

**Bond University**

## **MASTER'S THESIS**

### **Role Factors, Leadership Styles and Stress Among Catholic Primary School Executives**

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*Award date:*  
2010

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**Role factors, leadership styles and stress among Catholic primary school executives**

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Completed towards fulfilment of requirements for the award of Masters of Arts by Research

March, 2010

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### Abstract

The aim of the current research was to address the relationship between role conflict and role overload, leadership style, and stress, among those holding leadership positions within the Catholic primary education system in Queensland. Little research exists in any country on the roles and stresses of leadership in religious school systems. Yet many stresses are faced. What leadership styles are used is not well documented and related issues exist about which little is known. This thesis has aimed to extend information in this area. Questionnaires used included the Occupational Stress Inventory Revised, the Multifactor Leadership Questionnaire, and a demographic questionnaire on age, gender, position held at the relevant primary school (Principal, Assistant Principal, Assistant Principal Administration, and Assistant Principal Religious Education), years of service in current position and prior leadership training. A sample of 136 principals and executive staff members from Catholic Education primary schools in the Brisbane Archdiocese, Queensland completed the surveys. Using bi-variate correlation analyses, ANOVAs and regression equations, relationships and differences among the variables were examined. Differences were found between transformational and transactional leadership styles with transformational leadership style being associated with personal resources of social support and self-care, and negatively associated with role conflict (high on transformational leadership; low on perceived role conflict). The transactional leadership style was also negatively related to role conflict but positively related to the personal resource of rational cognitive coping. No significant differences were found among the different senior administration staff positions in terms of stress experienced; and staff executives who had received formal leadership training were equally as stressed as those without leadership training experience. Age, gender, and years of service also seemed unrelated to stress levels experienced. Reasons for the limited differences found between the leadership styles are suggested. Further research investigating factors contributing to stress is necessary to establish an understanding of preferred leadership styles in the Catholic Education system.

### Declaration

This thesis is submitted to Bond University in fulfilment of the requirements of the degree of Masters of Arts by Research. The thesis represents my own original work towards this research degree and contains no material which has been previously submitted for a degree or diploma at this University or any other institution, except where due acknowledgement is made.

### Acknowledgements

My thanks are extended to the people involved in this research project. I would like to express my heartfelt thank you to Dr Richard Hicks for his patience, willingness and direction and his unwavering confidence in me. I would also like to thank Dr Mark Bahr for being present as a back up support person in trying times.

Special thanks to the participants from the many Catholic primary schools in Brisbane who selflessly gave up their time to complete the required questionnaires and also to area managers and staff at Brisbane Catholic Education Head Office who assisted in the distribution of the questionnaires.

Finally, to my husband, Michael, who consoled me when times were tough and gave me his unwavering support and encouragement throughout the entire process.

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### **Role factors, leadership styles and stress among Catholic Primary school executives**

Causes of stress in the school system have been identified in numerous earlier studies and yet there are continuing reports that stress is increasing (De Nobile & McCormick, 2005). There has been much research into teacher stress but little attention to administrative staff stress, and even less within a religious education system (Schiller, 2002). This study examined role factors, leadership styles and stress in a sample of principals and executive staff members from Catholic Education primary schools in the Brisbane Archdiocese, Queensland. Well established questionnaires on stress and leadership were used and a demographic questionnaire designed to collect information regarding age, gender, position held at the relevant primary school (Principal, Assistant Principal, Assistant Principal Administration, and Assistant Principal Religious Education), cultural background, years of service in current position and prior leadership training.

There was a gap in the literature regarding principal and executive stress in schools, as well as limited studies in the school system in the area of role conflict, role overload, leadership styles and stress. The aim of the current research was to address the accuracy of the perceptions about stress within an educational system in Queensland (whether it exists today as predicted, and what its components are); examine the roles of principal and executive staff and their application to the system(s); and examine leadership theories in relation to style adopted and outcomes.

Use of questionnaires specifically designed to measure occupational stress, the Occupational Stress Inventory Revised Edition (Osipow, 1998) and Multifactor Leadership Questionnaire Form 6S (Bass & Avolio, 1997) assisted in addressing some of the research gaps. The OSI-R hypothesises that stressors originating in the work environment influence

how individuals perceive their work roles; that when work stressors interact with stress-inducing work roles, strain results; and finally that the variety, strength and level of coping resources an individual possesses influence both the presence and level of stress. The MLQ measured both transformational leadership styles and transactional leadership styles, using descriptors identified as idealised influence, inspirational motivation, intellectual stimulation, individualised consideration, contingent reward, management by exception and laissez faire. This thesis reports the results of administering these questionnaires to the senior administrative staff of the Catholic Education system examined.

### **Literature Review**

Stress among teachers and administrators in education including principals, continues unabated despite many years of research (Antoniou, Polychroni, & Vlachakis, 2006; Guthrie, 2006; Phillips, Sen, & McNamee, 2008). In Australia, stress levels in schools continue to be high (Forlin, 2001; Jarzabkowski, 2002; McCormick, 2000; Pithers & Soden, 2002; Thomas, Clarke, & Lavery, 2003) and although many changes have been implemented, they have been made without examining the effects on workload and stress (Naylor, 2001b). Goddard and O'Brien (2003) argued that many of the changes undertaken in the school system have contributed to higher stress, low morale, and particularly, difficulties in recruiting and retaining teachers. Kinman and Jones (2001) reported that stress is a leading cause of workers taking time off, seeking compensation, and taking early retirement on medical grounds. Previously Quick, Quick, Nelson, and Hurrell (1997) suggested that social status, that is, educational level, profession, job title, income level, past accomplishments, plus feelings of insecurity and doubting the ability to maintain a position in the organisation, elevated stress levels for employees.

It is thought that many stress reactions arise from role conflicts and demands (Aamodt, 2009); individual skills or lack of them, in dealing with the role demands of the job (Wincent & Ortqvist, 2009); or inadequate coping resources of the individual to handle the role requirements (Aamodt, 2009). Some have argued that leadership style is associated with different stress reactions at all levels (De Nobile & McCormick, 2007); others that the social and other roles of the leader and associates (Antoniou, Polychroni, & Vlachakis, 2006; Lau, Yuen, & Chan, 2005) and the way these are handled, impact the outcomes in the educational workplace (DeNobile & McCormick, 2007; Hui & Cheng, 2006; Smith, 2002). Most of the above research deals with teachers and the system. What about executive staff?

Whitehead and Ryba (1995) and Manthei, Gilmore, Tuck, and Adair (1996) argued that executive staff experienced greater stress due to time, resource and curriculum demands in the school environment, leaving little time for self care and seeking social support although there are few studies on executive stress to support their work. The current study was designed to examine stress and the associated variables related to principal and executive stress within the school. It was thought that leadership style used by the principal could be correlated with experienced stress levels (De Nobile & McCormick, 2007; Grimm, 2008; Hui & Cheng, 2006).

### **A Proposed Model of Stress in Educational Settings**

A lack of models that take into account the multifaceted nature of stress within the school system has limited the understanding of why and how staff within primary schools experienced stress. Below is a proposed model of inter-relationships within Catholic primary school environments that could create stress for principals and executive staff in their specific roles.

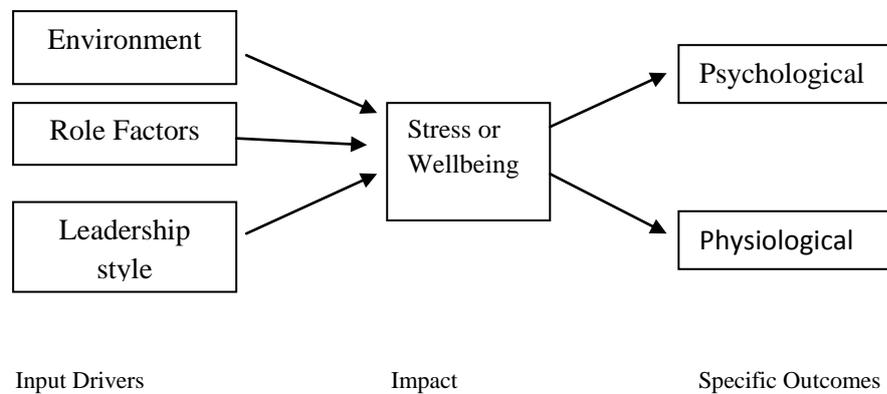


Figure 1. A Proposed Model of stress in educational settings

This model proposed that it is the role that the principal or executive staff member maintained within the school environment, and the function created by that role, which produced stress and that the stress was exhibited in the areas of psychological and physiological consequences. Quick, Quick, Nelson, and Hurrell (1997) proposed a similar model and found that stress influenced psychological and physiological outcomes with consequences ranging from anxiety and depression to hypertension, stomach ulcers, fatigue, headaches, irritability and lowered general wellbeing. Quick et al.'s study determined that there was a strong relationship between the principal and executive staff role (in terms of role conflict and role overload) and experienced stress in a senior school population, especially within the state and private school system (Aamodt, 2009; DeNobile & McCormick, 2005; Wincent & Ortqvist, 2009).

Researchers have found links between occupational stress and physiological and psychological consequences (DeNobile & McCormick, 2007; Thomas, Clarke, & Lavery, 2003). Table 1 gives a clear indication of the many ways in which stress can display itself

and this current study looked for answers as to why stress levels are high for principal and executive staff in catholic primary schools and what can be done.

Table 1

*Psychological, physiological and other consequences of occupational stress*

Psychological Consequences	Physiological Consequences	Other stress consequences
Frustration	Hypertension	Role overload
Worry	Elevated blood pressure	Role ambiguity
Anxiety	Dryness in throat	Role conflict
Depression	Nervous tics	Inadequate work environment
Job dissatisfaction	Stomach complaints	Demands by external agencies
Reduced job commitment	Ulcers	Poor relations with colleagues
Anger – work/home	Neck pain	
Inter/intrapersonal conflict	Headaches/migraines	
Perceived lack of control	Tiredness	
Self-alienation	Chest pain	

*Sources:* Aamodt (2009); Angerer (2003); De Nobile & McCormick (2005); Hanson & Sullivan (2003); Hecht (2007); Luthans (2002); Martin & MacNeil,(2007); Troman (2000); Wincent & Ortqvist (2009); Witt & Carlson (2006) .

There was a trend in research to focus on issues which were relevant at the time, especially in the late 1980's and the early 1990's. The areas, however, which are now being questioned further are: the type of effective leadership in schools and what shifts are occurring (Antoniou, Polychroni, & Vlachakis, 2006; De Nobile & McCormick, 2007; Lau, Yuen, & Chan, 2005) and whether leadership has been effective from a transformational model perspective (Berson, Shamir, Avolio, & Popper, 2002; Dvir, & Shamir, 2002; Hall, Johnson, Wysocki, & Kepner, 2008), and if so then why has there been a reported increase in stress (Dollard, LaMontagne, Caulfield, & Blewett, 2003; Schabracq & Cooper, 2000), and

why does there appear to be a lack of opportunities for some females (Gregg, 2008) to reach senior positions in the school systems. An understanding of the individual reactions to stress by principals and executive staff is addressed in the next section.

### **Stress within schools**

Since the middle of the twentieth century stress within schools has been known to exist, and given the length of time passed, and the research conducted, it would be thought that these issues had been resolved and that there would be little unmanageable stress in today's schools as a result. However, from the many comments in newspapers, from appropriate educators and in research, this appears not to be the case (Australian Association for Research in Education, 2008). The AARE (2008) found that stress related challenges in the school system do not appear to have reduced even though many principals have the power within their own schools to bring about changes in workload which would assist to control experienced stress outcomes for staff (Naylor, 2001b). However, research is needed to confirm this, especially regarding principals and administration staff levels of stress in catholic primary schools. Suggestions in the current study are that an increase in stress could be related to the roles played and styles of leadership used by principals and executive staff. Some of the larger education associations have conducted their own research amongst their members to assist in understanding why there are rising stress levels in schools and this is discussed below.

### **Principal stress**

Recent research by the AARE (2008) which surveyed 1100 public and private schools in Australia, found that one in five principals worried about the way they were using alcohol to manage stress. Sometimes alcohol is used to deal with stress and sometimes as a normal

functioning in a social setting. There have been many studies linking stress and alcohol use (Cooper, 1992). In this thesis, attention is given to other outcomes of stress, e.g., workload, time pressures, roles and gender.

Statistics from AARE found that 82% of Principals were stressed by work overload; 70% by expectations from their employees; 57% by parent-related issues. One third of the principals participating in this research reported having experienced a diagnosis of a cardiac or mental health issue that was suspected to be caused or exacerbated by their job. In 1999, Rudlow reported that the problem with physiological measures was that it was difficult to determine causality; changes in physiological measures of a stress response do not give insight into the cause of the increase or the decrease. Differences in physiological measures could be due to several different internal or external variables that are difficult to isolate or control. For example, principals reported that dealing with endless paperwork, abuse or grievances from angry parents, and the lack of administrative support in schools was taking its toll. Unfortunately due to the lack of uniform surveys by researchers when testing for stress levels in organisations, conflicting data occurs. The current research sought to clarify the kinds of stressors and stress experienced by principals and executive staff. To assist, the author used the Occupational Stress Inventory Revised Edition (Osipow, 1998) and the Multifactor Leadership Questionnaire (Bass, 1997), both psychometrically validated and reliable questionnaires, across all principal and executive positions within the primary school environment. It was expected that there would be negative health issues reported by principals and executive staff from the catholic primary school system.

### **Executive staff stress**

Duncan and Riley (2005) suggested that school executive and staff members are responsible for minimising adverse effects of frustration, inexperience of staff, parental expectations of children, and stress outcomes affecting school employees. This thesis examined the outcomes from role impacts on executive staff members within catholic primary schools and how leadership styles of principals affected these outcomes. Examining this limited research in regard to gender roles allowed for further explanation regarding increased stress levels within roles, as discussed below.

### **Gender Roles**

A recent study by Gregg (2008) investigated the link between gender roles especially in the area of principal ship and conflicts that arose as a result of the role held within the school environment. Suggestions by Gregg were that school principalship was both challenging and sacrificial in nature for females and female principals and female assistant principals may be torn between commitments to family obligations and work requirements. In addition, Gregg found that some female principals and female assistant principals had been provided minimal training for the major duties of being a principal and had some difficulty adjusting to a male dominated profession. Gregg's solution was that female assistant principals needed mentors or a support person to assist them in gaining promotions in secondary administration. Jones (2008) revealed that some females found it difficult in interpreting and interacting in middle school principal ship whilst Gregg added that female assistant principals were limited in opportunities to be educational or transformative leaders and were often held to a different standard of performance than

male assistant principals. The current study examined possible gender issues within catholic primary schools and whether the level of training females received in principal positions impacted on their stress levels. Training and its outcomes are addressed below.

### **Training**

Sutherland and Cooper (1988) discovered that individuals who felt they were not capable of completing job tasks due to excessive demands suffered stress and they reported that some individuals within the school system believed they had not received adequate training for the position they held. Furthermore, Dowling's study (2008) revealed that assistant principals often received no leadership training regardless of gender. This current study also investigated the degree to which principals and executive staff in the Catholic Education system believed they were not adequately equipped for the position they held within the school, regardless of the type of training they had.

### **Comparison between the Catholic Education system and the State Education system in Queensland.**

Although the current study investigated the Catholic Education primary school system, a comparison between the State education system and the Catholic Education system was necessary to give a broader context to the education systems. The hierarchy within each of the school systems, either private or public, was similar; however, the major difference was the vision or mission statement of each organisation. The Catholic Education system espouses to be Faith centred first and then people and achievement oriented; whereas information regarding the State School system was that it is totally focussed on people and achievement

orientation (Department of Education, Training and Arts, 2007). Table 2 below shows the differences in roles between private and state primary school

Table 2

*Comparison between Principal and Executive Staff roles within Catholic primary school system and State primary school system*

Brisbane Catholic Education (Faith Centred)	Queensland State Education (People & achievement oriented)
<p>Principal (P)</p> <ul style="list-style-type: none"> <li>- Religious leadership</li> <li>- Educative leadership</li> <li>- Relational leadership</li> <li>- Strategic leadership</li> <li>- Organisational leadership</li> </ul> <p>Assistant Principal (AP)</p> <ul style="list-style-type: none"> <li>- Share leadership with principal</li> <li>- Relationship with Leadership team</li> <li>- Relationship with senior staff at BCE.</li> </ul> <p>Assistant Principal Administration (APA)</p> <ul style="list-style-type: none"> <li>- Leadership role</li> <li>- Management role</li> </ul> <p>Assistant Principal Religious Education</p>	<p>Principal (P)</p> <ul style="list-style-type: none"> <li>- Educational leadership</li> <li>- Personal Leadership</li> <li>- Relational leadership</li> <li>- Intellectual leadership</li> <li>- Organisational leadership</li> </ul> <p>Assistant Principal (AP)</p> <ul style="list-style-type: none"> <li>- Share leadership with principal</li> </ul> <p>Office positions vary according to funding from State Government.</p>

<p>(APRE)</p> <ul style="list-style-type: none"> <li>- Nurture school climate</li> <li>- Facilitate the experience of Christian message</li> <li>- Leadership role</li> <li>- Management role</li> <li>- Nurture school climate</li> <li>- Facilitate the experience of Christian message</li> </ul>	
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### **Catholic Primary School system**

Within the Catholic Education system in Queensland, the role description for a principal suggested that there are five specific leadership roles which the Principal is required to undertake. These are religious leadership, educative leadership, relational leadership, strategic leadership and organisational leadership (Principal Role Description, 2008). The role description of Assistant Principal (AP) had delegated positions and descriptions within the role and together with the Principal (P), the assistant principal (AP) also had specific areas in which the incumbent is required to work. Principals (P) and assistant principals (AP) hold significant organisational relationships with the Leadership Team and senior staff at Brisbane Catholic Education Centre.

The position of Assistant Principal Administration (APA) holds two major role dimensions within the school, namely a Leadership and Management role whereas the Assistant Principal Religious Education (APRE) role differed from that of AP and APA as it

required the APRE to nurture the school climate, which is faith centred. The major role of the APRE was to contribute to the development of practices and procedures which facilitated the experience of the Christian message. By studying the roles of the P and executive staff separately, the author investigated in this current study which of the roles of 1) Principal (P); 2) Assistant Principal (AP); 3) Assistant Principal Administration (APA); or 4) Assistant Principal Religious Education (APRE) experienced the highest stress/strain levels.

Catholic Education espouses a vision which has the central core content aspect of Faith. This was reflected in the Catholic Education mission statement which incorporated 'teach, challenge, transform'. The development of the Archdiocese community of schools has seen a progressive reduction in class sizes, upgrading of facilities, and the improvement of salaries, conditions and career opportunities for over 8000 staff (Principal Role Descriptions, 2008).

### **State Education System**

In a paper by the Department of Education, Training and Arts (2007), reference was made to leadership capabilities for Education Queensland principals (State system). The paper inferred that highly effective principals in education Queensland schools demonstrated a range of capabilities and that there are five interrelated and interdependent capabilities which highly effective principals were able to balance. These capabilities are educational leadership, personal leadership, relational leadership, intellectual leadership and organisational leadership. These five capabilities fall into the categories of people orientation and achievement orientation and are referred to in Table 2.

Although these categories of leadership appear similar to those in the Catholic Education, the major distinction between the two systems, State and Catholic Education, is the

central core aspect of Catholic Education being Faith centred. Regardless, both systems rely on a strong organisational structure of processes and policies to maintain order and control within the school itself.

### **Roles and Leadership**

In school environments, roles are defined by the position within the school and the responsibilities which have been allocated to the individual. It is usual that principals have more specific roles with responsibilities and accountability back to the parent organisation whereas the executive staff have roles emphasising more general administrative duties and responsibilities within the office confinements.

### **Role Conflict/Role Overload**

Early research by Kahn, Wolfe, Quinn, Snoeck, and Rosenthal (1964) indicated that role conflict played a major part in organisational stress. Role conflict, defined as pressure to perform in two or more incompatible ways, had been tied conclusively in Western research to occupational stress by Kahn and his colleagues. Many other researchers have also studied role conflict in organisations (Aamodt, 2009; Duncan & Riley, 2005; Hecht, 2007; Martin & MacNeil, 2007).

Roles are an important way for an individual activity to be socially regulated as they created regular patterns of behaviour and a measurement of predictability, which allowed individuals to function effectively because they know what to expect of others. However, as Knowles and Saxberg (1971) found, role conflict may lead to an increase in anxiety, frustration and reduced efficiency for the individual concerned. Conversely, if well handled, role conflict may also motivate the individual to do more and work harder.

Martin and MacNeil (2007) wrote that most conflicts among people within organisations are inter-role conflicts. They suggested that especially within a school environment, accurate descriptions of expectations reduced conflict between principals, teachers, and students and that most people working within an educational setting had at least four roles. These included administrators, spouse, parent and friend; and with each of these roles came expectations and responsibilities. Martin and MacNeil found that defining and clarifying a person's role within the school setting helped to reduce stress for the principal and teaching staff as well as reducing conflict within administration areas.

In addition to role conflict, Latack (1981) suggested that role overload was a stressor by way of work demands exceeding personal and workplace resources. Hecht (2007) indicated that (a) different contextual factors influenced individuals' feelings of role conflict and role overload, and (b) feelings of role conflict significantly undermined psychological well-being, while feelings of role overload do not. The researcher aimed to examine whether Hecht's findings in regard to the principal/executive role would be replicated in the Catholic education system sample. Much research has been focussed on role conflict and role overload but this current study also investigated the impact of leadership styles on principals and executive staff with respect to whether these leadership styles influenced personal stress levels. Roles affect stress to different degrees, but leadership style might also contribute to experienced stress at work. This is examined next.

## **Leadership**

There have been multiple styles of leadership researched over the years for all types of groups and organisations. Hsien and Tsai-Hua (2005) suggested that it is the leadership style

which plays an important role in achieving performance of the organization and the leader's ability to adapt to internal and external environment changes and lead a group of cordial subordinates to work together is the key to success. For the purpose of this study two major styles of leadership have been chosen for investigation, being Transformational leadership style and Transactional leadership style.

Cox (2001) reported there are two basic categories of leadership – Transactional and Transformational leadership styles. By extending transactional or transformational leadership styles to teams and groups, differences in organisations are observed (Avolio & Bass, 1994) as well as specific differences in leadership styles. Bass (1987) observed that transactional leaders worked within the constraints of the organisation whereas a transformational leader implemented changes within the organisation. Further studies by Bass suggested that the transactional and transformational paradigm viewed leadership as either a matter of contingent reinforcement of followers by a transactional leader or in contrast, a transformational leader by the motivating of followers beyond their self-interests for the good of the group, organisation, or society (Bass, 1997: 130).

A review of leadership styles within school environments has suggested that there are similar yet distinct differences in the styles used (Hall, Johnson, Wysocki, & Kepner, 2002; Judge & Piccolo, 2004). These two specific styles of leadership set a prelude for examining which of the two types of leadership style are dominant in Catholic primary schools in Queensland, and whether the styles reduced or exacerbated occupational stress for executive staff within the school environment. The author's reading suggested there are several ways to compare and contrast the styles. Table 1.A gives examples of the many researchers who have examined leadership in organisations.

Howell and Frost (1989) suggested that followers working under a transformational leader had higher task performance and reported greater levels of task adjustment compared to individuals who were led by a transactional leader. The conclusion was that a more positive contribution to unit performance came from behaviours associated with transformational leadership style rather than from a transactional leadership style. Conversely, Bass (1996) and Lussier and Achua (2004) argued that transactional leadership style sought to maintain stability in organisations and was instrumental in goal attainment through regular economic and social exchanges.

Transformational leadership style and transactional leadership style have been used predominantly within business organisations; however, the concept of both these leadership styles being adapted to the educational settings has drawn a debate as to which style would be most effective. There are many other leadership styles used within the school environment but transformational leadership style and transactional leadership style are the ones mostly reported as being used by principals and executive staff. What has research found about these styles of leadership in educational settings?

### **Role of Educational Leaders**

Bamburg and Andrews (1990) found that the major components of a principal's role as the educational leader of the organisation were fourfold: (1) having a vision for the organisation that is clearly focussed upon desired outcomes, that is, ensuring academic excellence, (2) communicating that vision to everyone connected with the organisation in such a way as to obtain their support, (3) providing and/or obtaining the resources needed by the organisation to accomplish the vision, and (4) managing one's self so that (1), (2), and (3) can be accomplished. Transformational leadership style was reported as becoming the dominant

traditional style for the training of principals (Hui & Cheung, 2006). According to these researchers, the principal was expected to articulate vision, redefine organisational problems, suggest solutions, transform or energise followers, and be an example and a mentor for followers. Executives needed to put into practice their roles. In doing so, they may experience pressures and demands (stress), they may experience role conflict and role overload, and in addition attempts to get their requirements across (using their particular leadership style) might cause themselves some problems.

The current study suggested that there would be a relationship between the principal/executive role (in terms of role conflict and role overload), leadership style adopted (Transformational leadership style vs Transactional leadership style) and experienced stress given the many roles needed to be adopted by the principal when dealing with different levels of followers within the school environment.

### **Popular Leadership Styles in Education**

Previously Leithwood and Jantzi (2000b) and Mulford, Silins, and Leithwood (2004) carried out extensive investigation into the adaptation of the transformation leadership model in education. However, Jackson (2000) argued that transformational leadership was unsustainable over the long haul. But how does leadership style operate in the Brisbane Catholic Education system and what are the relationships to roles and stress?

### **Rationale**

The aim of the current research was to address the accuracy of the perceptions about stress within an educational system in Queensland (whether it exists today as predicted, and what its components are); examine the roles of principal and executive staff and their

application to the system(s); and examine leadership theories in relation to style adopted and outcomes.

There are limited studies with regard to gender and leadership in holding the position of principal in primary schools as previously noted. Gregg (2008) described the difficulties for assistant principals to become principals and Jones (2008) suggested that middle school principalship would be challenging in nature for females. The Jones' study revealed that gender made a difference in the way females interpreted and interacted in the position of middle school principalship. Further research is warranted into the area to determine the difficulties, particularly for females, when promotions do occur.

Kenworthy and Tausch (2008) found there are increasing numbers of qualified educators who are either choosing not to seek administrative positions or who feel inadequately prepared to assume leadership roles. A lack of research in this area has limited the understanding as to why these choices are occurring. Suggestions are that area supervisors (or superintendents) must be proactive and take the necessary steps to constantly build leadership capacity among their principals (Fullan, 2001; Lambert, 2003). The current study addressed the amount of training principals and executive staff have undertaken and whether they felt if this was adequate or not for the roles they hold within the school environment.

According to Grimm (2008), principal leadership responsibilities continued to increase as more mandates are established that focus on improving students' academic success. Research findings from Grimm highlighted that principals experienced issues of lack of time, limited knowledge to use technology to its fullest extent and lack of acceptance to continue using technology, for example, emails. Conclusions from the study were that most principals would like to increase their use and skills of computer technology. Grimm's studies were

based on principals' receiving adequate training in technology. This current study examined whether similar responses would exist following leadership training with principals.

Previous research reported the importance of leadership styles in any organisation. As Bass (1987) found, there are major differences between transactional leadership style, where positions are competed for, and transformational leadership style where adaptability is the key.

As has been indicated throughout the introduction, there are several areas needing research. This thesis aimed to address these in relation to the Catholic Education system in Queensland.

### **Aims and Hypotheses**

The aim of this thesis was to address the perceptions about stress within the Catholic education system in Queensland; to examine role or social role theories and their application to the system(s); and to examine leadership styles in relation to outcomes. Examination of the effect those particular leadership styles, namely transformational leadership style and transactional leadership style, have on stress within Catholic primary schools, as well as the effect role overload and role conflict have on the health of the principal and executive staff are also addressed.

There is a gap in the research literature linking leadership styles and the roles of principals and executive staff members with outcomes in non-state government institutions. This study sought to partially fill the gap by examining the following hypotheses concerning the Queensland Catholic Education system.

It was thought, based on previous studies (Hall, Johnson, Wysocki, & Kepner, 2002; Judge & Piccolo, 2004) that:

Hypothesis 1: That transformational leadership styles and Transactional Leadership styles would be related positively but differently to the availability and use of personal resources.

This difference would show up as follows:

Hypothesis 1(a): That *Transformational leadership style* will be significantly positively related to the Social Support and Self-Care scales (sub scales on Personal Resource Questionnaire) and negatively related to the Role Overload and Role Conflict scales (subscales on Occupational Role Questionnaire) of the Occupational Stress Inventory Revised.

Hypothesis 2: That *Transactional leadership style* will be significantly positively related to the Recreation and Rational Cognitive Coping scales (subscales on PRQ) and Role Overload and Role Conflict scales (subscales on ORQ) of the Occupational Stress Inventory Revised.

Hypothesis 3: That senior administration staff positions within Catholic primary schools will be associated with higher levels of stress (as measured by total score on the Personal Strain Questionnaire) compared to lower senior administration staff positions (positions in order of seniority: Principal, Assistant Principal, Assistant Principal Administration and Assistant Principal Religious Education).

An examination is necessary as to whether a variety of demographic factors such as age, gender, years of experience or length of service, and leadership training may be directly associated with experienced personal stress (scores on the PSQ) among the executive staff in the Catholic education system. Many studies have examined such relationships in organisations generally, including in regard to age (Ravichandran & Rajendran, 2007), gender (Gregg, 2008; Jones, 2008), years of experience (Sharma & Chow, 2008), and the effect of leadership training (Hui & Cheung, 2006). More specifically the hypotheses are as follows:

Hypothesis 4: That there will be significant negative associations between age and stress, and length of service and stress (stress measured by the Personal Strain Questionnaire).

Hypothesis 5: Compared to staff with leadership training experience, staff without such experience will demonstrate significantly higher levels of stress (measured by the Personal Strain Questionnaire) and decreased coping skills (measured by the Personal Resources Questionnaire).

Hypothesis 6: That Transformational Leadership style and Role Conflict will each contribute significantly to stress experienced by senior administrators.

## **Method**

### **Participants**

One hundred and thirty six staff members (consisting of Principals = 69 (P), Assistant to Principal = 10 (AP), Assistant to Principal for Administration = 17 (APA), Assistant to Principal for Religious Education = 40(APRE) from Catholic primary schools, belonging to the Brisbane Archdiocese Education system of Queensland participated in the study.

### **Procedure**

A representative from Brisbane Catholic Education was assigned to distribute the questionnaires with a pre paid envelope attached to each area manager (eight in total) and these questionnaires were then distributed by the area managers to each primary school principal and executive staff member involved in the study in their area. Participants were drawn from 120 Primary schools. The completed questionnaires were returned to the researcher by return post so as confidentiality and anonymity were maintained. No marks were on the envelopes or questionnaires that could identify the school from where the

questionnaire came or the participant. From two hundred and twenty distributed questionnaires, one hundred and thirty six questionnaires were returned, representing 62% of the surveys distributed. Of this sample, 56 participants (42%) were female; Principal =18; Assistant Principal = 4; Assistant Principal Administration = 9; Assistant Principal Religious Education = 25: and 80 participants (58%) were male; Principal = 51; Assistant Principal = 6; Assistant Principal Administration = 8; Assistant Principal Religious Education = 15.

### Measures

A letter outlining the purpose of the study was included with the survey forms (Appendix B). Two self report questionnaires were used for this study (on occupational stress and leadership style) plus a demographic/bio-data questionnaire (Appendix C). Principals and executive staff completed the demographic/bio-data questionnaire which indicated age (30-39, 40-49, 50-59, 60+), gender (male or female), position held at the relevant primary school (P, AP, APA, APRE), cultural background (Australian, Irish, English, Italian and other), years of service in current position, and prior leadership training. Other questionnaires were the Occupational Stress Inventory- Revised (OSI-R) (Appendix D) and Multifactor Leadership Questionnaire (MLQ) Form 6S (Appendix E). Below in Table 4 are the frequencies for age, gender, position at school, cultural background, leadership training.

Table 3

*Frequencies for age, gender, position at school, cultural background, leadership training.*

Description	Frequency	Percent
<b>Age</b>		
30 – 39	27	19.9
40 – 49	48	35.3

50 - 59	53	39.0
Greater than 60	8	5.9
<b>Gender</b>		
Female	56	41.2
Male	80	58.8
<b>Position at school</b>		
Principal	69	50.7
Assist. Principal	10	7.4
Assist. Principal Administration	17	12.5
Assist. Principal Religious Educ.	40	29.4
<b>Cultural Background</b>		
Australian	103	75.7
Irish	15	11.0
English	6	4.4
Other	12	8.8
<b>Leadership Training</b>		
No	61	44.9
Yes	75	55.1

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### **The Occupational Stress Inventory Revised (Osipow, 1998)**

The OSI-R was developed and standardised for use with individuals 18 years of age and older. The OSI-R's three dimensions are defined as the Occupational Roles Questionnaire (ORQ), Personal Strain Questionnaire (PSQ), and the Personal Resources Questionnaire (PRQ). Each dimension has its own scales which assess specific characteristics that subsequently contribute to the total overall score. The three dimensions can be used together

or individually based on the research questions and are divided into scales as shown in Table 5. For the purpose of this study personal strain and stress have been used interchangeably in the results and discussion section of this paper.

Table 4

*Scale Descriptions of Occupational Stress Inventory-R – (OSI-R)*

Scale	Description of Sub-scale
<b>Occupational Roles Questionnaire (ORQ)</b>	
Role Overload	Job demands, resources, ability to complete tasks
Role Insufficiency	Fit between skills and job, needs for recognition, boredom
Role Ambiguity	Awareness of one's own work expectations
Role Conflict	Level of conflict in loyalties and priorities in workplace
Role Responsibility	Feeling of responsibility of welfare and performance of others
Physical Environment	Exposure to stressful work environment ( e.g. heat, noise)
<b>Personal Strain Questionnaire (PSQ)</b>	
Vocational Strain	Attitude towards work, problems in work quantity/quality
Psychological Strain	Whether employees are experiencing psychological problems
Interpersonal Strain	Degree of disruptions in interpersonal relationships
Physical Strain	Symptoms of physical illness and worries about their health
<b>Personal Resources Questionnaire (PRQ)</b>	
Recreation	Level of recreational and leisure activities engaged
Self-care	Participation in stress-reducing habits (e.g. adequate sleep)
Social Support	Feeling of having support and help from others
Rational/Cognitive Coping	Knowledge and use of cognitive techniques to deal with stress

Source: Osipow (1998)

Each scale is comprised of ten items, with the total number of items for all scales being 140. The ORQ consists of sixty items and the PSQ and PRQ have forty items each. All

participant responses are based on a five point Likert scale and include five anchor points: rarely or never, occasionally, usually, often, and most of the time.

Reliability estimates were determined by test-retest and internal consistency analyses. The OSI-R was administered to 62 Air Force Cadets (Lombard, 1997), with test-retest correlations ranging from .39 to .74. Using the normative sample, the alpha coefficients of reliability ranged from .88 to .93 for the overall OSI-R. The alpha coefficient for each dimension is .88 for ORQ, .93 for PSQ, and .89 for PRQ. The fourteen scales have reported alpha coefficients ranging from .70 to .89 (OSI-R manual: Osipow, 1998)

Validity data for the OSI and OSI-R is reported in the OSI-R manual to be based on: (a) convergent validity studies; (b) factor analyses; (c) correlational studies of the relationships of the scales to variables of practical and theoretical importance; (d) studies using the scales as outcome measures following stress reduction treatment; and (e) studies of the stress, strain, and coping model employing comparisons of selected criterion groups. In terms of correlational studies, Fogarty, Machin, Albion, Sutherland, Lalor, and Revitt, S. (1999) used the earlier version of the OSI, and found that for stress, strain and coping “correlations among the different variables were all significant ( $p < .05$ ) and in line with expectations” (p. 436). Specifically, Fogarty et al. found in their first study that role stress and strain were directly related ( $b = .48$ ), coping was related to strain negatively ( $b = -.14$ ), role stress was negatively related to coping ( $b = -.12$ ), and the whole model predicted 55% of variance in psychological strain experienced.

The OSI is capable of predicting occupational stress with all age groups above 18 years of age and has been found to have appropriate validity and reliability across the years with

increasing amount of researchers using the scale in occupational studies (Hicks, Bahr, & Fujiwara, 2009; Kenny, Davis, & Oates, 2004; Pflanz, 2001).

Osipow (1998) studied three hundred and ten employed adult males and females with respect to their report of occupational stresses, strains, and coping behaviours. Older respondents also displayed a trend toward decreasing vocational, psychological, physical, and interpersonal strain than younger respondents, and greater recreational, self-care, and rational-cognitive coping resources than younger respondents. No differences by age group were seen in the use of social supports as coping devices. The findings for sources of stress by age were as expected based on life span career development roles. It is postulated that older workers learn to use coping resources, thus enhancing their ability to experience reduced strain given equal amounts of stress. However, some workers who do not cope well may *leave* the labour force as they age as a result of illness, death, unsuitability for employment, or early retirement.

In the current study, there is a subscale of the Occupational Stress Inventory Revised used to measure personal strain/stress. This subscale came under the heading of Personal Strain Questionnaire (PSQ) and measured vocational strain, psychological strain, interpersonal strain and physical strain. Attitude towards work, problems in work quantity/quality; whether employees are experiencing psychological problems; degree of disruptions in interpersonal relationships and symptoms of physical illness and worries about their health are all measured under this subscale.

#### **Multifactor Leadership Questionnaire (MLQ) Form 6S.**

This is a self-report questionnaire that measures seven factors related to transformational leadership and transactional leadership, using a seven point Likert scale. The MLQ descriptors are Idealised Influence, Inspirational motivation, Intellectual

stimulation, Individualised consideration, Contingent reward, Management by exception, Laissez faire. Table 6 below gives an explanation of the seven factors and how they relate to a person's leadership style.

Table 5

*Multifactor Leadership Questionnaire - Seven Factors related to Transformational Leadership/Transactional Leadership*

<b>Characteristics of Leadership</b>	<b>Behaviours associated with Leadership Characteristics</b>
Idealised Influence	When a leader is being a role model for the followers and encouraging the followers to share common visions and goals by providing a clear vision and a strong sense of purpose.
Inspirational Motivation	When a leader tries to express the importance of desired goals in simple ways, communicates high level expectations and provides followers with work that is meaningful and challenging.
Intellectual Stimulation	When a leader challenges a follower's ideas and values for solving problems.
Individualised Consideration	Leaders who spend more time teaching and coaching followers by treating followers based on individual basic.
Contingent Reward	Refers to an exchange of rewards between leaders and followers in which effort is rewarded by providing rewards for good performance or threats and disciplines for poor performance.
Management-by-Exception (Passive)	Leader intervenes with the group only when procedures and standards for accomplishing tasks are not met.
Management- by-Exception (Active)	Leaders are characterised as monitors who detect mistakes.

Laissez-faire (non-leadership)	When leaders avoid clarifying expectations, addressing conflicts, and making decisions.
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Source: Bass & Avolio (1997)

Research by Kanste, Miettunen, and Kyngas (2006) verified that the internal consistencies of the MLQ leadership subscales were satisfactory. They concluded that the MLQ is a highly suitable instrument to measure multidimensional leadership in the nursing area studied. Although the MLQ is the most widely used instrument to assess transformational leadership theory (Kirkbride, 2006) and “is considered the best validated measure of transformational and transactional leadership”(Ozaralli, 2003, p. 338), the MLQ had been criticised in some areas for its conceptual framework (Bradley & Charbonneau, 2004). However, after reviewing studies which have examined the validity and reliability of the MLQ, it appears on balance that validity and reliability of the scale has been supported.

The more recent studies using the MLQ are included in research by Hulsing (2008). Using the Proquest database, Hulsing found that 66 dissertations had been published using the MLQ as a data collecting instrument between 2005 and 2007. The MLQ was used to assess leadership styles, two examples of which are: religion (Carter, 2009); medical education (Horwitz, Horwitz, Daram, Brandt, Brunicardi, & Awad, 2008).

### **Design**

The statistical analyses used in this research were ANOVA, MANOVA and descriptive analysis and the research was a mixed design/between subjects. The dependent variables used for this research are Occupational Stress Inventory Revised (Osipow, 1998) - role overload, role insufficiency, role conflict, physical environment, physical strain, psychological strain, self-care, recreation, social support, rational/cognitive coping; the

Multifactor Leadership Questionnaire – transformational leadership style and transactional leadership style (Bass & Avolio, 1997); and the independent variables are age, gender, position at school, leadership training and negative health issues.

## Results

### Overview

This research was analysed using SPSS version 13.0 for Windows (Norusis, 2005). The data were checked for skewness and kurtosis which were within acceptable limits and Levene Test was non-significant. MANOVA is robust to non-normality, except where outliers are present. There were no multivariate outliers identified. Each independent variable, that is, years in position, age, gender, leadership training, and negative health issues, the subscales of the Occupational Stress Inventory and the subscales of the Multifactor Leadership Questionnaire were tested using the equation:

$$Z \text{ value} = \frac{\text{skewness}}{\frac{\sqrt{6}}{N}}$$

where N is the sample size (Hair, Anderson, Tatham & Black, 1995). As the calculated values did not exceed  $\pm 1.96$ , using a .05 error level, the assumption of normality of each variable was satisfied and data transformations were not deemed necessary.

A standard multiple regression analysis was performed to examine the relationship between leadership style, stress and roles and negative health issues, length of service in position, training for position, age, gender and sub scales of Occupational Stress Inventory OSI-R (occupational roles, personal strain, personal resources) and sub scales of Multifactor Leadership Questionnaire (MLQ) Form 6S (Idealised influence, inspirational motivation,

intellectual stimulation, individualised consideration, contingent reward, management by exception, laissez faire).

### **Descriptive**

The means and standard deviations for the Occupational Stress Inventory subscales and the Multifactor Leadership Questionnaire subscales are presented in Table A.2.

Examination of relationships between variables are shown below in Table 7. Personal strain has a significant positive relationship with role conflict and role overload. Whereas Transformational leadership style is negatively related to role conflict as well as being positively related to Transactional leadership style. Transactional leadership style reports a negative relationship to role conflict. Role conflict and role overload are positively related.

Table 6

*Descriptive Statistics for Criterion and Predictor Variables used in Standard Multiple Regression Analysis (N = 136)*

Variables	1	2	3	4	5	M	SD
1. Personal Strain	1.00	-.07	.00	.29***	.81***	82.40	21.63
2. Transformational		1.00	.39**	-.15*	.09	25.38	3.89
3. Transactional			1.00	-.21**	.02	15.19	3.33
4. Role Conflict				1.00	.34***	19.71	5.17
5. Role Overload					1.00	352.88	33.61

Significance levels \*p<.05, \*\*p<.01, \*\*\*p<.001

### Results of hypotheses testing

Hypothesis 1: That Transformational Leadership styles and Transactional Leadership styles would be related positively but differently to the availability and use of personal resources.

As shown in Table 8, using a bi-variate correlation analysis, Transformational Leadership style was shown to have a significant positive relationship with personal resources,

indicating the higher the level of transformational leadership in the Catholic primary schools, the higher the level of personal resources. However, transactional leadership style was not significantly related to personal resources. Personal resources include skills in coping using recreation, rational/cognitive, social support and self-care and the higher these skills the more they are associated with strength of scores on Transformational Leadership

Table 7

*Bi-variate correlation between Occupational Stress Inventory scales of Occupational Role, Personal Strain, and Personal Resources and Transformational Leadership Style and Transactional Leadership style.*

Leadership Style	Occupational Role	Personal Strain	Personal Resources
Transformational	.02	-.07	.24**
Transactional	-.07	.00	.13

\* $p < .05$ , \*\* $p < .01$

Hypothesis 1(a): That *Transformational leadership style* will be significantly positively related to the Social Support and Self-Care scales (subscales on PRQ) as these subscales indicate the collaborative and supportive effect of this form of leadership style and negatively related to the Role Overload and Role Conflict scales (subscales on ORQ) of the Occupational Stress Inventory Revised.

Transformational Leadership style was positively related to social support ( $r = .04$ ) and self-care ( $r = .02$ ), but the associations were not significant ( $p = .68$  and  $p = .79$  respectively). Contrary to expectations, transformational leadership style was also positively

related to role overload ( $r = .09$ ), but again the relationship was not significant ( $p = .29$ ).

There were no significant relationships found.

Hypothesis 2: That *Transactional leadership style* will be significantly positively related to the Recreation, Rational Cognitive Coping (subscales on PRQ) as these subscales indicated the structured and planned effect of this form of leadership and Role Overload and Role Conflict scales (subscales on ORQ) of the Occupational Stress Inventory Revised.

Transactional leadership style, recreation, rational/cognitive coping, role conflict and role overload were not significantly related. Transactional leadership style was negatively related to role conflict ( $r = -.21$ ) and this relationship was statistically significant ( $p = .01$ ).

Hypothesis 3: That the higher the senior administration staff positions the higher levels of stress (as measured by total score on the Personal Strain Questionnaire); positions in order of seniority: Principal, Assistant Principal, Assistant Principal Administration and Assistant Principal Religious Education).

Table 8

*Means and Standard Deviations of Senior Administration staff positions measured by total score on the Personal Strain Questionnaire*

Position at school	Mean	Std. Dev.
Principal	86.4	22.2
Assist. Principal	74.5	22.5
Assist. Principal Admin.	76.0	13.3
Assist. Principal Religious Educ.	80.2	22.4

Contrary to the hypothesis, the more senior administration staff positions were not associated with higher levels of stress  $F(3, 132) = 1.91, p = .07$ .

Hypothesis 4: That there will be significant negative associations between age and stress, and length of service and stress (stress as measured by the Personal Strain Questionnaire).

As hypothesised, there was a significant negative association between age and stress ( $r = -.22, p = .01$ ). Although length of service and stress were negatively correlated ( $r = -.12$ ), this association was not significant ( $p = .15$ ).

Hypothesis 5: Compared to staff with leadership training experience, staff without such experience will demonstrate significantly higher levels of stress (measured by the Personal Strain Questionnaire) and will show decreased coping skills (measured by the Personal Resources Questionnaire).

This hypothesis was not supported. However, staff without leadership training experience demonstrated a tendency to decreased coping skills compared to staff with leadership training experience, (with  $p = .06$ ).

Table 9

*Means and standard deviations of staff with leadership training and staff without leadership training and experienced stress (measured by Personal Strain Questionnaire).*

Leadership Training	Means	Std. Dev.	N.
With training	33.71	6.33	75
Without training	31.57	6.62	61

Hypothesis 6: That Transformational Leadership style and Role Conflict will each contribute significantly to stress experienced by senior administrators.

A standard multiple regression was performed with personal strain as the dependent variable and transformational leadership style, transactional leadership style, role conflict, and role overload as independent variables. Table 10 shows the predictor variables resulting from a standard multiple regression with criterion variables.

Table 10

*Predictor Variables- Personal Strain as dependent variable and Transformational Leadership style, Transactional Leadership style, Role Conflict and Role Overload as the independent variables - resulting from Standard Multiple Regression with Criterion Variables.*

	Transformational	Transactional	Role Conflict	Role Overload
Unstandardised coefficients				
<i>B (Unstandardised Reg. Coefficients)</i>	-.88	.28	-.01	.53
<i>SE (Standard Error)</i>				
	.30	.35	.23	.03
Standardised coefficients				
$\beta$ (Beta)	-.16	.04	-.00	.83
<i>SE (Standard error)</i>	3.09	.05	.06	.05
<i>t (t-test statistic)</i>	-2.93	.80	-.06	15.55
Significance	.00	.42	.95	<.001
<i>pr (Partial correlation)</i>	-.25	.07	-.00	.81
<i>sr (Semipartial correlation)</i>	-.15	.04	-.00	.77
<i>sr<sup>2</sup> (squared)</i>	.02	.00	.00	.59

Significance:  $p < .001$

Role overload accounted for a statistically significant unique contribution to personal strain (sub-scale of OSI – PRQ), ( $\beta = .83, t = 15.55, p < .001$ ). The individual unique contributions of the other independent variables to personal strain were not statistically significant. Similarly, role overload contributed to 59% of the variability in personal strain.

There had been interest in what the leadership style contributed to stress/strain experienced. Two percent of the variability in personal stress/strain was accounted for by transformational leadership style. Finally, transactional leadership style and role conflict contributed less than 1% each to the variability in personal stress. The regression results showed that neither Transformational Leadership style nor Role Conflict contributed significantly to personal stress experienced by principals and executive staff.

$R$  for regression was significantly different from zero,  $F(4, 131) = 69.83, p < .001$ , with  $R^2$  value of .68. The adjusted  $R^2$  value of .67 indicated that more than two-thirds (67%) of the variability in personal stress/strain was predicted by transformational leadership style, transactional leadership style, role conflict, and role overload. However, only role overload produced a significant contribution.

A non-significant relationship was found between transformational leadership style and role overload ( $r = .09, p = .14$ ). A non-significant relationship was also found between transformational leadership style and role conflict with role conflict being associated with lower scores on transformational style ( $r = -.15, p = .04$ ). That is, those using Transformational Leadership styles had experienced less role conflict.

A one-way between groups multivariate analysis of variance was also performed to investigate differences in position held at school, and leadership style. Two dependent

variables were used: transformational leadership style and transactional leadership style. The independent variable was position at school. There was no statistically significant difference between principals ( $N = 69$ ), assistant principals ( $N = 10$ ), assistant principals administration ( $N = 17$ ), and assistant principals religious administration ( $N = 40$ ) on the combined dependent variable,  $F(4, 131) = .62, p = .71$ ; Wilks' Lambda = .97; partial eta squared = .01. When the results for the dependent variables were considered separately, none reached statistical significance.

### **Discussion**

Transformational leadership style and Transactional leadership style were the focus of this paper and how each leadership style influences stress levels for the role of principal, assistant principal, assistant principal administration, and assistant administration religious education within Catholic primary schools. Whilst it was anticipated (Hypothesis 1) that both Transformational and Transactional Leadership styles would be related positively but differently to the availability and use of personal resources, findings supported Transformational Leadership style as relating to personal resources positively but not Transactional leadership style. These findings are congruent, in part, with other research findings that reported no relationship (Avolio & Bass, 1994; Hsien & Tsai-Hua, 2005).

Transformational leadership style is based on the concepts of unity and shared purpose and on the forming of personal relationships that persist when costs outweigh benefits (Hay, 2007). Although Transformational leadership works for the greater good of the followers, emphasis is on community and caring for self and others. As part of hypothesis 1, the relationship between Transformational Leadership style and social support and self care was examined: the findings were not significant. This research ran counter to the findings by

Aadmodt (2009) that some individuals had inadequate coping resources to handle role requirements, and the work by Manthei, Gilmore, Tuck, and Adaire (1996) and Whitehead and Ryba (1995). It was also thought that Transformational Leadership style would be negatively related to role overload and role conflict. The results showed Transformational leadership style and role overload were not statistically significant and that transformational leadership style was negatively to role conflict.

Findings from Hypothesis 2 showed that *Transactional leadership*, recreation, and rational cognitive coping, role overload and role conflict were not significantly related. However, Transactional leadership style was significantly and negatively related to role conflict. This supports previous research by Bass (1985) and Lussier and Achua (2004). The foundation of Transactional leadership is compliance, contingent rewards and administrative actions to reinforce positive behaviours (Hay, 2007). As competing for tasks and recognition within the workplace is a feature of Transactional leadership, it seems that role conflict decreases in these circumstances, with outcomes in emphasis on impersonal relationships and decreased bonding with fellow workers. Clearer actions and requirements lead to less conflict, according to the apparent trend from the results.

Holding higher senior administration staff positions has previously been cited as a predictor of occupational stress; however, the current research used the total score on the Personal Strain Questionnaire to calculate the level of stress higher senior administration staff may be experiencing. The positions in order of seniority were: Principal, Assistant Principal, Assistant Principal Administration and Assistant Principal Religious Education. None of these positions showed an association with high levels of overall stress, and there were no differences between stress experienced in each position. This supports research findings by

McCormick and Solman (1992) and Manthei and Gilmore (1996) who also found no statistical significance between positions held within Catholic primary schools. In contrast, statistics from AARE found that 82% of Principals were stressed by work overload and one third of principals surveyed reported having experienced a diagnosis of a cardiac or mental health issue that was suspected to be caused or exacerbated by their job. Contrary to hypothesis 3, senior administration staff positions were not associated with high levels of overall stress and therefore the hypothesis was not supported for this sample of senior executives. However, specific elements of stress, such as role overload paint a different picture as will be seen later.

Suggestions in Hypothesis 4 that there would be significant negative associations between age and stress, and length of service and stress (stress as measured by the Personal Strain Questionnaire), were partially supported. Findings indicated that the higher the age of the staff member, the lower the stress level. This contradicts findings by Goddard and O'Brien (2003) who argued that many of the changes undertaken in the school system have contributed to higher stress and low morale. However, as 74.3% of the senior staff members were between 40 and 60 years of age, and there were no significant results from the research regarding heightened stress levels for senior staff members, it is possible that the age-stress relationship could not be assessed correctly due to restriction of range in the ages. The relationship between the length of service and stress levels was found to be not statistically significant. The same restriction of range effects could apply.

Sutherland and Cooper (1988) reported that some individuals within senior staff positions believed that they had not received adequate training for the position they held and Dowling's work (2008) suggested that many assistant principals received no training.

However, in the current sample within the Catholic Education system, 55.1% of the school senior staff had received some form of leadership training, and 44.9% of senior staff had not received any form of leadership training. When the two groups were compared (leadership training vs no leadership training) there were no significant differences in the levels of overall stress experienced. However, staff without leadership training experience did demonstrate a trend toward decreased coping skills compared to staff with leadership training experience although this was not statistically significant. Aamodt (2009), DeNobile & McCormick, (2007) and Thomas, Clarke, & Lavery, (2003) had previously identified in their individual studies that training experience increases coping resources.

Role overload contributed highly (59%) to personal stress which supported the work by Latack (1981) and Naylor (2001b). Role conflict did not contribute to increased stress levels, in contrast to work by earlier researchers who found that role conflict played a major part in organisational stress (Aamodt, 2009; Duncan & Riley, 2005; Hecht, 2007; Kahn, Wolfe, Quinn, Snoeck, & Rosenthal, 1964; Martin & MacNeil, 2007). It is role overload in the current sample that was associated with higher levels of experienced stress, and not role conflict.

Jones (2001) reported that stress is a leading cause of workers taking time off, seeking compensation, and taking early retirement on medical grounds. This work was supported in the current study if stress is seen in relation to role overload. This is in line with findings by Antoniou, Polychroni, and Vlachakis, (2006); Guthrie, (2006); Phillips, Sen, and McNamee, (2008), who predicted that stress is continuing to be unabated in the school system especially with teachers and administration staff.

In the introduction, a model was proposed that took into account the multifaceted nature of stress within the school system. The model (Figure 1) suggested that as a result of environmental factors, role factors and leadership styles, principals and executive staff within Catholic primary schools would be subjected to different levels of stress outcomes. Quick, Quick, Nelson, and Hurrell (1997) also proposed a similar model which determined that there was a strong relationship between principal and executive role (role conflict and role overload) and experienced stress, especially within the state and private school systems (Aamodt, 2009; DeNobile & McCormick, 2005; Wincent & Ortqvist, 2009). The current study did not find such a strong association if both role conflict and role overload were included, but instead found there was a strong association with role overload alone.

### **Limitations**

The data collected was from 220 participants, the total of all executives within the Archdiocese of Brisbane, of which 136 replied. There is no way of knowing if this is fully representative but there were disproportionately smaller numbers for the position of assistant principal (AP), and this may not have reflected a true indication of stress levels and leadership styles for that role.

There was no comparison data collected from other denominational schools or State primary schools. This meant that comparisons could not be made and the influence investigated of differences in vision and mission statement. Another limitation may be on the reliance on quantitative self-reported data, which may be subject to bias due to concern for confidentiality, despite assurances of anonymity.

### **Future Research**

Qualitative data from individuals and groups would be useful to determine the problems and strengths within the schools as seen by the senior staff, and would assist in understanding why there are increasing stress levels among senior staff . Using a more personal approach by having perceptions of representatives from each cluster of schools meet with a researcher to discuss issues would assist in identifying further issues not indicated in the formal questionnaires.

### **Conclusion**

This research has examined relationships among role overload, role conflict, Transformational leadership style and Transactional leadership style, stress outcomes and personal resources among senior staff in Catholic primary schools. The major findings are that role overload is contributing to experienced stress in this system; as it has and does in other education systems; that there are no significant stress outcome differences among the different levels of senior staff; that transformational leadership was associated more with possession of personal resources helping in coping with difficulties; that transactional leadership was found to engender lower levels of role conflicts in the workplace; and that training in leadership yielded better resource levels and strategies for coping, but did not lessen the stress experienced. In essence, role overload, among the various factors examined, seemed to account most for stress experienced among these senior executives, as it has been seen to account also for much stress experienced by teachers themselves. Further research is needed to clarify the leadership style, role conflict and stress outcomes. As suggested both intensive interviewing and group work as well as further survey research may be needed to identify the relationship more clearly.

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Table A. 1

*Comparing and contrasting contemporary understandings of Transactional and Transformational Leadership.*

Transactional Leadership	Transformational Leadership
<p>Leadership of the status quo. Effective in stable organisations and contexts. More likely to be observed in a well-ordered society.</p> <p>Focuses on social and economic exchanges between leaders and followers, contingent rewards/administrative actions to reinforce positive /reform negative behaviours.</p> <p>Leader-follower relationship sees each exchange needs and services to satisfy their independent objectives.</p> <p>Motivates followers by appealing to their own self-interests (promotion, pay).</p> <p>Based on directive power acts.</p> <p>Follower response based on compliance. Supervision likely to be important.</p> <p>Leadership ‘act’ takes place but leaders and followers not bound together in mutual pursuit of higher purpose.</p> <p>Founded on people’s need to make a living by completing tasks.</p> <p>Focuses on situational authority, politics and perks. Involves values, but typically those required for successful exchange relationships (reciprocity, integrity).</p> <p>Emphasis on day-to-day affairs, business needs, short term goals.</p> <p>Leader-follower relationship may be established quickly. A relatively impersonal relationship maintained only as long as</p>	<p>Leadership of change (within leaders, followers and organisations). Important in times of distress and rapid and destabilising change.</p> <p>Focuses on organisational objectives and organisational change by disseminating new values and seeking alternatives to existing arrangements.</p> <p>Leader-follower relationship sees purposes of both become fused, leading to unity and shared purpose.</p> <p>Attempts to raise follower need (Maslow’s hierarchy) to higher levels – self esteem, and followers into leaders.</p> <p>Based on interaction and influence</p> <p>Follower response based on commitment. Supervision may be minimal.</p> <p>Leaders and followers raise one another to higher levels of motivation and morality.</p> <p>Founded on people’s need for meaning</p> <p>Focuses on personal power, values, morals, and ethics. May be demonstrated by anyone in an organisation in any type of position.</p> <p>Transcends daily affairs, concentrating on long term issues.</p> <p>May take time for leader-follower bonds to develop. A personal relationship that may persist when costs outweigh benefits.</p>

<p>benefits outweigh costs.</p> <p>Tends to be transitory. Once a transaction is completed, relationship may need to be redefined.</p> <p>Emphasises tactical issues.</p> <p>Typically involves working within current systems.</p> <p>Supports structures and systems that emphasise outcomes.</p> <p>Follower counselling focuses on evaluation.</p> <p>Atomistic world view and moral altruistic motives based on teleological perspective (on consequences).</p>	<p>Tends to be enduring.</p> <p>Emphasises strategies and missions for achieving them.</p> <p>May involve redesigning of jobs to make them more meaningful and challenging. Emphasises realisation of human potential.</p> <p>Aligns structures and systems overarching values and goals.</p> <p>Follower counselling focuses on personal development.</p> <p>Organic view of the world and moral altruistic motives based on deontological perspective (on promises).</p>
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Table A.2

*Means and Standard Deviations for Independent Variables of Occupational Stress Inventory and Multifactor Leadership Questionnaire*

Independent Variables	Mean	Std. Dev.
<b>MLQ subscales:</b>		
Idealised influence	8.87	1.60
Inspirational motivation	8.4	1.49
Intellectual stimulation	8.12	1.80
Individualised consideration	8.80	1.75
Contingent reward	7.20	2.25
Management by exception	7.99	1.70
Laissez-faire	4.67	1.87
<b>OSI-R subscales - Occupational roles</b>		
Role overload	352.89	33.62
Role Insufficiency	32.75	6.53
Role ambiguity	20.28	6.17
Role Boundary	19.71	5.17
Role Responsibility	22.13	5.40
Physical Environment	32.55	6.73
<b>Personal Strain –</b>		
Vocational Strain	15.14	4.46
Psychological strain	17.92	4.48
Interpersonal strain	19.81	7.08
Physical strain	21.62	5.79
<b>Personal Resources –</b>		
Recreation	23.06	7.87
Self Care	24.75	6.26
Social Support	25.97	6.85
Rationale/Cognitive Coping	42.70	7.03

Table A.3

*Correlations between variables, unstandardised regression coefficients (B), the standardised regression coefficients ( $\beta$ ) and the semi partial correlations ( $sr^2$ ).*

Variables	1	2	3	4	5	B	$\beta$	$sr^2$
Personal Strain	1.00	-.07	.000	.29	.81			
Transformational L.		1.00	.39	-.15	.09	-.88	-.16	.02
Transactional L.			1.00	-.21	.02	.28	.04	.002
Role Overload					1.00	.53	.83	.59

Appendix A.4

Hypothesis 1:

*Means and Standard Deviations of Transformational Leadership Style and Transactional Leadership Style.*

Leadership Style	Means	Std. Dev.
Transformational	25.38	3.89
Transactional	15.19	3.30

Hypothesis 1(a):

*Means and Standard Deviations of Transformational Leadership style, Social Support and Self Care.*

Description	Means	Std. Dev.
Social Support	25.97	6.84
Self Care	24.75	6.26
Transformational Leadership style	25.38	3.89

Hypothesis 2:

*Means and Standard Deviations of Transactional Leadership style, Recreation, Rational Cognitive Coping and Role Conflict.*

Description	Means	Std. Dev.
Recreation	23.05	7.87
Rational Cognitive Coping	42.70	7.02
Role Conflict	19.70	5.16
Transactional Leadership style	15.19	3.33

Hypothesis 3:

*Means and Standard Deviations of Senior Administration staff positions.*

Position at school	Mean	Std. Dev.
Principal	86.4	22.2
Assist. Principal	74.5	22.5
Assist. Principal Admin.	76.0	13.3
Assist. Principal Religious Educ.	80.2	22.4

Hypothesis 4:

*Means and Standard Deviation of Age and Length of Service.*

Description	Means	Std. Dev.
Age	33.0	8.6
Length of Service	6.39	6.53

Hypothesis 5:

*Means and standard deviations of staff with leadership training and staff without leadership training and experienced stress*

Leadership Training	Means	Std. Dev.
With training	33.71	6.33
Without training	31.57	6.62

Hypothesis 6:

*Means and Standard Deviations of Leadership styles and Role Conflict.*

<i>Description</i>	<i>Means</i>	<i>Std. Dev.</i>
Leadership style	55.0	5.0
Role Conflict	19.70	5.16