159; Thomas, 2006, pp. 242, Table 242)

4.11. Data coding

During the coding process, similar codes in the data were compared and reviewed in relation to the research question. Colour coding text segments and creating tables helped to organise the information emerging from the data and allowed for the initial coding of themes. The text segments were reviewed repeatedly across all transcripts, to search for similarities and differences in the responses (Thomas, 2006). Codes were compared to look for consistencies, frequencies and patterns. This constant comparison was repeatedly used to check if codes were appropriately assigned and to discover relationships among the data (Ryan & Bernard, 2003). Through the questioning of the coding process new categories were developed and concepts that significantly overlapped were merged. The coding process was revised several times, enabling the refinement of the categories and ensuring that all codes had been identified. Code networks were established to show how the codes conceptually related to each other. The analysis process was finalised by developing a data conclusion in which categories with similar representation were merged. The findings of the data analysis were presented as a narrative outline, with accompanying tables. The aim of this process was to provide a summary of the interview data and to establish a clear link between the results and research objective to expose "an underlying structure of experiences" (Thomas, 2006, p. 237).

4.12. Identification and development of themes

Themes were discovered across the data by looking for meanings. Single words were used to represent information from the interviews using different colours for each theme; colouring the corresponding text section in the transcript accordingly. After the first themes had been developed, all transcripts were repeatedly searched for responses connected to the themes. Identified themes were compared across the data. In multiple rounds, all transcripts were screened for other themes or subthemes related to the theme. The data reading was guided by questions such as "What does this really mean?" and "What is this really about?" (Ryan & Bernard, 2003). Recurring words were noted and taken into consideration when reflecting on the overall outcomes of the findings. Relationships between the emerging themes were considered and revisited over a period of time. Through this process, themes became clearer or were abandoned and subthemes became apparent. This technique was repeated systematically until no further themes or links between the topics were found.

4.13. Defining data saturation

To ensure an adequate number of participants, the study initially considered interviewing up to 12 health care professionals from the same hospital. This number was based on the work of Guest et al. (2006, p. 76), which suggests that "qualitative data saturation is likely to be achieved with approximately 12 interviews" but a sample of six can be sufficient in cases when the research is investigating "high-level over-arching themes". As this study aimed to investigate the high-level theme of external pressure, the minimal, adequate, initial sample size was chosen at 8 and the stopping criterion was identified as the moment when no new information, ideas, themes, findings or problems were emerging (Francis et al., 2010; Glaser, 1977). Hence, the point of data saturation was defined as the time when "no or little change" (Guest et al., 2006, p. 65) occurred to the identified codes. Progressive judgements were made about the data saturation by ongoing data analysis (Francis et al., 2010). The stopping criterion was tested after each successive interview until it was clear that no new data had emerged (Francis et al., 2010). For validation, after apparent data saturation, three more interviews were conducted to confirm the identified stopping criterion (Guest et al., 2006). Before ending the interview process, the sampling strategy was verified by making sure that the participants appropriately represented a wide range of hospital professionals across various roles and departments. This process was discussed with the associate supervisors.

5. Results

5.1. Introduction

The previous chapter described the methods and methodology used in the research, the data collection process and interview question development. The data analysis strategy, extraction process and the point of data saturation were outlined. This chapter describes the study population, the qualitative interview, the data analysis and synthesis process. The code identification and theme development, as well as the findings and results of the thematic analysis, are outlined. The topics, codes and themes are presented in several tables and explained in a narrative summary. A description is given of each category, and data associated with it. The process of reaching data saturation is justified. This chapter is concluded with observations of underlying meanings in the data by the interviewer, and the validation process is discussed. At the beginning, a broad level of analysis was undertaken and is presented first to illustrate the participants' general interpretations of external influences and external pressure to help contextualise the identified codes and themes from the in-depth coding undertaken later.

5.2. Study population

The aim of the study was to capture representation across multiple roles, fields and departments within the hospital. A total of 27 hospital professionals, ranging from the Managing Director, senior managers and department-level managers to front line health care professionals, were initially contacted in several rounds of invitations. Follow-up emails were sent to all non-respondents after one or two weeks. 21 hospital staff eventually responded, with 11 agreeing to participate. In total, 8 qualitative interviews were undertaken. As all of the participants were working within various administrative structures and position titles in the hospital, the final study group was considered to be sufficiently diverse: one patient liaison officer, one chair of hospital board, one director of emergency, one senior divisional manager, one clinical midwifery educator, one director of paediatrics, one medical intern and one neurologist. Table 3 outlines the professions and roles of the participants, the years they had been employed in the hospital and the length of time they had worked in the health care system. The participants consisted of six females and two males, and were aged between 31 and 60 years. They had worked in the hospital between 1 and 24 years, and in the health system between 2 and 28 years. After each interview, the interviewer revisited the

organisational chart to check that each level of the hospital was being given representation (Thomas, 2006). In order to protect the participants' anonymity, their responses will be reported in terms of level (senior, middle, clinical staff) in this study.

Table 3: Study participant characteristics

Profession	Age	Gender	Work Role	Years in hospital	Years in health system
Administration Officer	53	Female	Patient Liaison Officer	9	9
Medical Specialist	56	Female	Chair of Hospital Board	14	28
Medical Specialist	56	Female	Director of Emergency	12	18
Registered Nurse and Midwife	45	Female	Clinical Midwifery Educator	18	18
Registered Nurse and Health Service Manager	60	Female	Senior Divisional Manager	24	36
Junior Medical Officer	31	Female	Medical Intern	1	2
Medical Specialist	38	Male	Director of Paediatrics	5	15
Medical Specialist	49	Male	Neurologist	5	10

5.3. Interview process

The collection and analysis of the data was an iterative process that took place between 1st April 2016 and 30th June 2016. The face to face interviews had an average length of one hour (30 to 60 minutes) and were conducted in privacy with individual participants. The pre-planned questions (Appendix B) were used to guide the topics being discussed, although additional questions were asked in the interview to allow a flow of conversation when required. While the sequence of questions varied in each conversation, relatively similar questions were asked. The interviewer opened the interview by asking the participants to describe what external influences came to mind and to outline their perception of external pressure. They were also asked if any external influences affected their work, if those pressures varied over time and if they were position dependent or not. A relaxed atmosphere allowed participants to respond freely, at length, and in their own words. The order and the wording of the questions were changed in each interview to preserve the natural flow of conversation; questions were left out when they deemed redundant. When interviewees answered multiple questions in one answer, the core questions were revisited later during the conversation to ensure that all questions were addressed. Immediately after

transcription, the initial processing of the data included multiple re-reading of the notes; looking for main topics and themes, in accordance with the inductive data analysis approach (J. Thomas & Harden, 2008). Based on findings from the first three interviews, the interview schedule was adapted. During the interview process, participants were asked to verify interpretations of the data in informal conversations, sometimes off the record to gain their trust and to build rapport. Notes were taken during the interview to supplement the recorded data. The interview was concluded by confirming that everything had been covered from the participants' point of view and thanking the participant for their time.

5.4. Data analysis

The textual data analysis process started with an initial "goal and assumption free" close reading of the transcripts, which was then repeated more than 20 times in order to increase familiarity with the text (Thomas, 2006, p. 238). The investigator documented impressions and notions that emerged, even if they seemed unrelated to the evaluation objective. After this, the transcripts were re-read and screened for patterns of meaning. Similar topics and quotes were grouped into mind maps and regrouped if needed after repeating the process with multiple rounds of reading (Francis et al., 2010). The elements of each mind map were arranged intuitively, then several other mind maps were created during the subsequent coding process (J. Thomas & Harden, 2008). To avoid focusing prematurely on specific aspects of the data, mind maps were redrawn (particularly in the beginning) to ensure replicability. For instance, the investigator tried to avoid rapid judgements by looking for specific stakeholder expectations.

Each time the transcripts were re-read, any repeated or similar text segments were colour-coded and key messages were structured into diagrams or grouped in tables. This helped to understand which points were important for the participants, how often they reoccurred in the data, and how they related to each other. The colour coding helped to compare responses connected vertically and horizontally in the raw data. This encouraged the discovery of more intangible aspects, such as underlying meanings and word repetitions (Ryan & Bernard, 2003). Emerging topics, ideas and key quotes in the data were categorised. Each data element was given equal attention during the coding and mind mapping process, as new insights and contradictory points of view were sought. The goal was to identify major categories and codes representing portions of the interview information in order to develop themes. This rigorous thorough comparison technique was repeated until no new themes

were developed. A category system was developed during the validation process, summarising key themes and their inter-connections. The in-depth analysis of the transcripts enabled the discovery of shared meanings amongst the participants, identification of patterns from the raw data, and connections between the findings and the research objective.

5.5. Data synthesis

Data analysis was performed over two rounds. Firstly, interviews 1 - 4 were analysed and a discussion with the associate supervisors took place about similar topics and themes which had been identified from the transcripts. This informed the second round of data collection (interviews 5 to 8) and helped to monitor data saturation. In the first stage of data synthesis, Table 4 (below) and Appendix C were created to aggregate the quotes and to make sense of the data. Data were constantly added to both tables after each round of reading of subsequent transcripts. The major issue during the interviews was that the meaning of external influences or external pressure was not clear to the participants. The terminology caused confusion and bewilderment, to the extent, that their doubts about the meaning impacted on the conversation.

Table 4 presents data elements pertaining to the question of whether the participants had ever considered 'external influence's or 'external pressure' before. The participants were confused about the meaning of both terms: a typical response was "External pressure is a very vague term. What do you mean?" (senior clinical staff (8)). Five participants stated that they had never considered external pressure before: "No, external pressure never crossed my mind" (middle level staff (7)) or "I never considered external influences as pressure" (senior level staff (5)). Other participants were not so sure: "Well I probably don't put it into the context of external influences" (middle level staff (3)), "I suppose so, but pressure in general" (middle clinical staff (4)). One considered pressure "all the time" (senior level staff (2)). Table 4 also captures which terms the participants used as synonyms. Six participants used the term 'influences' instead, one 'external forces', one 'external factors', one 'external dominators', one 'opportunity' and one 'challenges'. The key messages about the participants' issues with the research topic and terminology are summarised in Table 4 below.

Table 4: Terminology of external pressure

Role (No)	Have you ever considered external pressures before?	Participant used following terms instead
General hospital staff (1)	*"Not before the interview"*	External forces, influences *"I distinguish between influences and pressure, it depends if I feel actively pressured by insurance companies"*
Senior level staff (2)	*"All the time"*	Influences, opportunity *"If I can control it, it is an influence rather than a pressure"*
Middle level staff (3)	*"Well I probably don't put it into the context of external influences"*	Influences *"External influences can be both, positive and negative. I don't think I would put it all down as pressure"*
Clinical staff (4)	*"Suppose so, but pressures in general"* *"I don't know"*	*"If it is an influence or pressure depends on perception in that moment"*
Senior level staff (5)	*"I never considered external influences as pressure"* *"Never considered external pressure"*	Challenges, influences *"I like the term influences more than pressure. Pressure is to negative. It often feels like something's weighing on you and external influences feels a little bit more positive in its feel."*
Lower clinical staff (6)	*"What do you mean?"*	N.A.
Middle level staff (7)	*"No. I am not so conscious of external factors"* *"External pressure never crossed my mind"*	External factors *"External influences influence how stressed I am"*
Senior clinical staff (8)	*"External pressure is a very vague term. I don't know what you mean"*	External dominators, external influences. *"External pressure does not exist. It is all internal"*

The responses during the interview reflected that there was uncertainty and confusion among the participants on the meaning of 'external influences' and 'external pressure'. As a result, the meaning was subjectively created by each participant. The participants' general interpretations of the topic are presented first to help to contextualise the codes and themes

that emerge on the topic in the data later. The participants explained when they considered something as a pressure or an influence. For all participants there was a clear difference between the two terms:

> *"I distinguish between influences and pressures; it depends if I feel actively pressured"* General hospital staff (1).

> *"If I can control it, it is an influence rather than a pressure*" Senior level staff (2).

> *"If it is an influence or pressure depends on perception in that moment"* Clinical staff (4).

Some participants raised concerns that the term 'pressure' was unsuitable as it implies something negative:

> *"External influences can be both positive as well as negative. I don't think I would put it all as pressure*" Middle level staff (3).

> *"I like the term influence more than pressure. Pressure is too negative. It often feels like something's weighing on you and external influences feels a little bit more positive in its feel."* Senior level staff (5).

From the first round of multiple, rigorous re-reading and data extraction, more topics became apparent. The main quotes on perceptions and meanings of pressure, which had emerged from each participant during the initial organisation of data, were extracted (see more additional information in Appendix C). The term caused 'external' confusion among all the participants and they were unsure what the researcher was looking for. Various interpretations o emerged:

> *"There is not one external pressure and what is external today might not be there tomorrow. That might go away or might be managed, or it might be an opportunity rather than a pressure."* Senior level staff (2).

> *"External are factors outside the emergency department that influence the way I am feeling at work" … "There are external influences all the time, media, community and what is happening in my family life"* Middle level staff (3).

> *"External pressure is family, aging parents, your own internal stuff, wanting everything for everyone and how you achieve that"* Clinical staff (4).

"For me external pressure is probably having too many things in my head. I know that is an internal pressure as well, but it is the number of things that come at you" … "External pressure is very different for everybody" Senior level staff (5).

"Juggling work/life balance is an external pressure" Lower clinical staff (6).

"External pressure is any pressure that I feel on my soul" … "Internal pressure is what I feel inside" … "External pressure for me would be less political, media, finance etc. It is more the strains of a busy family and private financial strains" Middle level staff (7).

"It depends how you define external" Senior clinical staff (8).

There was no clear understanding of what 'internal' or 'external' referred to in the responses. Commonly, 'internal' was interpreted as meaning internal to themselves whereas 'external' was everything else. At other times, internal was related to the work environment and external referred to the private life. Each participant created their own meaning of 'internal' and 'external'. The boundaries were unclear and the perception of 'external' even shifted throughout the interviews. All but one participant ended up talking about pressure in general. The following quotes capture the interpretation of external pressure as perceived by the participants:

"The level of stress is what I am regarding as pressure" Senior level staff (2).

"Pressure is about competing priorities of work and family and getting something done" Middle level staff (3).

"Pressures are clinical work-load. Things that are not here and now but you know that they are out there, that they still need an answer. And it might not be affecting your action straight away but you see the relevance as to why that is important to attend to at some stage" Clinical staff (4).

"Pressure is having many things in my head. Pressure is the requirement to achieve, the requirement to get things done. People dynamics are a pressure" Senior level staff (5).

"Pressure is very different for everyone. Some pressures are universal but others would be unique to certain individuals" Lower clinical staff (6).

"Pressure is anything. It includes family, finance, politics … well all" Middle level staff (7).

Appendix C gives an overview of the data. It summarises what the participants believed caused pressure and what impact it had on their decision-making or work. All participants stated that pressure influenced their decision-making or work; both positively and negatively. Sometimes pressure caused stress and led to "sharp and abrupt decisions" (5).

> *"Make more rapid judgements, less analytical and less contemplative"* Middle level staff (3).
>
> *"Do things differently than planned. Sometimes when there is a lot of external pressure or influences, if you are not aware of it, it can lead you to feeling overwhelmed and muddled."* Senior level staff (5).
>
> *"Those external influences influence how stressed I am and that impacts my work culture and affect my decisions and demeanour"* Middle level staff (7).
>
> *"It limits my work and frustrates me"* Senior clinical staff (8).

At other times, pressure was perceived as a 'positive and motivating' (1)) experience:

> *"It encourages me to be a good advocate for the patients. It motivates me to get the answers I need"* General hospital staff (1).
>
> *"It keeps you on track" … "It creates better outcomes"* Senior level staff (2).
>
> *"It is what makes my job interesting. It makes me knuckle down and do it and really concentrate. … Get the job done. … "There is an element of satisfaction when achieving external pressures"* Senior level staff (5).
>
> *"External factors are important to push you a little bit"* Middle level staff (7).

5.6. Organisation of data and identification of patterns of meaning

While participants (1), (2), (5) and (8) described how influences impact decisions or the delivery of work, participants (3), (4) and (7) described how influences were experienced more personally. Although the intent for each interview was to assess external pressure, the conversation would typically turn to pressure in general. Thus, during further rounds of systematic, vertical reading of the transcripts, the meaning of pressure as experienced by each participant was extracted. The data revealed that external pressure was interpreted

very differently by each participant. Individual perception, their work role and profession determined which factors were experienced and interpreted as external influences or external pressure. This led to the creation of various individual meanings of pressure. Table 5 (below) was created to illustrate what each participant connected most to pressure. This exposed latent themes connected with the interpretation of external pressure: stakeholder expectations (1), loss of control (2), individual perceptions (3), feelings (4), managing responsibilities and work-load (5), getting patients out (6) and family stress (7). Participant (8) felt that external pressure does not exist. The table shows the diversity of perceived boundaries which shape the understanding of the term 'external' and shows some descriptions of pressure from the data. The participants unanimously stated that the perception of pressure is different at different times and for different people. They established that it depended on the work position, work-load and private life. During this first data organisation and summary process, themes were searched which facilitated the code development.

Table 5: Data summary – meaning of external pressure

Role (No)	Meaning of external pressure	Perceived boundaries of 'external'	Description of pressure
General hospital staff (1)	**Pressure = perception of stakeholder expectation**	External to organisation	*"Different pressures at different times"* *"Each job has a different set of influences"*
Senior level staff (2)	Pressure is if you perceive something as a challenge or as an opportunity, depends on perception. **Pressure = loss of control**	Participant switches between: External pressure = external to herself Personal work responsibilities shape boundary of influences	*"Perception of pressure is different at different times, depends on your attitude"* *"Pressure is different for everybody, because of different accountability, affects every individual differently depends on how they relate to the organisation at different levels ".*
Middle level staff (3)	**Pressure is something personal and individual,** depending on emotional intelligence and reaction to outer circumstances and is affected by private life	External = everything outside the Emergency Department	*"I think it is perceived differently by everyone as it depends how you cope with various influences. Some people cope well with 43 balls in the air, others don't"* *"It absolutely varies in time"*
Clinical staff (4)	External pressure = stress connected to work-load, not enough time to do everything **Pressure is connected to how participant feels** Own self-talk = internal pressures	Internal = Inner World Everything else = external Far away external: ministry etc. (no big relevance)	*"Pressure is very different for everyone"* *"Pressure varies, there are certain times in a year when the pressures increase"* *"Pressure does impact work"*
Senior level staff (5)	**Pressure = managing responsibilities** managing work-load (= prioritising)	Considers general manager as 'external' External = external to self Differentiates different professional boundaries	*"Pressure is very, very different for everybody"* *"Pressure varies over time"* *"Pressure does impact work positively and negatively"* *"One has control how to perceive pressure"*

		Far away external: system (no big relevance) Does not distinguish internal to self and external properly	
Lower clinical staff (6)	**Pressure = to get patients out**	Does not distinguish between external and internal, talks about pressure in general	*"Pressure is very job dependent, also depending on circumstances"*
Middle level staff (7)	**External pressure = outside of work = family** = **stress**	Compartmentalises work in general vs. private life External pressure = outside of work = family Switches to external pressure = outside of himself	*"There are different pressures for everyone. Some are universal but others would be unique to certain individuals"* *"Pressure varies in time and impacts work"*
Senior clinical staff (8)	**External pressure on hospital does not exist.** Hospital and health system are in-separable	Hospital and Ministry of Health are inseparable. Outside of health system (insurances, pharma companies)	*"Pressure is very different for everyone"* *"Pressure varies over time"*

5.7. Data coding

Several major rounds of data coding were performed. The first rounds of initial coding included transcripts from interviews 1 - 4. After each additional interview was transcribed, a further round of systematic reading and coding was completed. Key quotes were highlighted, coded and sorted into categories that supported the identification of themes. The emerging codes and categories were labelled by words, and links between codes were drawn in the mind maps to indicate relationships. Sometimes one segment of text was coded into more than one category. During this process, an attempt was made to extract the underlying belief of each participant. A code was identified if shared perceptions were mentioned by four or more participants (Guest et al., 2006).

While there were major differences between the understanding of pressure, the participants still described recurring topics and ideas. The similarities in the responses were organised into four categories: 'Context', 'Perception', 'Work Role' and 'Personality'. The results from these first coding rounds and organisation of data in mind maps are displayed in Table 6 (below). It shows the first topics emerging from the raw data, the identified codes and the initially identified categories. The category 'Context' referred mainly to private and work influences and was connected to what kind of pressure was experienced. The category 'Work Role' referred to work volume, activities and responsibilities; it was also linked to the amount of pressure perceived. The category 'Personality' referred to attitudes, self-expectations and feelings. This category determined how influences were perceived (i.e. as pressure, stress or motivation). All three categories influenced the overall perception of external influences and pressure.

Table 6: Initial topics, codes and categories (first round of coding)

Topics emerging from the data	Initial odes	Emerging categories
Influences depend on Work Role	Confusion	Context
Volume of work is related to pressure	Outcomes	Personality
Change causes pressure	Perception	Work Role
Pressures changes in time	Family life	Perception
Depends on circumstances	Competing priorities	
External stakeholder expectations	Feelings	
Individual personality	Circumstances	
Private life, family	Control	
Positive effects, motivation	Time	
Perception	Work role	
Better outcomes	Stress	
Influence on decision-making	Work volume	
	Self-expectations	
	Perception	
	Pressure is positive and negative	

5.8. Reviewing of initial codes

After the first rounds of data extraction and coding were completed and key messages and ideas were captured, the process of systematic and rigorous re-reading was repeated from the beginning in order to test the identified codes and categories. The investigator approached this second major coding round with a fresh mind and created further mind maps starting anew. The coding frame was adapted and changed accordingly during this phase. By re-reading the transcripts horizontally and vertically, the amount of data was reduced while redundant and overlapping categories were investigated. This process helped to find the main categories and their inter-connections. After further re-interpretation and re-investigation during the reading of the data, the four main categories 'Context', 'Inner World', 'Perception' and 'Work Role' were refined. Table 7 lists the codes and categories that emerged from data extraction during the second rounds of coding based on the transcripts of interviews one to eight.

Table 7: Codes and categories (second round of coding)

Final codes developed in further rounds	Linked categories
Work-load	Work Role
Change	
Outcomes pressures	
Prioritising (overall pressures)	
Stakeholder expectations	
Confusion (terminology)	Perception
Boundaries (external problem)	
Control	
Time	
Personality	
Private life (family)	Context
Social environment	
Professional (occupational) environment	
Work environment	
Competing priorities (work and family)	
Self-expectations	Inner World
Stress	
Emotions (anxiety)	
Inner dialogue	
Self-regulation	

The systematic and rigorous horizontal and vertical reading of the data was repeated to validate the previously-identified codes and categories, and to identify if code and category definitions were stable. The raw data was searched continuously to analyse and verify repeated patterns of meaning while screening for themes. From this, the following codes were established during the final round of coding: work-load, change, outcomes pressures, prioritising (overall pressure), confusion (terminology), boundaries (external problem), control, time, personality, private life, social, professional, and work environment, competing priorities (work and family), self-expectations, stress, emotions (anxiety), inner dialogue and self-regulation. They were organised into the categories of 'Work Role', 'Perception', 'Context' and 'Inner World'.

5.9. Description of categories

Words often carry an "inherent meaning" (Thomas, 2006, p. 240) and therefore Table 8 was developed to present the meaning of the four main categories: 'Context', 'Inner World', 'Perception' and 'Work Role'. The 'Context" category varies over time (change of situational factors) and represents any context and circumstances in the 'outer world' of the individual: the family environment, social environment (everyone else), professional environment (related to occupation) and work environment (related to position). This category determines which influences are present. The 'Context' category also includes the competing priorities of work and family environment and has a potential influence on all the other three categories.

The category 'Inner World' represents the 'inner self' and refers to 'thinking about things', feeling and judging and refers to cognitive processes of each individual. It shapes the attitude and depends on the personality (faculties of the individual). It consists of the following codes: inner dialogue, self-expectations, emotions (stress, anxiety) and self-regulation (control), perception and personality. It is about making choices and is different at different times. This category is connected to all other categories as it reflects on them consciously.

The category of 'Perception' is linked to the categories 'Inner World' and 'Context' as it shapes how everything else is perceived. It refers to the confusion about the terminology of external influences and pressure. It shapes the differentiation of boundaries between the various environments and determines what is perceived as internal or external. It determines if influences are perceived as pressure and varies over time.

The category 'Work Role' is defined as the work volume, work tasks, position and professional responsibilities, work and professional accountabilities. Task prioritisation and work volume dominate this category. It sometimes overlaps with the category 'Context'.

Table 8: Category descriptions

Category label	Description of category meaning	Connections to topics, codes and other categories
Work Role	Determines 'amount' and type of pressure, which depends on context and circumstances of Work Role and profession (situational factors of hospital and health care, occupational and work environment). In the data it is perceived as the outer environment of the individual	Prioritising, work volume, tasks, responsibilities, accountabilities, stress, time, outcome pressures, stakeholder expectations, complexity, occurring change. Linked to self-management, private life, 'Inner World'
Perception	Determines if influences become pressure and 'how' pressure is perceived. Various meanings of external influences and external pressure. Internal/external has a different meaning for each participant. Perception depends on individual personality and 'Context'. Varies in time	Confusion (terminology), individual perception (boundaries), pressure, time, control Linked to self-management, stress, personality, 'Inner World', 'Context'
Context	Origin of influences: determines 'what' kind of influences are present. Overall context and circumstances of 'outer world' of individual. Demands from various social entities. Change of situational factors.	Creates competing priorities of work environment and private life, time (constraints), change,
Inner World	Everything connected to the inner self: thinking, feeling, judging. Shapes how everything else is perceived. Inner dialogue creates self-expectations (wanting to achieve certain outcomes), prioritising and decision-making, (managing expectations and external requirements), perception of control (self- regulation),	'Perception', inner dialogue, self-expectations, attitude, emotions (stress, anxiety), control (making choices), perception, personality

5.10. Data associated with each category

In order to illuminate the meanings of each category, text-segments and quotations from the raw data related to the category were illustrated in Table 9.

Table 9: Sample text associated with each category

Category	Associated text
Context	*"It depends on the circumstances which external influences create pressure"* General hospital staff (1) *"Perception of pressure is influenced by work priorities and private life. If something happened at home it can tip you over the edge"* Senior level staff (2) *"It depends on what is going on at that moment in time"* Middle level staff (3) *"Circumstances (sleep, how busy I am) determine how I perceive pressure"* Lower clinical staff (6) *"Pressure is caused by change"* Middle level staff (7)
Inner World	*"Private life and expectations of yourself have lots to do with pressure"* Senior level staff (2) *"Pressure depends on the level of stress. Competing priorities of work and family are really stressful"* Middle level staff (3) *"Wanting everything for everyone. Things I want to do but I don't get to"* Clinical staff (4) *"Pressure is connected to internal perception where you are in time, what is coming your way and what you feel"* Clinical staff (4) *"Internal calmness affects perception of pressure"* Senior level staff (5) *"Perception of pressure depends on where I am on the spectrum of stress anxiety and commitment"* Middle level staff (7) "*I want to be a good parent, good father in the setting of a busy job"* Middle level staff (7)
Perception	*"So it's just how you perceive it. It is like those people that perceive opportunities and other perceive challenges. So some people might see the same with a pressure and an opportunity"* Senior level staff (2) *"The way you choose to be affects perception"* Clinical staff (4) *"Pressure depends on personality"* Senior level staff (5) *"Your perception is important on how external pressure is measured for yourself"* Senior level staff (5)
Work Role	*"There are different pressures from different stakeholders at different times"* General hospital staff (1) *"Competing priorities at work cause pressure"* Senior level staff (2) *"Cross pollination of pressure downwards"* Clinical staff (4) *"Pressure is to juggle all the balls in the air"* Middle level staff (7) *"Do more for less. Be more efficient"* Middle level staff (7)

5.11. Development of themes

Themes were identified by linking the code segments, taking the developed categories into account and looking for relationships and underlying structures in the data. Table 10 illustrates factors associated with the perception of external influences and pressure during the initial coding process. These factors helped to develop themes later on.

Table 10: Factors connected to research topic

Factor	Description of factor
Perception	Confusion of terminology and boundaries. Perception depends on outer circumstances, personal attitude and personality; it is linked to control
External	Is considered as external to self = participants talked about pressure in general;
Change	Is a source of pressure
Time	Pressure and perception of pressure varies in time
Work role	Work-load is causing pressure; work circumstances; prioritising of tasks Stakeholder expectations very different for each participant and connected to position/Work Role
Stress	Pressure and stress are connected; terms are sometimes used interchangeably
Prioritising	Is connected to stress and pressure and self-expectations (requirement to achieve)
Private life	Adds to pressures; connected to self-expectation
Control	Pressure can be controlled by inner attitude
Inner dialogue	Is related to control (inner self-management), self-expectations". Emotions (stress, anxiety) are connected to pressure

Interview transcripts were searched for themes progressively. Sometimes, when reading one transcript, a new discovery was made and the investigator went back to the previous transcripts to re-read them from a new perspective or to confirm a theme. The data were screened to discover which over-arching meanings were expressed by the participants, and to identify similarities and differences in the responses. There were no idiosyncratic themes identified in the data. During this data analysis process, certain aspects emerged, which were not particularly expressed by the participants but were identified as a theme; linked to codes

and words that were mentioned repeatedly by the interviewees. The aim was to go beyond the surface meanings of the data. The themes were reviewed and refined using mind maps. Themes were also considered in relation to other themes during the analysis process. The transcripts were re-read to validate codes, categories, and to ensure that the developed themes covered the research question sufficiently. From this, the following initial themes emerged: confusion of terminology, individual perception, subjective meanings, context and time, work role, personality, control, stress, inner dialogue. In Table 11, the initial themes are defined and it is explained what they refer to.

Table 11: Themes initially developed from data (following completion of all interviews)

Initial theme	Refers to
Confusion of terminology	Confusion about what external influences or external pressure refers to. Participants are talking mostly about pressure in general
Individual perception	Difficulty to distinguish internal/external worlds and establishing boundaries. It depends on the perception if any influences were perceived as pressure
Subjective meanings	Meanings of external influences and external pressure are different and created by each person individually
Context and time	Inner and outer environments of individual changing in time
Work Role	Is central to which expectations from external entities are creating external influences
Personality	Individual differences in thinking, feeling and behaving patterns. Shapes attitude
Control	Individuals making choices and feeling in control, self-management, influencing outcomes
Stress	Participants connect external pressure and stress. Stress is resulting from demanding circumstances
Inner dialogue	Connected to thinking processes of the participants, creates self-expectations which cause stress and pressure, self-regulation is connected to control, self-awareness, perception of emotions (stress, anxiety),

5.12. Underlying experiences in the data

To develop a deeper understanding of the initial themes, the underlying meaning of what the participants had actually said, the observations of the researcher, and the most mentioned words were noted in Table 13. This revealed what was truly important to the participants in connection to 'external influences' and perception of 'external pressure'. When reflecting on meanings and the underlying experiences in the data, a very subjective interpretation and understanding of pressure emerged. The table shows what pressure meant for each participant. It was connected to the work role, work-load, perception, control, self-expectations, stress and prioritising between private life and work responsibilities: 'role and motivation' (1);'pressure is the loss of control and challenges' (2); 'pressure is individual' (3); 'anxiety and stress', 'feelings, inner dialogue and self-expectations' (4); 'responsibility and work-load' (5); 'getting patients out' (6); 'stress and family' (7); 'funding, ministry and politics' (8).

Table 13: Observations of the interviewer

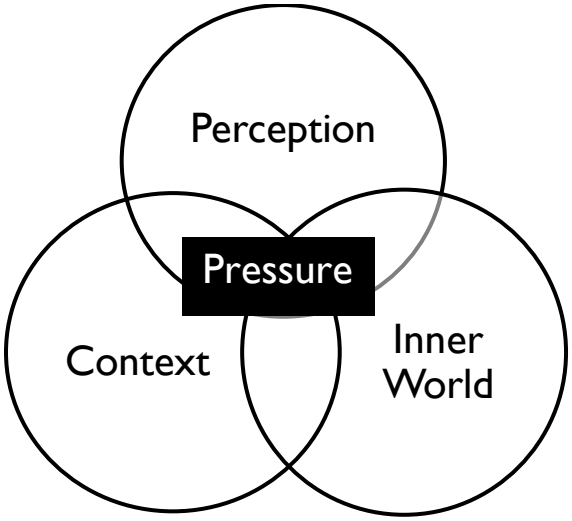
Role (No)	Summary of meaning of pressure in interview	Most used word
General hospital staff (1)	**Pressure = connected to Work Role and Perception** Participant also talks a lot about pressure (from health insurance companies) as a source of **motivation** to get better outcomes for patients	1. Role (8x) 2. Motivation (7x) 3. Perception (4x) 4. Stress (3x)
Senior level staff (2)	Talks about challenges and unconsciously mentions "anxiety" a lot (as not related to her) Pressure depends on perception it can be a challenge or opportunity, loss of control is pressure **Talks about pressure connected to level of control**	1. Challenge (11x) 2. Anxiety (8x) 3. Stress (7x) 4. Control (5x) 5. Change (4x)
Middle level staff (3)	**Pressure depends on perception and is very individual** External = within hospital	1. Family life (7x)
Clinical staff (4)	Does not distinguish between external to hospital and external to private life. External = external to self (clinical environment) EP merged into pressures generally during interview Sees pressure sometimes as internal sometimes as external External influences = unpredictability within volatile hospital	1. Internal dialogue, self-talk, self – expectations (10x) 2. Feel (9x) 3. Time (7x)

	Conversation is about "how participant feels (inner dialogue), self-expectations, time constraints and work-load" 'Pressures are the clinical work-load" External pressure = perceived work-load (stress) Talks about feeling overwhelmed	
Senior level staff (5)	Talks about pressure, as external to her, does not clearly distinguish in answers between external/internal organisational pressures. External = external to self External is for her within the hospital. Only towards the end of interview becomes more aware of "system outside" the hospital. Distinguishes intellectually between external and internal when but mostly talks about pressure in general Distinguishes work-load related to organisation and work-load related to Work Role (professional responsibilities vs. position responsibilities = boundary) Talks about responsibilities and work-load a lot **Conversation is mainly about: Pressure = Managing work-load = responsibility & Prioritising** Presence of internal dialogue Conversation is about managing responsibilities mainly Tries to manage pressure purposefully	1. Responsibility (12x) 2. Most mentioned work-load (7x) 3. Prioritise (5)
Lower clinical staff (6)	**Does not understand what 'external' pressure means**	1. Getting patients out (13x)
Middle level staff (7)	Struggles to distinguish anything outside hospital. Hospital is one inseparable unit. Patients are within the hospital. Conversation always comes back to family and financial pressure, self-expectations Talks mainly about **stress and** about feeling anxious Managing work-load is also an issue "**External pressure = external to work = family life"** and extremely connected t**o stress** Tries to control pressures	1. Stress (9x) 2. Family (5x) 3. Anxiety (4x) 4. Control (4x)
Senior clinical staff (8)	Does not distinguish hospital and health system. Both are one for him. Sees health care system as one big health unit without boundaries Mostly talks about government being influence on treatment possibilities. Patient access to appropriate treatment restricted by funding, politics and administration. Main focus of conversation is on **Finances limit best possible treatment and the health system in general**	1. Funding (20x) 2. Politics and Ministry (7x)

5.13. Review of developed themes

Looking for overall meanings contributed to the interpretation of data and supported also reliability and credibility (Braun, 2013). To make further sense of the findings, the investigator reviewed the categories in relation to the initial themes, trying to understand the connections in the data. In the search of the answers to the research question, Figure 2 helped the investigator to reflect on the topic. The figure showed links between the three main categories that seemed to be connected to the diverse interpretations of the research topic. It illustrated that the categories 'Perception', "Inner world" and "Context" influenced the participants' cognition and experiences of their environment.

Figure 2: Underlying structure of experience in the data

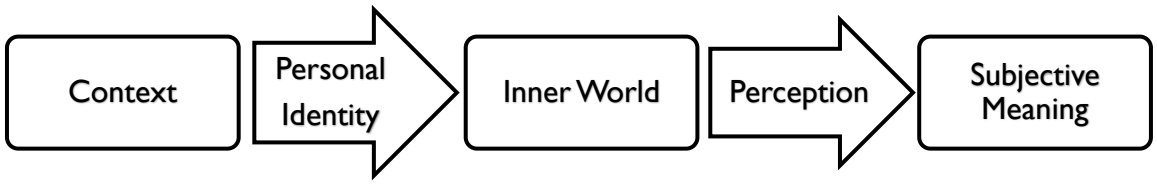


The themes and categories that were developed initially only provided a partial explanation of what caused the meanings of pressure to be unique for each person. The question was, why were meanings individually created and boundaries of 'external' and 'internal' perceived so differently? In the search for a consistent explanation of the individuality of perceptions (which is connected to how the terms were understood and interpreted), the researcher encountered the problem of representation of language, interpretation of reality and cognition (Hall, 1997). Language is used to represent meaning and sometimes words reflect meanings which already exist but at other times, it can express the underlying meaning of the individual (Hall, 1997). Language and understanding depend on culture and identity: the meaning is not inherent in the word itself but is individually and socially constructed (Du Gay, 1997).

Cultural studies have found that personal identity and the 'perceived truth' are produced through context, social dynamics and discourse (Downes, 1998). According to Hall (1997) meaning is generated through regulations (i.e. norms, institutionalised systems, politics and power), the impact of these regulations, and the identification with a certain group discourse. Researching the concepts of cognition and cultural studies helped to understand that identity and cognition were the missing factors that linked the three main categories. This allowed the development of the four main themes: 1) subjective meanings, 2) inner world, 3) individual perception and 4) personal identity.

Personal identity is the determinant of how context (i.e. outer environment of individual) is processed in the inner world using cognitive evaluation activities. In turn, these activities influence an individuals' perception and lead to the construction of subjective meaning. Figure 3 was developed to illustrate the interconnection between the four main themes.

Figure 3: Construction of subjective meaning



5.14. Achieving data saturation

As the collection of data and data analysis are interrelated in the inductive thematic analysis, the transcripts were analysed from the very beginning (Francis et al., 2010). Consequently, the findings from the initial interviews informed the direction of the further interviews and incorporated new aspects (e.g. the interviewer did not insist on reminding the interviewee on the researchers' definition of external during the conversation as outlined in paragraph 3.6). During the iterative data analysis and interview process, it appeared that data saturation was achieved at approximately five interviews as it seemed that no new information, ideas, themes, findings or issues were emerging. The investigator continued looking for new or reoccurring topics or themes in the transcripts in a deliberate search for new information to "exhaust possibilities" (Guest et al., 2006, p. 65), but by eight interviews no new findings or themes were revealed. Hence, it appeared that this was an adequate sample size for this

study. Completing three interviews after apparent data saturation ensured that an adequate diversity in the sample was achieved before the interview process was considered complete (Guest et al., 2006).

5.15. Validation process

After the data analysis and extraction process were completed, a cumulative frequency distribution of topics and codes was established (Table 12) to display the number of shared topics and codes and to test the replicability and confirmability of the findings (Francis et al., 2010). For this, all the transcripts were re-read horizontally and vertically in multiple rounds and the meanings of text segments were confirmed. The discovered patterns of perception, and the identified relationships between categories were reviewed. The table not only helped to identify possible thematic prevalence and underlying experiences or beliefs in the data, but also to verify if code definitions were stable in order to validate the results (Guest et al., 2006). The cumulative frequency table also helped with the verification of the data saturation. For instance, the work role, stress, control, self-expectations, personality affecting perception, private life, and work-load were among the most mentioned recurring topics in the interviews. All participants talked about pressure in general.

Table 12: Cumulative frequency table of codes

Participant	Work Role	Stress	Control	Change	Self-expectation	Inner dialogue	Pressure varies in Time	Delivery of care	Positive experience	Personality affecting perception	Attitude affecting perception	Available funding	Ministry/Politics	Socio-demographic of hospital population	Private life – family	Anxiety	Patient expectations	Work-load and competing priorities	Patient outcomes	Talks about pressure in general
(1)	**XX**	X	X	X	X		XX	XX	XX	XX	XX	XX		X			X	X	XX	X
(2)	X	**XX**	**XX**	**XX**	X	X	X	X	X	**XX**	**XX**		**XX**	X	XX	XX	X	XX	X	XX
(3)	X	**XX**	X		XX	X	X	X		**XX**	XX		X	X	**XX**		X	**XX**		**XX**
(4)	**XX**	XX	X	XX	**XX**	**XX**	X	X		X	X		X		**XX**	X		**XX**	X	**XX**
(5)	X	X	X	X	X	X	X	X	X	XX	**XX**	X	X		X		X	**XX**	X	**XX**
(6)	XX				XX	X	X	X	X	**XX**	X	X			X	X		X	**XX**	**XX**
(7)	X	**XX**	XX	X	**XX**	XX	X	X		X	XX	X			**XX**	**XX**	X	**XX**	X	**XX**
(8)	**XX**		X	X				**XX**		X		**XX**	**XX**	X			X		**XX**	**X**

X = mentioned a couple of times, XX = important, **XX** = dominant in interview

6. Discussion

6.1. Introduction

The previous chapter described the study population and then explained the data collection and extraction process. It presented the results of the inductive thematic analysis and the identified themes, codes and categories. The key findings were illustrated with tables which included key quotes. This chapter discusses the results and the main issues arising from the research. It describes the implications of the meanings and underlying beliefs that were extracted from the data for the understanding of the research topic. The connection between the themes, their meanings and the relevance in relation to the research question are outlined in terms of subjective meanings, inner world, individual perception and identity. The originality of this work and the implications for current health care system research and practice are considered. The chapter finishes with a discussion of the limitations of the method and reflects on the rigour of the research.

6.2. Summary of key findings

The research goal was to identify if external influences impact on hospital staff and to find out which of those influences are perceived as pressure. A further aim was to assess if the perception and experience of external influences differ at different levels of the hospital. Overall, the study found that each participant created their own subjective meaning of external influences and pressure, which was shaped by their perception, identity, personality and the overall context. Four main themes were developed from the analysis of patterns of meaning and underlying beliefs in the data: 1) subjective meanings, 2) inner world, 3) individual perception and 4) personal identity. The themes shed light on the confusion of terminology and the individual interpretation of 'external influences'. They reveal the significance of the inner dialogue and personality. The themes show how factors such as context and time, work role, stress and control are related to the perception of external influences and provide the crucial link to understand the connotations of factors discovered in the data.

6.3. Confusion of terminology

The results showed the ambiguity in the participants' understanding of how to define 'external influences' or 'external pressure'. The findings of this study mirror the results of the literature review, which found an inconsistent use of expressions such as 'external pressure' and 'external influences'. On the whole, the term 'pressure' was not well received by most of the participants who considered it as 'very vague'. Some participants raised concerns that the term 'pressure' was unsuitable as it implies something negative (i.e. causing stress). Others felt that pressure can also be a positive experience: participant (1) felt that pressure was "motivating", and participant (5) expressed that pressure was "what makes the job interesting". Most participants preferred the term influences. The interviews revealed that the perception of the term 'external pressure' was shaped by the individual's understanding and interpretation of the term.

The answers were very different in terms of which influences created pressure and were subject to what was going on in the participants 'inner world' and 'outer environment'. The key position of postmodernism is that "meaning and understanding are not naturally intrinsic to the world" (Cooper & Burrell, 1988, p. 99) but are constructed by individuals and bound by their beliefs, perceptions and notions. This agrees with the main findings, which were identified during the data extraction and interpretation process. They showed that the participants constructed their own meaning in the absence of a clear definition. Since the participants were unsure what was meant by 'external' influences or pressure, they constantly sought confirmation, both verbally and non-verbally that their responses were, what the interviewer was looking for. The participants had never considered external influences, on or within the hospital system, as creating pressure before and ended up talking about pressure and influences in general. Often the terms influence, stress and pressure were used by the interviewees interchangeably.

6.4. Subjective meanings

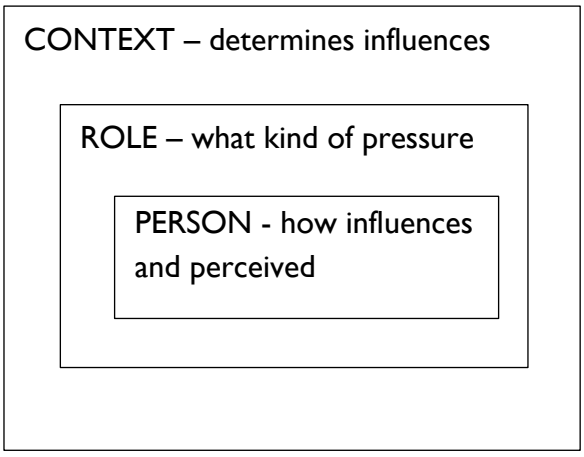
The research found that the perception of pressure was a very personal and individual experience, and understanding of external influences and pressure was subjectively created by each participant. For the participants, pressure was connected to the 'work role and perception' (general hospital staff (1)), the 'loss of control and challenges' (senior level staff (2)), 'inner dialogue, self-expectations, time-constraints and work-load' (clinical staff (4)), or

to 'managing the responsibilities and work-load' (senior level staff (5)). One interviewee (middle level staff (7)) mainly talked about external pressure caused by "family life, private financial pressure and self-expectations" and another (middle level staff (3)) asserted that "pressure depends on perception and is individual". Participant (senior clinical staff (8)) stated that "external pressure on hospitals does not exist".

Context and time

Meanings in the world do not pre-exist but are constructed (Malafouris, 2013), and context leads to the construction of meaning (Chia, 1995). The responses showed that context and time were factors that influenced the perception of the hospital staff. While the individuals created their own meaning of 'external influences', there was consistency in the data about the impact of work and private life as two major contextual factors. There was a strong agreement among the participants that inner and outer environments were fluid in time, and influenced by constantly changing contexts (i.e. everything that is going on externally to themselves). Context and time refer to the impact of all environments, such as private life, work environment, professional (occupational) environment or the health care system. The topic of change was present in the data. It was experienced as a challenge and was related to pressure. Figure 4 illustrates the factors which lead to the creation of subjective meanings and how they are linked to the perception of influences creating pressure. The context determined which influences were present (shaped the overall situation), whereas the work role determined the type of pressure (e.g. time constraint, outcome), the amount of pressure, which influences and stakeholders were relevant. The work role also created competing priorities which led to pressure or stress. The person is made up by identity and personality (attitudes towards outer world) and determines how pressure is perceived.

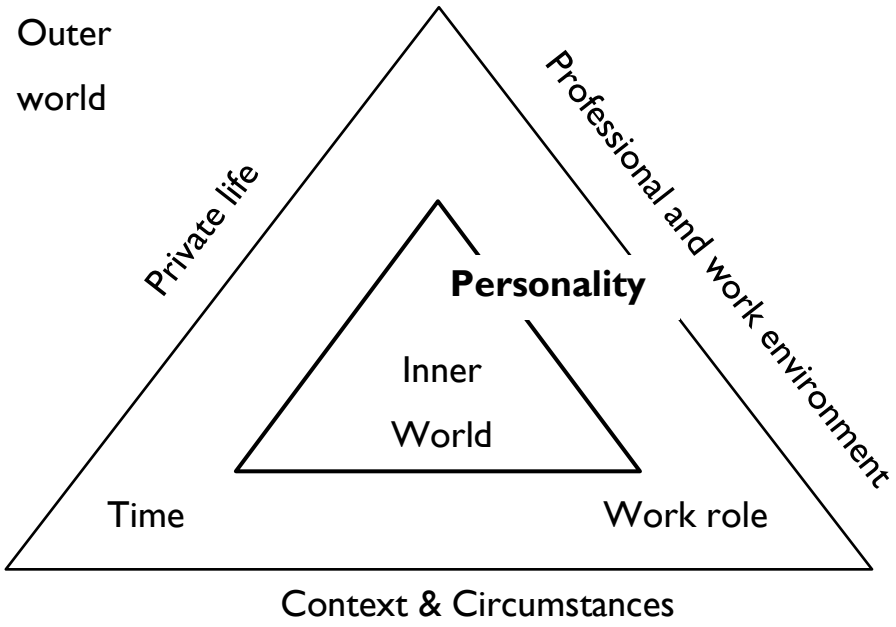
Figure 4: The perception of pressure



The hospital professionals perceived pressure similarly, regardless of their level in the organisation. The hospital organisation and its structures held little relevance for the participants. Different contexts caused different influences for different individuals.

The main finding of this research was that the factor of "individuality of individuals" (Chia, 1995, p. 592) impacted on the perception. According to Berger (1975) society exists both as objective and subjective reality. The questions are "Why are perceptions so different?" and "What do the answers all have in common?" There was a widespread agreement among the participants that the perception of external influences creating pressure varied for each hospital and person, depending on their role, position, and situation at that time, with private circumstances also being an important factor. Figure 5 was developed during the coding process, in an attempt to make sense of the different responses. It shows the factors that were related to pressure and that the participants distinguished in some way between 'inner' and 'outer' worlds. Private life, professional and work environment, context and circumstances represent all the influences in the 'outer world', which have the potential to create pressure. The theme 'inner world', comprising self-expectations, emotions (stress and anxiety) and personality (shapes attitude), determined how the pressure was perceived. The experience of pressure was also related to the work role, varied in time, depended upon the point of view and faculties of each individual (personality). A major topic connected to the work role was the work-load. Participants unanimously felt that the volume of work and competing priorities were the two biggest sources of pressure.

Figure 5: Factors influencing perception of pressure



6.5. Inner World

In the 'inner world', meanings are constructed. The 'inner world' representing the 'self' and the 'identity', refers to an individual's processes of self-awareness, self-representation, self-regulation and mental organisation (Leary & Tangnety, 2002). The inner world is the identity, which makes up one's self-concept: 'what one thinks of oneself and what one believes to be true for oneself' (Turner, Brown, & Tajfel, 2010). The inner world determines decision-making and responses (Meichenbaum, 1977).

The participants linked the perception of pressure clearly to their 'inner world' and 'inner dialogue'. The literature describes the inner dialogue as the psychology of evaluation processes and reasoning (Leary & Tangnety, 2002). In the inner dialogue, the participants expressed their feelings (i.e. anxiety), self-expectations, and also other cognitive inputs (e.g. perceived time-pressure, stress). The interviewees referred to their thinking processes as: "what is going on internally" (middle level staff (7)) or "feelings and inner dialogue" (clinical staff (4)). Through their inner dialogue, self-expectations were established. Reflecting on professional responsibilities and accountabilities was an important part of the inner dialogue, and a constant source of worry. Svenson and Maule (1993) have found that internal judgement and perceived time-pressure lead to stress and affect decisions. The participants frequently talked about their self-expectations creating stress and pressure. Self-expectations can be described as the expectation of each person to be good at what they do, for instance "being a good nurse" (4), being a "good doctor" (8), "being a good manager" (5) or "being a good father" (7).

> *"[Pressure] It's influenced by work priorities and private life and expectations of yourself"* Senior level staff (2).
>
> *"[Pressure is] Personal life and expectations of yourself"* Middle level staff (3).

Self-expectations create pressure

The requirement to achieve expected outcomes led to the participants putting pressure on themselves by wanting to meet certain objectives for each of their accountabilities. This was perceived as a source of external (i.e. as external to themselves) pressure. In behavioural medicine, stress is a synonym for pressure and is the result of individuals appraising events in

their environment (Voìgele, 2015). Participants regarded the level of stress at work, their private life, and the need to constantly prioritise 'demands' as a source of pressure ((7), (2), (4)). 'Demands' referred to stakeholder expectations in the work and private environment as well as self-expectations. The deliberate reflection on meeting those demands led to a feeling of stress. There was also a connection with senior people in the hierarchy being a source of pressure ((4), (6), (7)). The self-expectations and stress were closely linked to the topic of control. All of the participants agreed that pressure affected their decision-making process at work, but said that it could be limited by the amount of control exercised (i.e. the ability to stay calm).

> *"I feel torn into little pieces by pressure. Someone always wanting a little piece of you. I can see the relevance of those pressures"* Clinical staff (4).

> *"Internal calmness impacts the perception of pressure"* Senior level staff (5).

The responses showed that the perception of pressure was dynamic and depending on how the person felt. The cognitive evaluation of meeting self-expectations and meeting outer demands is the major determinant of the experience of stress and shapes the coping with various life and work environments. (Lundberg & Frankenhaeuser, 1999). The inner dialogue represents the cognitive processes of each individual, which was present in each conversation and influenced the perception of pressure.

Cognition and personality

External pressure cannot be observed physically or measured objectively without a person perceiving it (Craig, 1998). Pressure requires a mental concept such as human perception to establish its existence, and is therefore in the realm of the cognitive. It is a construct of the human mind (Chalmers, 1997). Cognition is how people make meaning out of what they perceive. Individual cognition explains subjective understanding and interpretation (Stich, 1998), but the question is why are individual cognitive processes so different? Why do different 'minds' have different perspectives of 'reality' and 'truth'? What distinguishes one person from another? The answer is personality. It represents a unique combination of traits and shapes expressions of the person (Gellman & Turner, 2013). It makes up human individuality and refers to individuals' differences in patterns of thinking, feeling or perceiving and processing information (Martin, 1998). Values, attitudes, personal memories, habits, and skills make up personality (Storm & deVries, 2006). Participants felt that cognition and

personality shaped the attitude of the 'inner world' towards the 'outer world' and affected the perception of anything external to the inner self:

> *Perception of pressure depends on personality and emotional intelligence and all those things that go towards making up a person"* Middle level staff (3).
>
> *"The way you choose to be affects your perception"* Clinical staff (4).
>
> *"Pressure depends on personality"* Senior level staff (5).
>
> *"If you put a lot of pressure on yourself and thought that you weren't doing too well, you might perceive everything than everybody says as pressure"* Lower clinical staff (6).

Gellman and Turner (2013) confirmed that individuals appraise the outer world as a result of factors such as personality. The individualistic mindset (as represented by the inner dialogue and self-expectations in the data) determines how contextual information was processed and perceived (Leary & Tangnety, 2002).

6.6. Individual Perception

The meanings conveyed in the interviews show that pressure depends on perception, which is individually shaped by the experiences of each person and the surrounding circumstances. This aligns with postmodernist views that knowledge and thoughts are the product of social discourse and interpretation, and are therefore contextual and constructed (Chia, 1995). From this perspective, each person attempts to make sense of their environment and give meaning to what they experience and believe. The findings are in accordance with the view that perception depends on the cognition of each individual as a mental experience of the human consciousness (Chalmers, 1997). Given that reality is a situational construct of the human mind, no objective domain of external influences can be established. The responses relating to external influences creating pressure illustrate the dependency on individual interpretation:

> *"So it's just how you perceive it. It is like those people that perceive opportunities and other people perceive challenges. So some people might see the same with a pressure and an opportunity. The level of control determines if something is a pressure or influence. A loss of control creates pressure"* Senior level staff (2).

"Pressure is perceived differently by everyone as it depends how you cope with various influences. Some people cope well with 43 balls in the air, others don't." Middle level staff (3).

"The perception of pressure is affected by what is coming your way, if you feel stressed and where you are at that time" Clinical staff (4).

"Pressure is very, very different for everybody" Senior level staff (5).

"I think everybody receives information differently and some people might perceive it as pressure, even if it is not meant to be perceived that way" Lower clinical staff (6).

Only individual perception can turn external influences into pressure. Pressure can be seen as either a negative stressor or as a motivating factor. The responses showed that, whether pressure has a negative or positive impact depends on the individual, and is therefore subjective and dynamic.

Perception of 'external' and 'internal' boundaries

It is of note that all the participants had never thought about 'external influences' or 'external pressure' prior to the interview: reading the participant information sheet was the first moment they encountered the idea. There was uncertainty regarding the interpretation of 'external' during the conversation. The interviewees did not distinguish between the 'internal' and 'external' hospital environment as conceptualised in organisational theories. In the literature, the external organisational environment is defined as all factors outside the boundary of the organisation that have the potential to affect the organisation and to which an organisation needs to adapt (Dauber et al., 2012). The study showed that these theoretically defined organisational boundaries had no relevance for the participants.

Even when the concept of 'external', as in 'external to the hospital', was understood by the participants intellectually, unconsciously the interviewees did not make the distinction during the conversation. Despite the external being defined as external to the hospital before the recording started, participants talked usually about pressure in general. Predominantly there was no conscious experience or perception of influences in the hospital environment creating pressure. The perception of 'internal' and 'external' boundaries varied between participants, determined mostly by work responsibilities. For example, patients and the Ministry of Health were perceived as entities within the hospital by one participant (senior clinical staff (8)),

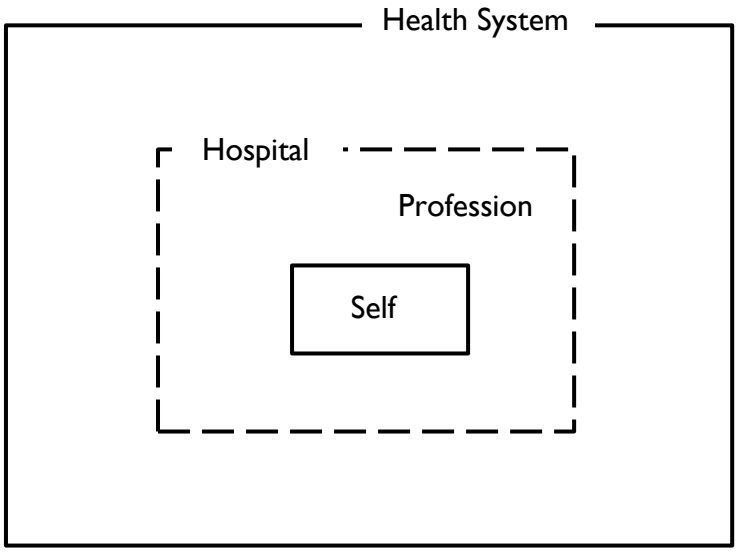
while another participant (senior level staff (5)) referred to the general manager and the volume of work as "external".

> *"There are a huge pressures and demand to do more for less, be more efficient. The patient expectations are massive", but they are for me within the hospital"* Middle level staff (7).
>
> *"The hospital is part of the Ministry of health, so you can't separate these two from each other. External pressure does not exist. It is all internal."* Senior clinical staff (8).
>
> *"[External is] everything outside the emergency department"* Middle level staff (3).

Some interviewees understood 'internal' to be the 'inner world' and saw everything else as 'external', whilst others understood 'internal' to be their work environment and everything outside of work (e.g. private life) as 'external'. Some even perceived 'external' as being outside the entire 'health care system'. Mostly, the interviewees switched between different perception of boundaries during the conversation. For interviewees ((3), (7) and (8)) 'external' meant the whole work environment, because the hospital was not perceived as an entity but rather as a part of the whole health system.

Participants did mention stakeholder expectations from outside the health system, such as health insurance companies (general hospital staff (1)), the media, politicians (senior level staff (2)), or universities (clinical staff (4)) but still reverted to the topic of pressure in general. However, the responses showed that there were clearly perceived boundaries between the inner self and the external environment of the individual, as well as between the personal life and the work and professional environments. Whilst boundaries within the work environment such as the hospital environment remained undefined, the participants clearly interpreted the health care system as a natural boundary. The perceived boundaries are illustrated in Figure 6 below:

Figure 6: Perceived boundaries



These results reflect the current discussion of how to define hospital boundaries in health care system research. Classic organisational analysis uses the term organisational boundaries as "imaginary dividers" (Fiol & Romanelli, 2012) to separate one organisation from another. This normative approach is mostly used in organisational research where "individuals, organisations, tasks and resources are treated as entities with immutable boundaries" (McCann & Baum, 2007, p. 113).

More recently, realist approaches claim that organisational boundaries depend on who is noticing them and that they are shaped by social interactions (Fiol, 1989). Time, knowledge, tasks, resources, control, project objectives and the position of the human agent in the meta network can define these "mutable boundaries" (McCann & Baum, 2007, p. 114). From this perspective, boundaries depend on the available information and the capabilities of each hospital professional to process it (Fiol & Romanelli, 2012). Previous studies found that boundaries are not constant, but change: they depend on the perspective of the observer and can be spatial (referring to work-space) or temporal (referring to deadlines) (McCann & Baum, 2007). The definition of boundaries can be linked to patterns of behaviour, work roles and functions (Fiol & Romanelli, 2012).

The concept that boundaries vary depending on the focus of each interviewee is one of the key findings in this study. Since 'external' boundaries are subjective, they cannot be defined objectively. Thus, no absolute meaning of 'external pressure' can be constructed because of

the constantly shifting perception of boundaries. This is important for health care and future research to consider what influences the perception of boundaries. However, it is notable that in perspectives on boundaries the terminology of 'control' and 'feelings' is used, since these were identified codes from this study.

Control is connected to boundaries

Control is connected to power, identity and creation of meaning (Hall, 1997). Control appeared in the data as a word as well as a reoccurring pattern of meaning. Fiol (1989) established a relationship between boundaries, perception, control and the human agent. This means that boundaries are created individually by examining external information which is processed internally (Fiol & Romanelli, 2012). In this theory, the perception of boundaries is connected to the amount of perceived control. When people experience a 'loss of control', boundaries become viewed more rigidly (i.e. 'us' and 'them' become more significant) to create a sense of safety (McCann & Baum, 2007).

For the participants, control was related to their work position and connected to boundaries and pressure. Superior and subordinate relationships and inter-professional collaboration emerged as a topic connected to the amount of perceived control over external events. Operating higher in the hierarchy was perceived as having more control over things ((2), (4), (6), (8)) by interviewees across all levels. Participants also mentioned how control influenced how much power they would have to avoid pressure. The participants felt that there was a clear element of 'pressure' being passed down from people above them, regardless of their own position in the hierarchy. Control was also referred to as the amount of autonomy they had in regulating how much pressure they would feel. Svenson and Maule (1993) stated that stress in-cooperates feelings of uncontrollability and unpredictability. Essentially the more they felt out of control, the more pressured (or stressed) they felt. Control was also connected to self-regulation, in terms of the ability to choose consciously to stay calm despite feeling pressured.

> *"Loss of control creates pressure"* Senior level staff (2).
>
> *"I control if I show how I feel"* Clinical staff (4).
>
> *'I can control how pressured I feel"* Senior level staff (5).
>
> *"Trying to stay in control of the pressures"* Middle level staff (7).

The findings in this study concur with those in the literature that boundaries are dependent upon who is defining them (Fiol & Romanelli, 2012). They are shaped by particular activities, interactions of human agents and on information exchange processes (McCann & Baum, 2007; Willetts & Clarke, 2014). The data revealed that the identity (depending on work position and profession) of the participant determined where boundaries were perceived. In contrast to health care practice and research, which agree currently that organisations are divided into a series of discrete units, the finding showed that these boundaries were not fixed but rather were subjective and dynamic, depending on perception. Social identity theory links perceived boundaries to social categorisation and social interaction, creating the identity of a person (Turner et al., 2010).

6.7. Personal Identity

Participants unanimously distinguished, between their inner self and outside world (private and work). Discriminatory and cognitive processes of social identity theory explain how people distinguish their inner self from the environment (Taska, Powell, & Jayasinghe, 2015). The knowledge of knowing 'who we are' is a process of social comparison. Personal identity is constructed and interpreted through each person's social relations, roles and group memberships which define the person (Leary & Tangnety, 2002). Self and identity are mental concepts and a person's idea of 'self' comes from groups to which that person belongs. For instance, "I am a doctor" (senior clinical staff (8)), "I am a manger" (senior level staff (5)) or "I am a father' (middle level staff (7)). The identity influences how a person experiences the world and is linked to feeling, thinking, and perceiving (Turner et al., 2010). An individual does not just have a personal self but has multiple selves and identities depending on which groups they belong to (Turner et al., 2010).

Identity determines the perception of boundaries

In the context of this study, this means that social groups in the work and professional environment or private life shaped the identities of hospital staff, and therefore influenced their understanding of 'internal' and external'. Sometimes they identified with the 'work group' (3), the 'health system group' (8), the 'professional group' (4) or the 'family group' (7). This led to the variations of 'perceived boundaries'. People compare themselves socially, and they tend to prefer groups according to their self-interest, which leads to intergroup discrimination (Turner et al., 2010). Belonging to a group enhances self-esteem and influences

behaviour and attitude. Identities provide orientation and a "meaning-making lens" (Leary & Tangney, 2002) for the perceived situation and immediate context. Contexts that seem to have no relevance to the self are not considered (Turner et al., 2010). This might explain why the concept of the hospital as an organisation had no immediate relevance for the participants as it was not part of their constructed identity.

Professional accountability and work responsibility create identity

Social comparison (e.g. where am I compared to others in the organisation?) and group favouritism (e.g. to which group do I want to belong?) may have led to the variation in interpretations of 'internal' and external' as observed in the data. According to Pearce (2013)personal and organisational variables contribute to the construction of identity

The analysis of the participants' responses clearly showed that pressure is perceived to be caused by the work role, position and the context. The literature defines professional (occupational) boundaries as barriers to co-ordinated working and states that boundaries provide a source of differentiation and identification ("who we are"), define a shared area of work ("what we do"), and shape relations with others ("who we work with") (Waring et al., 2015, p. 36). From this, it can be concluded that the work role is the the biggest determinants, connected to the perception of boundaries; these in turn govern which factors are influences for each particular hospital professional.

The data showed that the 'work role' was connected to the work volume, work tasks, prioritising and work responsibilities, as well as professional accountabilities (occupation). Respectively, further determinants of boundaries come into focus: professional accountability and work responsibility contributed to the construction of the participants' personal identity. Work responsibility can be defined as the "obligation of the individual to account for their activities and hold responsibility for the results" (BusinessDictionary, 2016), while professional boundaries are associated with the "division of labour and workforce configuration" (Waring et al., 2015, p. 38). Both terms occurred in the patterns of meaning in the data. While the participants did not seem to think in categories of external influences, it was noticeable that they distinguished between professional accountability, clinical and patient accountability, and work responsibilities. Participants (5) and (4), for example, talked about clinical accountability and work responsibilities (i.e. self-expectations to get all the work done). Participant (5) also mentioned patient accountability in terms of meeting patient

expectations, while the main topic during the conversation with participant (8) was his responsibility to care for the patients appropriately.

> *"I think because everybody has a different accountability. So what affects one person's accountability is different to what affects another person. So that brings in a different likelihood of X causing stress in person A, Y causing different stress in person B"* Senior level staff (2).

The professionals were not interpreting the external hospital environment as a natural boundary but rather as their professional (i.e. occupation) and work boundaries. The underlying meanings in the data indicated that the work role responsibilities and professional accountabilities were connected to the perceived boundaries (i.e. defined external). These boundaries determined which external factors were identified as external influences potentially creating pressure. For health care that means that the dominant discourse on hospital environments needs to change its paradigms when organisations are structured and restructured. To assume that organisations have boundaries as described in the orthodox organisational theory is a false premise.

Stakeholder demands

The role, position and tasks defined which stakeholder demands and influences the hospital professional was exposed to. For instance, for participant (1) it was health care funds, while participant (2) listed unions, community expectations and the Ministry of Health as stakeholders. Participant (4) spoke of influences from the Clinical Excellence Commission, the university and enquiring midwifery students. Participant (8) felt that the biggest influence on his work was insufficient funding to treat patients with rare and complicated conditions, participant (6) reported pressure to 'turn patients around' as quickly as possible.

> *"Pressure is connected to the role and perception"* General hospital staff (1).

> *"Pressure is different for everybody, because of different accountability, affects every individual differently. Depends on how they relate to the organisation at different levels.'* Senior level staff (2).

> *"Pressure is very job dependent and also depends on the circumstances"* Lower clinical staff (6).

"Pressure is managing responsibilities and workload. There is a potential for controlling and making choices. You internally deal with it and make decisions to alleviate the pressure" Senior level staff (5).

The position of each participant gave them a unique perspective of which stakeholder demands were relevant. Participants closer to the bottom of the organisational hierarchy were focused on stakeholder expectations from patients, their families and health funds, while participants (Senior level staff (2)) higher up in the hierarchy considered political and institutional stakeholders from entities outside the health care system such as unions, non-governmental organisations or the media to be more important.

Much more rigorous and empirical data on the 'identity' of hospital professionals is needed to understand its causality in relation to productivity, quality and safety outcomes. The results of this study demonstrate that wide-ranging and general terms such as 'perception of external pressure' or 'external influences' are to open to subjective interpretation. The terminology has to be much more specific, for example referring specifically to financial pressure, competitive pressure or political pressure when further examining stakeholder perceptions on the issue. The results confirm that to gain a better insight into the impact of the environment on organisational outcomes, it is crucial to not only measure organisational contexts as done so far, but to take into account the influence of organisational agents and their shared values, beliefs, practices and behaviours. Social relationships and organisational climate (e.g. broader institutional environment and their cultures) should be also considered, as suggested by Braithwaite et al. (2010).

6.8. Implications for quality and safety

There was a strong link between the perception of external influences and pressure, and decision-making in the responses. The implications for patient outcomes link back to the theme of control (self-regulation). All participants pointed out that they make conscious decisions about how stress impacts their work. A perceived 'feeling of being in control of pressure' was connected to how those pressures influenced outcomes. The participants distinguished between influences that affected their work ((1), (2), (5), (8)) and those that influenced them as an individual ((3), (4), (7)).

"There are external influences that are more related to external factors, that impact on how I deliver my work. And there are external influences that impact on me" Senior level staff (2).

"You need to recognise how external pressures get to you" Senior level staff (5).

The answers showed that the perception of influences and pressure impacted on how the participants communicate, act, behave, and think, and are therefore hard to separate from outcomes. Interestingly a good quality and delivery of care was assumed by the participants and did not emerge as a topic related to pressure or stress. Only participants (4) and (5) mentioned adverse events briefly, but in both cases those adverse events were connected to the nature of their job. One participant had to deal with external stakeholders like media and community if something went wrong, while for the other the risk of adverse events is inherent in the nature of the task. To understand the impact of external influences and pressure on quality and safety, it needs to be understood what those terms mean and represent for each hospital professional.

The results demonstrate that, despite the ambiguity in the meaning of external pressure for most participants, it was still important to them. The participants talked in length about pressure in general and the study showed that the topic of external influences creating pressure is relevant and had a significant impact on them, their decisions (3), (5), and their verbal and non-verbal communication. Participants (7) and (4) expressed how pressure affected their demeanour. The interviewees did not want to admit directly that pressure/stress affected perhaps the quality of their work, but their facial expressions and indirect responses communicated that there was a connection. Participants (2), (3), (4), (7) talked about "the need to prioritise", which affected work outcomes indirectly.

In the literature, there are no conclusive results about whether influences from the external hospital environment impact on quality and safety or not. Wagner, Groenewegen, de Bakker, and van Der Wal (2001) found that perceived external pressure has very little influence on the implementation of quality management, with the exception of patient expectations. Trinh and Begun (1999) determined that organisational pressures exerted more influence than environmental ones, while Secanell et al. (2014) indicated that external accreditation, certification and standard programmes, as well as perceived pressure from hospital leadership (chief executive officers and governance boards), are related to performance outcomes. Braithwaite et al. (2010, p. 14) also found a "positive trend between accreditation and clinical performance". Interestingly, accreditation could be interpreted as a form of accountability.

Accountability and responsibility in the data were linked to the experience of pressure. To understand how external influences impact on quality and safety, boundaries and identity need to be taken into account in future research.

6.9. Implications for health care practice

Health care practice is structured assuming that hospital professionals have a common understanding of the hospital and its activities. This study found that the perception of external influences was subjective and fluid, and perceived pressure depended on the context. Hospital staff defined 'external' according to their own identity. External pressure and organisational boundaries, as understood by organisational theorists, held very limited or no relevance for most people working in the hospital. The study findings indicate that existent health care structures and continuous improvement strategies need to be reconsidered as the perceived boundaries are relative and depend on the individual identity, which creates subjective meanings rather than hierarchical concepts. It would be beneficial to consider how hospital professionals construct their own understanding of the work environment.

6.10. Implications for research

This thesis set out to explore the perception of external influences by hospital staff to identify which factors in the hospital environment create pressure. The literature review identified problems with the terminology used to describe the environment, the definition of hospital boundaries, the application of normative frameworks and theories, and the neglect of the human agent (influence of perception) in health care research. These four identified issues were confirmed by the research results. This literature review and the interview results establish that current paradigms in organisational analysis, which form the idea of 'external pressure', need to be re-interpreted. It was strongly emphasised in the data that there is no clear or consistent understanding or interpretation of 'external influences' or 'external pressure' by hospital professionals at all levels. Both expressions are ambiguous, vague and caused confusion.

No objective experience of 'external influences or external pressures' has been identified in the data. The research outcomes were mostly related to pressure in general. The responses showed that external pressure is a subjective experience depending on subjective perceptions

of the hospital staff. The main problem of the research topic is that different meanings are created by different social units (e.g. hospital staff versus the research community). In organisational analysis, the term is used loosely by researchers to summarise influences such as financial, competitive, market or political pressure. It is mostly applied in titles, abstracts, introductions or conclusions to effectively encapsulate a whole range of influences.

This research adds to the literature by furthering our understanding of the perception of pressure from individuals with various roles in the hospital system. The results confirm that pressure is an internally perceived phenomenon and therefore cannot be separated from the receiver (i.e. hospital professional) and studied in isolation. Thus, one could argue that other pressures, such as financial, technological, political or competitive pressure, as used by organisational management theories are equally subject to individual perception.

The original contribution of this work is that it has identified perceived dimensions of boundaries and contributed to the understanding of 'external' influences. The literature review identified a gap in the definition of organisational boundaries. In health care system research, its representation varies between external to the health system and external to the hospital organisation. This study revealed that different meanings are created through the perception of hospital professionals and that the boundaries are not fixed but changing. In this study, boundaries between work and private life and boundaries between the individual and the work environment were more significant than the hospital and its organisational environment, which is the focus of traditional organisational analysis. Professional accountabilities and work responsibilities were more relevant for the participants then organisational boundaries. The data indicates that professional boundaries and work responsibilities defined which external factors can be identified as external influences potentially creating pressure.

From these findings it can be concluded that external pressure is a general notion and it may not be possible to objectively measure this construct as it is a subjective experience. For example, attempting to establish an objective definition would fail to capture all the possible facets connected to the topic. External influences become pressure only by the process of experience and perception of individuals in the organisation. Thus, it is crucial to critically revisit the underlying paradigms for external environments when studying external influences on organisational systems. However, since it is the task of scientists to describe and explain 'reality' (as understood in the rational modern society), the idea of external pressures cannot

be dismissed. The results showed that, for hospital staff, the professional environment, work-load, stress, and private life are experienced as 'external pressure'. This needs to be further investigated, since the participants clearly indicated that there is an influence on work decisions, with possible implications for quality, safety of care and productivity.

If health care research wants to gain a deeper understanding of people in the health care system, it needs to turn its attention away from what is similar (i.e. hospital) and focus on the differences (people working there). Also, the homogeneity or heterogeneity of hospitals compared with other organisations needs to be studied to test the applicability of current theoretical approaches in health care research. Institutional mechanisms and contexts (e.g. structures, processes and regulations) typical to hospital organisations need to be further understood, as well as the impact of political factors and power which are likely to be different to other organisations.

6.11. Opportunities for future research

This study provided just a snapshot into factors associated with the perception of 'external' influences creating pressure, and there are still many questions, which remain unanswered. Further investigation is needed to validate the key findings. The subject of perception of external influences requires an interdisciplinary approach, taking cognitive science, behavioural and cultural studies, as well as psychology into account, to create an integrated understanding of the topic. This research lays foundations for the future investigation into how the professional and work environments, work responsibilities and professional accountabilities impact on the perception of boundaries. A possible topic for a future PhD topic could be the 'impact of cognition, identity, personality for quality improvement process in relation to perceived subjective boundaries of hospital staff'.

6.12. Limitations of the method and reflections on rigour

> *"In an interview, what you already know is as important as what you want to know. What you want to know determines which questions you will ask. What you already know will determine how you ask them." (Leech, 2002, p. 665)*

Qualitative evidence can provide significant insight into individuals' perceptions. It allows a topic to be explored in ways which cannot be studied using quantitative methods. However,

the major challenge of qualitative research is to ensure validity, reliability and replicability (Leedy, 2010), since the researcher becomes closely intertwined with the research topic and will inevitably influences the research outcome in some way. Therefore, it is necessary to determine what pre-conceptions the investigator may have brought to the research. For instance, despite the attempt to avoid prior assumptions, expectations of the interviewer cannot be completely prevented. The challenge of this research was to avoid the trap of looking for external influences as defined by the research. This needs to be regarded as a "constraint of the data collection process" (Thomas, 2006, p. 242).

Also, in-depth interviews can leave too much room for interpretation and misunderstandings, since the attitude and beliefs of the researcher influence the conversation (Swanson et al., 2001), because the researchers' mind creates its own reality rather than mirror the outer world and it becomes challenging to investigate "shared meanings" (Rapley, 2001, p. 308). Conversation is a social interaction and thus the interviewer influences the outcomes inherently as interviewees and interviewer "collaborate in producing identities" (Rapley, 2001, p. 309). Also the interviewer impacts on the responses by holding the over-arching "topical control" (Rapley, 2001, p. 315) and by deciding which part of the answer is worthy of further exploration. To avoid this, the interviewer aimed to stay open to topics, which were not originally considered and consciously focused on managing preconceptions to avoid pre-judging responses. Another potential disadvantage of semi-structured, open-ended interviews is that questions can be too prescriptive or leading and therefore affect the outcomes of the interview (Leech, 2002).

As an inexperienced interviewer, creating rapport whilst maintaining sufficient distance to the interviewee to ask "grand tour" (Leech, 2002, p. 667) and example questions, was a challenge. Sometimes, the reflection on the answers influenced the further flow of the conversation and the variation in the individual conversations might have had an impact on the value of the extracted data. At the beginning, the interviewer was very rigid with regards to the meaning of the term 'external', but exerted less control as the interview schedule moved along in order to allow the conversations to flow and more unexpected points rise to the surface. Therefore, the richness and relevance of the data may have differed as each new participant was interviewed.

The appropriateness of participant selection, the initially defined number of participants and the proposed point of data saturation could also be regarded as a potential weakness of this

study. While the relative diversity of the participant group was purposefully chosen, the limitations on comparability cannot be ignored. The chosen point of data saturation and the sufficiency of participants to make the data comparable could be a possible weakness since the perception of data saturation may vary depending on the complexity of data and the experience of the researcher (Francis et al., 2010). Due to the small sample, it is hard to tell if the results capture all factors of the research topic. The influences identified in this study should be investigated further, critiqued, and supplemented in future research. By relying on interviews in only one hospital, this study assumes that the perceived pressures would be similar in other hospitals.

> *"Interpretation is an act of imagination and logic. It entails perceiving importance, order and form in what one is learning that relates to the argument, story, narrative that is continually undergoing creation." (Peshkin, 2000, p. 8)*

The inductive analysis approach might not be as strong as other qualitative data analysis approaches but it is a useful and uncomplicated method to analyse data in order to extract findings related to the research question (Thomas, 2006). However, thematic analysis requires skills and experience and there is a risk of over-constructing or misinterpreting themes. The range of possible outcomes is limited by the focus of the research objective and the expectations of the investigator, which constrains and shapes the data analysis process and its outcomes by "focusing attention on specific aspects of the data" (Thomas, 2006, p. 240). Given that inductive analysis is inherently interpretative, the process of data analysis is constantly linked to images, ideas, and the researcher's imagination (Peshkin, 2000). Imagination has to do with the judgement of what to collect, what to look for and what to see. In that regards, albeit in the attempt to avoid bias and prior assumptions of the researchers' standpoint, "disciplinary knowledge and epistemology" (Braun, 2013, p. 174) always influence the research outcomes and thus present a limitation to the study.

To offset the influence of the investigator in this study, an 'observe the observer' procedure was used during the data analysis process. This involved the investigator conducting a self-reflection exercise of how personal attitudes and perspectives may have influenced the results, then continuously questioning the findings and re-reading the transcripts in order to discover depths and feelings in the data to truly understand how the participants felt about the topic. This provided as much reliable and comparable data as possible from a single investigator.

Despite this attempt to "manage expectations and to avoid preconceptions" Thomas (2006, p. 247) the findings are influenced by the evaluation objectives, assumptions and views of the investigator, which are in favour of contextualism, constructivism and cognitive pluralism. While the mind maps and detailed process descriptions were used in the data analysis process to ensure credibility, transferability, transparency and replicability, the interpretation of the underlying structure in the data is a potential weakness of the research. While presenting ideas in visual mind maps enables greater freedom for exploration it also adds the "associations of the note-taker" (Thomas, 2006, p. 240) to the process of analysis. The problem is that for the researcher, the topics and codes are familiar and it is easy to fall into the trap of counting how many people answered similarly.

Notwithstanding those limitations, peer review meetings with the associate supervisors were used to increase "credibility, transferability" and "confirmability" (Thomas, 2006, p. 245). To ensure consistency and clarity, the coding process was repeated many times through several rounds of re-reading. Due to time and scope restrictions, no independent parallel coding or "stakeholder member checks" as described by (Thomas, 2006, p. 244) were possible. To avoid pre-judgements, the investigator constantly questioned the findings over a time period of two months and revisited the data with fresh eyes to minimise generalisations.

7. Conclusion

7.1. Introduction

In the previous chapter, the results of the study were interpreted and discussed. The implications of the study for quality and safety interventions, current health care practice and health care research were considered. At the end of the last chapter, the limitations of the research and rigor were discussed and opportunities for future research were reviewed. This is the final chapter of this study and the conclusion is presented.

7.2. Conclusion

This study aimed to discover which external influences impact directly on hospital staff and to determine which factors are perceived as external pressure with a subsequent impact on decision-making. In the existing health care system research, organisations are seen as formal, rational entities following bureaucratic logic, as established by traditional organisational analysis. This study took a postmodern approach and explored the perceptions of organisational agents.

The research confirmed the findings of the literature review that the idea of external pressure on the organisation as an entity is too broad and therefore unhelpful. The inherent problem with this view is that organisational agents are ignored when examining the external environment. The findings indicated that orthodox models of organisational analysis may not apply in the study of external pressure, and that research centred around individual identities rather than entire organisations might prove more fruitful. Perceptions, inner dialogue, self-expectations and emotions such as stress and anxiety were influences identified in connection to the research topic. Traditional organisational studies follow theoretical frameworks, which assume planned thought and calculated action of organisations without capturing human thoughts, emotions and judgements (Chia, 1995, p. 581). The representation of the external environment with variables such as population demographics, gender, age, geographical factors or network size needs to be reviewed. The dominant discourse around the organisational environment of hospitals has to add human agents to organisational analysis (Chia, 1995, p. 592). Studies of the hospital environment need to abandon "organisational

codes" (Chia, 1995, p. 590) such as 'environmental pressure', 'environmental complexity' or 'uncertainty'.

This study was unable to confirm the presence of external pressure as defined by science, and the question remains whether external pressure on organisations really exists. The term external pressure is a little bit like the holy grail; most people have heard of it but no-one can explicitly describe it.

8. References

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APPENDICES

APPENDIX A ETHICS APPROVAL

Office of the Deputy Vice-Chancellor
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MACQUARIE University
SYDNEY·AUSTRALIA

3 August 2015

Professor Jeffrey Braithwaite
Macquarie University NSW 2109

Dear Professor Braithwaite

Reference No: 5201500630

Title: *Identifying external influences and understanding of factors creating pressure on the hospital system*

Thank you for submitting the above application for ethical and scientific review. Your application was considered by the Macquarie University Human Research Ethics Committee (HREC (Medical Sciences)) at its meeting on 30 July 2015.

I am pleased to advise that ethical and scientific approval has been granted for this project to be conducted at:

- Macquarie University

This research meets the requirements set out in the *National Statement on Ethical Conduct in Human Research* (2007 – Updated March 2014) (the *National Statement*).

This letter constitutes ethical and scientific approval only.

Standard Conditions of Approval:

1. Continuing compliance with the requirements of the *National Statement,* which is available at the following website:

http://www.nhmrc.gov.au/book/national-statement-ethical-conduct-human-research

2. This approval is valid for five (5) years, subject to the submission of annual reports. Please submit your reports on the anniversary of the approval for this protocol.

3. All adverse events, including events which might affect the continued ethical and scientific acceptability of the project, must be reported to the HREC within 72 hours.

4. Proposed changes to the protocol must be submitted to the Committee for approval before implementation.

It is the responsibility of the Chief investigator to retain a copy of all documentation related to this project and to forward a copy of this approval letter to all personnel listed on the project.

Should you have any queries regarding your project, please contact the Ethics Secretariat on 9850 4194 or by email ethics.secretariat@mq.edu.au

The HREC (Medical Sciences) Terms of Reference and Standard Operating Procedures are available from the Research Office website at:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics

The HREC (Medical Sciences) wishes you every success in your research.

Yours sincerely

Professor Tony Eyers
Chair, Macquarie University Human Research Ethics Committee (Medical Sciences)

This HREC is constituted and operates in accordance with the National Health and Medical Research Council's (NHMRC) *National Statement on Ethical Conduct in Human Research* (2007) and the *CPMP/ICH Note for Guidance on Good Clinical Practice*.

Details of this approval are as follows:

Approval Date: 3 August 2015

The following documentation has been reviewed and approved by the HREC (Medical Sciences):

Documents reviewed	Version no.	Date
Macquarie University Ethics Application Form	2.3	Received 17/07/15
Interview Questions	1	26/06/15
Participant Information and Consent Form (PICF)	1	26/06/15
Participant Revocation of Consent Form	1	26/06/15

APPENDIX B PARTICIPANT INFORMATION SHEET AND INTERVIEW QUESTIONS

[ethics approval number: 5201500630 **]**

PARTICIPANT INFORMATION SHEET

Identifying external influences and understanding of factors creating pressure on the hospital system

Invitation

You are invited to participate in a research study to evaluate the impact of external influences creating pressure on the hospital system. While there seems to be an underlying assumption of external influences creating pressure only little is known about what definitively constitutes external pressure for different parts of the health system. This study aims to gain a better understanding of how external influences are perceived by healthcare professionals in hospitals and to identify its main variables.
The research is being conducted to meet the requirements of the Masters of research (MRes) degree at Macquarie University under the supervision of Prof.Jeffrey Braithwaite.

The study is being conducted by:

Researcher: Ms Jadranka Cook (Macquarie University, Faculty of Medicine and Health Sciences, Australian Institute of Health Innovation)
Supervisor: Prof.Jeffrey Braithwaite, (Macquarie University, Faculty of Medicine and Health Sciences, Australian Institute of Health Innovation), Ph: +61 2 9850 2401, email: jeffrey.braithwaite@mq.edu.au
Co-supervisors: Dr Robyn Clay-Williams and Dr. Natalie Taylor (Macquarie University, Faculty of Medicine and Health Sciences, Australian Institute of Health Innovation, Level 6, 75 Talavera Rd, Macquarie University, 2109 Australia), Dr Robyn Clay-Williams Ph.: +61 2 9850 2438, email: robyn.clay-williams@mq.edu.au and Dr. Natalie Taylor Ph: +61 2 9850e2415, email: n.taylor@mq.edu.au

Before you decide whether or not you wish to participate in this study, it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully and discuss it with others if you wish.

1. What is the purpose and aim of this study?

The purpose is threefold:

1. To assess if the impact of external influences on the hospital system creates pressure
2. To identify which external influences create pressure
3. To assess if the perception and experience of external pressure differ at different levels of the hospital system

The examination of how external influences are actually perceived by health care professionals will contribute to the understanding the impact of external forces affecting the delivery of care. This study is a pilot as part of a Master of Research thesis and will inform the design of a subsequent PhD project, which will investigate if and how external pressures impact differently on policymakers, management and healthcare professionals who deliver care.

2. Why have I been invited to participate in this study?

You are invited to participate in this study because you hold a leadership position at organisational department or team level in a public hospital or similar.

3. What does this study involve?

If you agree to participate in this study, you will be asked to sign the attached Consent Form.

You will then be asked to attend at a mutually convenient time on [Date 1, Date 2, or Date 3] for an interview. The interview will last between half an hour to an hour, and will be related to your perception of external influences creating pressure.

The interview will be undertaken at a place of your convenience, will be conducted by the main researcher, and will be audio-recorded. By signing the consent form you consent both to participating in the interview and to having it audio-recorded. You have the right to stop the recording and/or withdraw your recording at any time.

4. Are there risks to me in taking part in this study?

All research involves some risk. Given the nature of this study assessing the impact of external pressure on your work, you may feel uncomfortable answering some of the questions about your job and interaction with team members. However all data is confidential and will be de-identified. You have the right to refuse to answer any of the questions asked. The probability of harm from the study is low.

5. Will I benefit from the study?

This study aims to further knowledge and may improve future delivery of healthcare; however it may not directly benefit you.

6. How is this study being paid for?

The study is being funded by the Australian Institute of Health Innovation at Macquarie University. The researchers report no financial conflict of interest.

7. Will taking part in this study cost me anything, and will I be paid?

[ethics approval number: 5201500630 **]**

Participation in this study will not cost you anything except the time taken to complete the interview; you will not be paid to do the interview.

8. What if I don't want to take part in this study?

Participation in this study is voluntary. It is completely up to you whether or not you participate. If you decide not to participate or to withdraw from the study once you have commenced participation, this in no way will prejudice your future relationship with your employing organisation nor Macquarie University.

9. What if I participate and want to withdraw later?

If you wish to withdraw from the study once it has started, you can do so at any time without having to give a reason. You should notify the researchers of your decision by filling out the withdrawal of consent form (attached to this document) and forwarding it to them.

10. How will my confidentiality be protected?

Any identifiable information that is collected about you in connection with this study will remain confidential and will be disclosed only with your permission, or except as required by law. Only the researchers named above will have access to your details and results that will be held securely at the Macquarie University

11. What happens with the results?

The study results may be presented at a conference or in a scientific publication, but information will be provided in such a way that you cannot be identified. Results of the study will be provided to you, if you wish.

12. What should I do if I want to discuss this study further before I decide?

When you have read this information, Jadranka Cook will discuss it with you and respond to any queries you may have. If you would like to know more at any stage, please do not hesitate to contact her at Jadranka.Cook@students.mq.edu.au or 0448 218 408

13. Who should I contact if I have concerns about the conduct of this study?

The ethical aspects of the project have been approved by Macquarie University Research Ethics Committee in order with the HREC requirements. If you have any concerns or complaints about ethical aspects of your participation you may contact the Ethics Committee through the Director, Research Ethics. Ph: (02) 98507854, e-mail: ethics@mq.edu.au

Thank you for taking the time to consider this study.
If you wish to take part in it, please sign the attached consent form.

[ethics approval number: 5201500630 **]**

This information sheet is for you to keep.

[ethics approval 5201500630**]** Interview code#.....

INTERVIEW QUESTIONS

Identifying external influences and understanding of factors creating pressure on the hospital system

The aim of this study is to gain an understanding the impact of environmental influences in the hospital system. The purpose of this study is to:

1. Assess if the impact of external influences on the hospital system creates pressure
2. Identify which external influences create pressure
3. Assess if the perception and experience of external influences differ at different levels of the hospital system

The examination of how external influences are actually perceived by health care professionals will contribute to the understanding the impact of external forces affecting the delivery of care.

I. Demographic information

The following demographic information will be collected from each interviewee. The information will not be associated with any individual's name, since this sheet will be given a number which will also be the individual's code reference for analysis purposes.

1. Gender
2. Age
3. Profession and educational background
4. Role within the organisation?
5. Time since qualifying to practice this profession
6. Time in this organisation
7. Time in the [Unit]

II. Introductory questions (setting the context)

1. To whom do you report?

2. What were your two previous roles?

3. What is your greatest challenge in this current role?

III. Interview questions

1. What is external pressure for you?

2. What would you associate with external pressure?

3. How do you distinguish between internal and external pressure?

4. Is the term External pressure clear or confusing?

5. What other terms would you prefer instead?

6. Did you ever consider external influences affecting on your work?
   (If yes)
   - Which ones?

7. How would you define external pressure for yourself?

8. Which external influences create pressure for you?

3. What are the most pressing external influences for you? (list in order)

4. Do external influences effect your behavior?
   (if yes)
   How?

5. Do external influences influence your decision making?
   (if yes)
   - How?
   - And to what extend?

6. Do external influences have any other impacts on your work?

7. Do you think external influences is perceived differently by all staff or do you believe the same influences apply to everyone?
   (if yes)
   - How would you describe the differences?
   - Does it vary for managers and other staff?

8. Does your individual personality affect your perception of external influences?

9. What influences your perception of external influences most?
    - Your personal life environment
    - Work experiences
    - Your expectations of yourself?
    - Level of stress
    - Other

10. Does your perception of external influences vary?
    (if yes)
    - How and why?
    - Due to internal (your state of mind and personal life situation) or external work environment factors?
11. Are there any benefits of external influences?

12. Would you describe external influences as external pressure?

13. Are external influences different for each hospital?

14. What do you believe I need to consider when researching external influences on the hospital environment?

15. Is there a misconception of my interpretation of external influences?

APPENDIX C CAPTURED QUOTES AND PERCEPTIONS

Appendix 6: Captured quotes and perceptions

Role (No)	Quotes on pressure	Perception & pressure	Feelings & pressure	Influences decisions?
General hospital staff (1)	*"It depends on circumstances which external influences create pressure"* *"Health insurance creates pressure – not being very cooperative when patients need to be admitted"* *"There are different pressures from different stakeholders at different times"* *"Pressures depend on circumstances"* *"Pressure is there if there is a strong attitude from a specific stakeholder (Health insurance company)"*	*"If influences turn into pressure, depends on the stakeholder attitude"*	*"Overall it is a positive, motivating effect"* *"I can control the aggravation"*	*"Yes, that affects my behaviour – I try not to express my frustration"* *"It encourages me to be a good advocate for the patients"* *"It makes me motivated to get the answers I need"*
Senior level staff (2)	*"The loss of control is what creates pressure rather than an influence"* *"Different pressures to a different extent at different times"* *"Level of stress is almost what I am regarding as a pressure"* *"There is not one external pressure and what is external today might not be there tomorrow. That might go away or might be managed, or it might be an opportunity rather than a pressure."* *"Competing priorities at work cause pressure"*	*"There are external influences that are more related to external factors, that impact on how I deliver my work. And there are external influences that impact on me."* *It's influenced by work priorities and private life and expectations of yourself"* *"So it's just how you perceive it. It is like those people that perceive opportunities and other perceive challenges. So some people might see the same with a pressure and an opportunity"* *"I have peer group, community, media and government, ministry influences"*	*"Expectations of myself"* *"If something happened at home, that can tip you over the edge"* *"If I can control it then it is an influence, if I can't control something, then it becomes a pressure"* *"Loss of control creates pressure"* *"Prioritising can be stressful"* *"Creates better outcomes"*	*"Yes - stakeholder expectations: ministry, unions, premier etc."* *"I have been mainly talking about external influences that are more related to the external factors that impact on how I deliver my work, not so much on external influences that impact on me"*

Middle level staff (3)	*"There are external influences all the time, media, community and what is happening in my family life"* *"Pressure is about competing priorities of work and family and getting something done"* *"Private life and expectations of yourself have lots to do with pressure"* *"Different patient demographic causes different pressure"* *"Pressure depends on level of stress (in middle of the night or daytime). It changes with circumstances and time"* *"Competing priorities of work and family are really stressful"*	*"Factors outside the emergency department that influence the way I am feeling at work"* *"Depends if you are time pressured"* *"Depends on how you feel (internal state)"* *"Perception of pressure depends on personality and emotional intelligence and all those things that go towards making up a person"*	*"It is a perception thing, and everybody is affected differently"* *"Private life and expectations of yourself"* *"It is a lot mood and tiredness related"* *"External influences can be positive as well as negative, I would not put it all as pressure"*	*"Make more rapid judgements, less analytical and less contemplative"* *"Keeps you on track"*
Clinical staff (4)	*"External pressure is family, aging parents, your own internal stuff, wanting everything for everyone and how do you achieves that"* *"Things that are not here and now but you know that they are out there, that they still need answer and it might not be affecting your action straight away, but you see the relevance as to why that is important to attend at some stage"* *"Pressures are clinical workload"* *"Get external pressure from university and potential enquiring students…things like family, aging parents, your own stuff, wanting to be everything for everyone and how to achieve that in a 24-hour day"*	*"Connected to internal perception"* *Interprets EP as expectations of what to do* *"Internal dialogue (pressure) affects perception of EP"* *"How you feel influences your perception of external things"* *"Perception of pressure is affected by what is coming your way… how you feel… what is going on"* *"It is just perception and where you are in time"* *"Cross pollination of pressure downwards (from manager)"*	*"For instance guilt"* *"Overwhelming. If EP negative or positive depends on perception and depends on energy level."* *"If your resilience takes a battering or not"* *"Inner conflict: what you would like to do, vs. what you find yourself being able to do"* *"I control if I show how I feel"* *"I feel torn into little pieces by pressure. Someone always wanting a little piece of you. I*	*"Yes, cause of stress"* *Pressure -> no conscious decision making -> respond mode"* *"It affects my demeanour"*

			can see the relevance of those pressures" *"The way you choose to be affects your perception"*	
Senior level staff (5)	*"For me external pressure is probably having too many things in my head I know that is an internal pressure as well, but it is the number of things that come at you…"* *"External pressure is very different for everybody… everyone has a different set of pressures"* *"Pressures to want to deliver and how to prioritise"* *"It's the pressure of volume, the pressure of delivering care, pressure of wanting to deliver"* *"Pressure is to be flexible, prioritise"* *"External pressure is just the volume of work (reports, number of staff, things that you are juggling in your head.)"* *"Pressure is the requirement to achieve, requirement getting things done"* *"People dynamics are a pressure"* *"We need to take note of what actually pressurises people"* *Pressures – requirements to achieve*	*Internal calmness impacts perception of pressure* *Private life influences perception* *"I can control how pressured I feel"* *"Pressure depends on personality"* *"Your perception is important on how external pressure is measured for yourself"* *"People dynamics are pressure"* *Responsibility connected to limited budget, delivery of care and patient outcomes*	*"What makes my job interesting"* *"It makes me knuckle down and do it and really concentrate (motivation)"* *"Get the job done"* *"There is an element of satisfaction when achieving external pressures"* *"Makes you get the job done"* *"Sometimes feeling overwhelmed and muddled"* *"There is an element of satisfaction about external pressures, makes you do things and there is satisfaction from achieving them"* *"You need to recognise how external pressures get to you"*	*"Yes. Leads sometimes to sharp decisions or abrupt decision"* *"Do things differently than planned. Makes you stop sometimes and reconsider"* *"Sometimes makes you stressed"* *"Sometimes when there is a lot of external pressures or influences, if you are not aware of it, it can lead you to feeling overwhelmed and muddled."*
Lower clinical staff (6)	*"Juggling work/life balance is an external pressure"*	*"If you put a lot of pressure on yourself and thought that you weren't doing to well, you might perceive everything than everybody says as pressure"*	*"Pressure can be sometimes positive and motivating if it does not get to much"*	*"I put a lot of self-pressure on myself. So I guess I have perceived any negative*

	"They are under a lot of pressure to get more patient admitted and they are trying to get patients out to get more in" *"I think everybody receives information differently and some people might perceive it as pressure, even if it is not meant to be perceived that way"* *"You hear how the hospital is under a lot of pressure in the media but it doesn't always correlate to what you experience day to day. I think how the media portrays pressure is just their way of creating dram"*	*"Circumstances (sleep, hoe busy) determine how I perceive pressure"*		*feedback as added external pressure that was not actually there I guess"*
Middle level staff (7)	*"External pressures for me would be less political, media, finance etc. It is more the strains of a busy family and the private financial strains"* *"There is a huge pressures and demand to do more for less, be more efficient the and patient expectations are massive", but they are for me within the hospital"* *"Pressure caused by change"* *"Pressure is anything includes family, finance politics well all"* *"Pressure to juggle all balls in the air"* *"Huge competing demands"*	*Work = internal pressures* *Private life = external pressures* *"External pressure is any pressure that I feel on my soul"* *"Pressure from manager gets translated down* *"Internal pressure is what I feel inside"* *"Perception of pressure depends on where I am on the spectrum of stress anxiety and commitment"*	*"It affects my mentality and demeanour"* *"Pressures cause stress and anxiety"* *"Trying to stay in control of the pressures"* *"I am self-aware that I am hitting the limit"* *"External pressure cause internal pressure"*	*"Those external influences (family) influence how stressed I am and that impacts my work culture"* *"Yes, they affect my decisions"* *"External factors are important to push you a little bit"*
Senior clinical staff (8)	*"It depends how you define external. The health system is everything"* *"The hospital is part of the ministry of health, so you can't separate these two from each other"* *"The ministry (politics) is too influential, determining funding, prescriptions, approval guidelines,*	*"External pressure does not exist. It is all internal."* *"Patient access to appropriate treatment (medication etc.) limited by administrative (Ministry) and financial pressures (funding)"*	*"It frustrates me. We cannot offer treatments which we would like to offer"*	*"Limits my work"*

"Political and financial pressures. But they are not external, because our employer is the Ministry of health. So it's not external pressure."