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Project Title: "An Investigation into the Time Management Behaviours and Attitudes of New Zealand Library Managers in the Tertiary, Public and Legal Sectors."

Year Project Completed: 2003

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"An Investigation into the Time Management Behaviours and Attitudes of New Zealand Library Managers in the Tertiary, Public and Legal Sectors."

by

Lynley Elisabeth Stone

Submitted to the School of Information Management,
Victoria University of Wellington
in partial fulfilment of the requirements for the degree of
Master of Library and Information Studies

August 2003

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"Time is the substance I am made of. Time is a river that sweeps me along, but I am the river; it is a tiger that rips me apart, but I am the tiger; it is a fire that consumes me, but I am the fire."

Jorge Luis Borges – A New Refutation of Time

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"An Investigation into the Time Management Behaviours and Attitudes of New Zealand Library Managers in the Tertiary, Public and Legal Sectors."

(hereafter referred to as 'The MLIS Research Project')

being undertaken by

Lynley Elisabeth Stone

in partial fulfilment of the requirements of the degree of
Master of Library and Information Studies,
School of Information Management,
Victoria University of Wellington.

Topic Commencement: **October 2002**

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ABSTRACT

This research explores whether there are patterns to how the line, middle and senior managers of New Zealand's public, tertiary and law libraries manage their time. It identifies the time management behaviours, and attitudes to time management, of managers at different levels and in different sectors, and explores whether managers who spend more time on self-care activities and a range of out-of-work commitments display different time management behaviour. It also explores a range of factors that may influence the development of individual time management behaviours.

All public and tertiary libraries, and those law libraries with three or more staff, were approached, and 102/126 agreed to participate. A printed questionnaire was mailed to 584 managers in these libraries, and 419 (71.75%) were returned. This questionnaire gathered a range of demographic data, sought opinion as to the factors that had influenced the development of time management behaviour (such as study while working and formal time management training) and included three established survey instruments. These were a modified version of the *Time Waster Index* (Mackenzie 1972), the *Time Management Behavior Scale* (Macan 2002), and the *Index of Polychronic Values* (Bluedorn et al. 1999). A series of semi-structured focus groups and individual interviews were used to collect supporting information, mostly on the influences on time management behaviour.

The study found that there is a high level of similarity in managerial time management behaviour between public and tertiary libraries, and that law libraries, being smaller and more focussed on tight deadlines and packaged information, require somewhat different behaviour. The size of library within sectors, and level of management are significant indicators of difference, with senior managers using more systematic time management techniques than line managers. The results of this study are comparable with a large-scale study of time wasters conducted in America in the late 1980's, which implies that aspects of time pressure have remained consistent over time.

It would seem that time management behaviour develops over the course of an individual's life. Each person has a core set of time management behaviour, often strongly influenced by their parents or other family members during childhood, which changes over time in response to life events such as a new job, study or parenthood. A library manager will be required to utilise a range of time management techniques that are appropriate to their work environment, which will change depending on the size of library and level of management.

Keywords:
Time Management; Polychronicity; Management Behaviour; Public Libraries; Tertiary Libraries; Law Libraries; New Zealand.

1 THE PROBLEM

1.1 Problem Statement

Do managerial time management behaviours differ between library sectors or levels of management? What other factors influence the development of time management behaviour?

Of all managerial skills, time management is one of the most personal. It influences the attitude of managers to their staff and to their jobs, and helps create the culture of the workplace. Specific time management techniques may be learned as part of formal training, but an individual's time management behaviour and attitudes about time mostly develop over a lifetime, and are inevitably influenced by a range of other factors such as personality type, becoming a parent and undertaking study while working.

Macan, Shahani, Dipboye and Phillips found that time management is not a single set of behaviours, but rather consists of several different factors, some behavioural and others attitudinal. Regardless of the time management behaviours that are used, people who perceive that they have control over time report lower stress levels than those who feel less control over time (Macan et al. 1990). The implications of this for managerial effectiveness are significant, and is an impetus to find ways to increase the feeling that one is in control of time.

While there is a large body of research into time management, only two major studies have been undertaken within the library profession. In 1973, Thomas and Ward surveyed 29 managers in a range of British libraries (Thomas and Ward 1973), and between 1986 and 1989, Gothberg studied the time management behaviours of library directors in the largest academic, public, state and special libraries in the United States (Gothberg and Riggs 1988; Gothberg 1991a, 1991b, 1991c). Neither of these studies is recent, and apart from the small, exploratory study by Thomas and Ward, no investigation has been undertaken of whether there is variation in time management behaviours across different levels of library management. No significant research has been undertaken into the time management practices of managers in New Zealand libraries.

Libraries, like other businesses, require professional management skills. Many library managers are undertaking higher degree study to upskill, in particular upgrading their library qualifications and undertaking business-related diplomas and advanced degrees. Anecdotal evidence suggests that library managers who work in law libraries operate in an environment with a tighter focus on time as a chargeable commodity, compared with those working in public and tertiary libraries. However, no research has been taken before now to explore whether there are differences in time management behaviour between these sectors.

In addition, all library managers are faced with the challenge of maintaining a healthy work/life balance. The time demands of children and other dependents, community and professional commitments and personal study mean that managers are very aware of time pressures and of the time management strategies that they use.

This research explores whether there are patterns to how the line, middle and senior managers of New Zealand's public, tertiary and law libraries manage their time. It identifies the time management behaviours, and attitudes to time management, of managers at different levels and in different sectors, explores their perceived control over time, and the influence of out-of-work commitments and self-care activities on time management behaviour. It also explores factors that have influenced the development of individual time management behaviours.

1.2 Theoretical Framework

The first part of this study sets out to explore whether there are differences in time management behaviour based on management level and library sector. The second part explores whether training and a range of life event factors influence time management behaviour. Apart from Gothberg's cross-sectoral study from the late 1980's, there is no significant body of library and information studies literature to draw upon. It is therefore necessary to look to the broader fields of management studies, psychology and education to provide appropriate theoretical framework for this research.

Management Studies Theory

One fundamental question is whether there is such a thing as a generic "management" job, and whether it is possible to generalise across different levels of management, across different sectors within the same industry (as in the current study), or across industries.

Level of Management

The four management functions, planning, organising, directing and controlling (derived from Fayol's 1916 work, are the cornerstone of management theory. However, it is recognised that the emphasis given to each of these functions varies depending upon the focus of the job, which is broader at higher levels of management (Mahoney, Jerdee and Carroll 1965). This is often depicted graphically using a variation of Katz's model of the skills needed at different levels of management. In its pure form, Katz's model shows that lower level managers make most use of their technical and human skills, whereas senior managers make most use of their conceptual and human skills (Katz 1974).

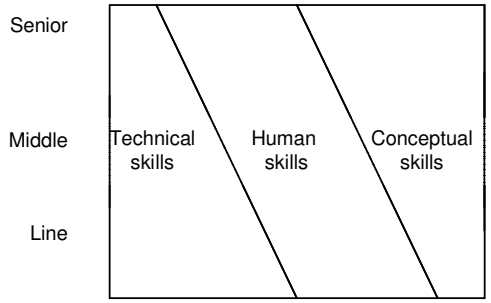

Figure 1. Katz's model of managerial skills required at different levels of management

Applying this theoretical framework, one would expect to find differences in the time management behaviour exhibited by library managers at different levels. A line manager must be available to ensure that production or service quality is maintained, whereas a senior manager needs time away from interruption to think, plan and be involved in strategic initiatives. However, it is recognised that the size of organisation makes a difference to the content of job roles. A senior manager in a small organisation may perform tasks within their working day that range from line management through to strategic management, and which would be quite separate in a larger organisation. Berner and Siess have both explored this in

relation to solo librarians and library managers in small special libraries (Berner 1988; Siess 2002).

Types of Organisation

If there are variations in management behaviour between levels of management, and between managers in different sized organisations, how great are the differences between different industries? Studies that have been conducted to explore whether there is a core set of management behaviour across the for-profit and not-for-profit sector have concluded that there is little difference in the roles of managers, particularly between organisations of the same size (Driscol, Cowger and Egan 1979).

In time management research, Mackenzie's *Time Waster Index (TWI)* provides a generic set of time waste factors that have been developed over a period of more than twenty years, working with organisations in forty countries. Mackenzie found that "striking similarity can be discerned in problems with time at virtually all levels of management in nearly all types of enterprise in every country." (Mackenzie 1972, 3). He defines time wasters as "anything that prevents you from achieving your objectives most effectively" (Mackenzie 1997, vii).

Mackenzie's *TWI* was first published in 1972, and refined since then in two subsequent editions of his book, *The Time Trap* (1991 and 1997). LeBoeuf used Mackenzie's list of time wasters to survey forty sales representatives and fifty engineering managers, exploring whether the two groups use time differently, as the nature of their jobs is very different (LeBoeuf 1980). The same list was used by Gothberg in her cross-sectoral series of studies of American library directors in the late 1980's (Gothberg and Riggs 1986; Gothberg 1991a, 1991b, 1991c).

Mackenzie's theory that people in different industries experience the same core set of time wasters is correct in so far as there is a high level of agreement about what the top ten time wasters are, but the rank orders assigned can be significantly different between industries,

indicating that there is wide variation in the time management techniques required to undertake roles in different industries and at different levels.

In the current study, Mackenzie's *TWI* is used explore whether there is a pattern in the time wasters that are perceived as being the greatest problems for between levels of management and/or for different library sectors. The exploration of sectoral differences in time management behaviours is discussed in the context of Gothberg's research, exploring whether the same trends that she found are apparent in the New Zealand survey, thereby providing a comparison within the same industry. However, the population of the current study varies considerably from that in Gothberg's work, as she surveyed the library directors (senior managers) of the largest libraries in America – there are few New Zealand libraries of comparative size.

Behavioural Instruments

In order to measure whether time management behaviour differs between management level or library sector, it is necessary to collect data about the specific time management behaviours of participants. A range of survey instruments have been developed to measure time management behaviours: several of these are discussed in the literature review.

Two established psychological tests which have been used by other researchers were selected for use in this study: the *Inventory of Polychronic Values (IPV)* (Bluedorn et al. 1999) and the *Time Management Behavior Scale (TMBS)* (Macan 2002). The decision to use these two instruments together was guided by the work of Conte, Rizzuto, and Steiner (1999).

Polychronicity

Bluedorn et al's polychronicity theory states that individuals have a preference along a continuum between polychronic, or multi-tasking, behaviour (that is, doing more than one thing in the same time-block, such as watching TV and eating, or having several partially-completed work projects underway at any given time), and monochronic, or mono-tasking,

behaviour (such as preferring to complete one task before embarking on another) (Bluedorn et al. 1999). They developed the *Index of Polychronic Values (IPV)*, an instrument with high internal validity, to measure this preference.

An awareness of polychronicity preference is useful in the workplace, as it is possible to modify the way work is assigned or communication initiated, based on knowledge of an individual's preferred approach. A polychronicity score indicates an individual's preference for operating, but not necessarily the way someone does operate. In the workplace, a person who prefers to be polychronic may adopt and report a more monochronic style of behaviour, depending upon the workplace culture (discussed by Persig 1999). In the current study, managers were asked to fill in the *IPV* in relation to their work context.

Time Management Behaviour

Whereas the *IPV* explores participants' attitudes to time use, another tool is required to explore what time management techniques are actually used. Several instruments have been developed (Bond and Feather 1988; Distasio 1988; Macan et al. 1990) deriving factors from popular time management literature and developing instruments that have high levels of validity in terms of measuring time management behaviour. Macan's instrument, the *Time Management Behavior Scale (TMBS)*, has been developed and refined since 1990, and is frequently cited in the literature as one of the most reliable time management behaviour instruments.

The *TMBS* was devised to test the dimensionality of time management behaviour (Macan 1990, 761) – that is, whether there are distinct factors that make up time management behaviour. The instrument explores four factors:

- *Mechanics of Time Management*
- *Setting Goals and Priorities*
- *Preference for Organisation*
- *Perceived Control Over Time.*

Macan's studies used the *TMBS* in conjunction with a stress-measuring instrument. The results indicated that the *Perceived Control Over Time* subscale of the *TMBS* was correlated with stress levels: people who scored higher on this scale reported lower levels of stress (Macan et al. 1990; Macan 1994, 1996). Theory from a wide range of sources, including the Transcendental Meditation movement (Harung 1998), poses that people who feel less stress are likely to be more productive in the workplace. However, the perception of being in control of your own time while at work appears to be related to the demands within your workplace. Managers at all level must respond to the needs of customers, subordinates and more senior managers, but the perception of being in control of ones own time may vary according to job level, with lower level managers feeling less in control (Cole 1995).

Self-Care

Time management cannot be divorced from all other management behaviour, nor from the manager as a whole person. Most management training courses cover some aspects of time management, but often this content is presented in another guise, such as personal efficiency, goal setting, project management, leadership or life balance. Stephen Covey is one of the most influential management theorists of the late 20th century. His publications have been widely read, the diary system that bears his name is well established, and his techniques and theories are widely used by management trainers and workplace facilitators.

Covey's theory of Principle Centered Leadership is a values-based approach to whole-life goal and priority setting. In this model, a person identifies the different roles that they perform (parent, partner, manager, golf player, etc) and sets goals and schedules activities based around a wholistic view of themselves as a person. His Four Quadrant Leadership model is a widely accepted tool for helping people identify what is important, as opposed to urgent, in their lives or in particular roles. Quadrant 2, the Important but Not Urgent section, is where the planning and base level work is undertaken.

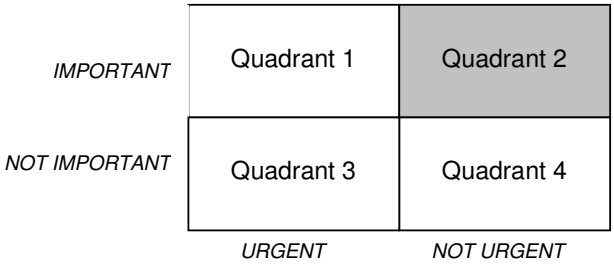

Figure 2. Covey's Four Quadrant Leadership Model

Health and self-care – looking after the whole person – is a key Quadrant 2 activity, which the whole person will benefit from paying regular attention to (Covey 1989; Covey, Merrill, and Merrill 1994). In the current study, the amount of time that an individual spends in self care activities and/or exercise is examined and explored in relation to time management behaviour.

Time Management Training

A core tenant of adult education theory is that people learn more effectively if they are self directed, motivated to learn, and if instruction is undertaken in a manner targeted to their needs rather than in a generic setting (Knowles 1984, 12). In time management literature, Macan's research indicates that time management training has little practical effect on time management behaviours, but that having attended time management training increases the perception that people have control over time (Macan 1994, 1996).

Summary of Theoretical Framework

While it is agreed that there is a core set of managerial behaviour, in detail this varies according to management level, size of organisation and between industries. Psychological theory states that individuals exhibit a range of preferred styles and will utilise certain behaviours according to their personal preference and, to some extent, to the demands and culture of the workplace. Education theory explains that targeted learning environments are more effective in changing learner behaviour than generic group instruction. This exploration of the time management behaviour of New Zealand library managers draws upon this wide theoretical base.

1.3 Research Question, Sub Questions and Hypotheses

This research seeks to answer the following question:

"What effect do sector, management level, self care, out-of-work commitments and time management training have on the attitudes of New Zealand public, tertiary and law library managers to their own time management, and on the time management techniques they use?"

The sub questions are as follows (where *time management behaviours* include perceived control of time; time management techniques used; level of polychronicity and ranked timewasters)**:**

1) To what extent do time management behaviours differ between sectors?
2) To what extent do time management behaviours differ between levels of management?
3) Is there a relationship between regular self care and perceived control of time?
4) Is there a relationship between out-of-work commitments and perceived control of time?
5) Is there a relationship between out-of-work commitments and level of polychronicity?
6) What training, life and employment factors have influenced the development of personal time management behaviours?
7) Is there a relationship between level of polychronicity and perception of control over time?

The following null hypotheses are explored, at a significance level of $p < 0.05$:

H_1. That there will be no difference between the time management behaviours exhibited by sector [Research Question 1].

H_2. That there will be no difference between the time management behaviours exhibited by management level [Research Question 2].

H_3. That library managers who regularly engage in self-care activities will have no greater perceived control over time than those who rarely engage in self-care activities [Research Question 3].

H_4. That library managers who have a high level of out-of-work commitments will exhibit no more systematic time management behaviours or have higher polychronicity scores than those who have few commitments [Research Questions 4 and 5].

H_5. That time management behaviour is not influenced by time management training or life changes [Research Question 6].

H_6. That library managers who have undertaken tertiary level study while employed will exhibit no more systematic time management behaviours than those who have not undertaken such training [Research Question 6].

H_7. That there will be no correlation between perceived control of time and the level of polychronicity score [Research Question 7].

1.4 Definitions

Levels of Management.

- ***Senior manager*** = the library's director or top manager, whose focus is largely on strategic management. Each library would have a single senior manager, who would report to a manager external to the library.
- ***Middle manager*** = head of section, who reports to the senior manager, and to whom line managers report. In some libraries there may be a deputy librarian or other strategic managers who do not supervise line managers. In this case, they are defined as middle managers. Smaller libraries may not have middle managers.
- ***Line manager*** = head of department, branch librarian, and team leader. These managers will perform a mix of operational duties and supervisory management.

Out-of-Work Commitments. Regular, ongoing and/or structured time commitments outside work. These include:

- ***Dependents*** = children, disabled or elderly people in their care
- ***Group/Committee involvement*** = membership of community, service or religious groups/committees that meet regularly for administrative purposes (groups that meet for spiritual purposes are included under "Self Care").
- ***Professional Activities*** = regular involvement in groups such as LIANZA or NZ Law Librarians' Group or a professional body related to their job.
- ***Involvement in tertiary-level study*** = enrolment in a course or programme at tertiary level for the duration of one semester or longer.

Perceived Control Over Time. The attitude a subject has to their own time management, using the *Perceived Control Over Time* subscale of Macan's *Time Management Behavior Scale (TMBS)* (Macan, 2002). This includes factors such as "I find myself procrastinating on tasks that I don't like but must be done" and "I underestimate the amount of time that it will take to accomplish tasks."

Polychronicity. The level to which a person prefers to do more than one thing simultaneously (e.g. read a magazine and watch TV) or within the same time block (e.g. have several tasks underway at once and switch between them rather than completing one before starting the next). A person with a low preference for such ambiguity, who prefers to concentrate on one task at a time, is termed monochronic. The level of polychronicity is measured by the *Inventory of Polychronic Values (IPV)* (Bluedorn et al., 1999).

Sector. The type of library that a manager works in. For the purpose of this study, three sectors are explored: public, tertiary and law libraries.

Self Care. Regular activities focussed on nurturing your self. These include:

- Exercise
- Relaxation/Spiritual Reflection = any individual or group activities such as reading for pleasure, hobbies, gardening, spa treatments, religious worship, meditation, yoga, that "recharges batteries" away from work. This is a non-judgemental category that indicates whether the subject takes regular time out to reflect and nurture themselves.

Time Management Behaviours. The techniques that are used to manage time. This is measured using two subscales of Macan's *Time Management Behavior Scale (TMBS)* (Macan 2002). These are:

- ***Setting Goals and Priorities*** = identifying what needs to be achieved. This includes factors such as "I set priorities to determine the order in which I will perform tasks each day" and "I break complex, difficult projects down into smaller manageable tasks."

- ***Mechanics of Time Management*** = making lists and using planning tools. This includes factors such as “I carry an appointment book with me” and “I write notes to remind myself of what I need to do.”

A third subscale is related to both behaviours and attitudes towards time management:

- ***Preference for Organisation*** = the orderliness of the workspace. This includes factors such as “My workdays are too unpredictable for me to plan and manage my time to any great extent” and “When I make a things-to-do list at the beginning of the day, it is forgotten or set aside by the end of the day.”

Time Management Training. The formal and informal ways in which a subject has learned about time management. These include:

- Attending training sessions = formal sessions provided by the employer or an external trainer.
- Attending motivational lectures/conference papers
- Reading about time management
- Being coached or mentored = individual guidance and instruction
- Developed gradually = learn by observing the behaviour of others in the workplace, and in social, family and other contexts
- Developed in response to a particular event = events such as undertaking tertiary study, the birth of a child, appointment to a new job, employment in a new sector or industry, or failure due to poor time management may make the subject modify their time management behaviour

Time Wasters. Activities and behaviours that prevent the subject from concentrating on their core job. The list that is used in this study is a modified version of the *Time Waster Index (TWI)* (Mackenzie, 1972).

1.5 Assumptions of this Study

The following assumptions underpin this research:

- The research instruments are valid and reliable.
- That library managers are willing to be honest and open in their discussion of this topic.
- That it is possible to generalise about the nature of work done by managers at each level in libraries of similar size within the same sector.

1.6 Delimitations of this Study

This study is delimited in the following ways:

- By level of management. The senior manager in each participating library identified all positions within their library which they considered to be managerial, based upon definitions supplied by the researcher. Non-managerial staff were excluded from the survey.
- By sector. This study was limited to public, tertiary and larger law libraries. Other library sectors, including the National Library, government department and special libraries, were excluded to keep the size of the study manageable.

  All **public** libraries in New Zealand were approached. These fall into two groups: the 18 largest libraries (the *Metronet* libraries), and 63 smaller libraries. Whereas a size limit was placed upon the law libraries, no limit was placed upon public and tertiary libraries, with the result that a small number of sole-charge public or community libraries have been included in the survey.

  Within the **tertiary** sector, this research was confined to the libraries of the state-owned tertiary education institutions: 8 Universities, 18 Polytechnics and Institutes of Technology, and 4 Colleges of Education (Otago Polytechnic and Dunedin College of Education share the same Library, which, for the purposes of this research, is counted as a College of Education). These groups were not differentiated in the data collection. The Wananga were excluded, as were Government Training

Establishments, and the 800+ Private Training Establishments. This decision was taken for two reasons. Firstly, the assumption was made that the nature of managerial work in the university, polytechnic and college of education libraries would be quite similar (depending upon size of the library), and that there may be a wider range of experience reported if these libraries were included. Secondly, the population size had to be kept to a realistic level.

Only those **law** libraries that have three or more staff were approached. It was initially intended to limit the survey to managers in libraries with five or more staff, but this number was revised downwards in order to expand the population base. The intention was to survey law library managers who have some staff and/or strategic responsibility, rather than sole charge law librarians.

- By specific types of time management behaviour. This study explores perceived time wasters, certain time management behaviour, and preference for polychronic behaviour. It does not explore actual use of time through any attempt at time logging, nor does it explore factors such as stress levels, personality type or job performance, which have been explored by other time management studies.

1.7 Limitations of this Study

The following limitations have been identified:

- The chief source of information as to which public and tertiary libraries should be approached was the published directory *Contacts in New Zealand Libraries* (June 2002). The list of suitable law libraries of appropriate size was identified with the assistance of two experienced law librarians. While the sources used to identify libraries were the most reliable available, there is potential that some libraries may have been omitted from the list.

- The size of the law library group was too small to be generalisable, so the results from this sector are treated in a descriptive manner rather than being subjected to statistical analysis.

- Permission to distribute questionnaires was reliant upon the support of the senior manager of each library. The rate of return and level of completeness was entirely dependent upon the willingness of libraries and of individuals to complete a long questionnaire (it took 15-20 minutes to complete). It is possible that some recipients felt compelled to complete the questionnaire because their manager had approved its distribution, or because they were acquainted with the researcher. However, the number of libraries that agreed to participate in the study exceeds that required for a representative sample, as does the number of returned questionnaires from each sector.

- There is the potential for bias in the questionnaire, as those who were less interested in the subject may have not participated. Also, very busy managers may have opted not to participate. However, an examination of returned surveys reveals no discernable pattern to non-returns according to sector, job level or library size. Verbal and written comments were received from non-respondents, and included a range of reasons including “not our/my policy to do surveys”, “not interested”, “oversurveyed”, “interested but too busy.”

- Although a definition of levels of ‘management’ was provided by the researcher, it was evident from the authorised distribution lists supplied by libraries that what constituted a management position was interpreted in a range of different ways. Most notable were inconsistencies in how libraries designate team leader positions, and how professional staff with specific responsibility, such as cataloguers, were regarded.

- The decision to use a self-administered anonymous questionnaire for the first phase of the study meant that no communication was possible between the researcher and respondents to clarify questions and instructions, or to seek additional information from those who made comments on the form. Although extensive testing of the questionnaire had removed many obvious ambiguities, it is not possible to guarantee that all questions were answered in the way the researcher intended.

- Human Ethics Committee approval was required for both the questionnaire and focus groups. As the questions for the focus groups could not be finalised until some preliminary analysis was undertaken of the questionnaire data, the second Human Ethics application was submitted late in the research process, and, once approval was granted, a very limited amount of time was available to recruit and conduct the interviews. These interviews were limited to the greater Auckland region, and due to time constraints the methodology was slightly modified and some individual interviews were also carried out.

2 LITERATURE REVIEW

Introduction

In libraries, as in other industries, time management is a core managerial skill. Although some research has been undertaken on time management in a library context, the bulk of the discussion in this review is based upon research done in the wider fields of management studies and psychology.

Time has always been an important commodity to be managed, but the emphasis in time management studies was initially on the efficient use of workers' time (e.g. Taylor's scientific management approach (Taylor 1911)), rather than on how managers could utilise their own time more effectively. However, during the twentieth century, white collar work and the information society became more important. Mintzberg found that, far from being able to be planned systematically, managers' time was fragmented and was difficult to predict (Mintzberg 1973). Drucker recognised the importance of executive time management in this changing environment (Drucker 1967), and it is from this work that serious discussion of time management for managers has developed.

Libraries are at the forefront of the information society. The changes in the publishing industry and in methods of delivery of information have radically transformed the jobs of librarians in all sectors. Libraries are increasingly expected to operate using business models, and library managers are developing skills and seeking advanced management training that would have been considered unnecessary in previous decades (Traue 2003). In some libraries, non-librarians are being appointed to managerial positions, while professional librarians are filling managerial roles in a range of other industries (Jenda 1994). This raises the question of whether there are differences in managerial behaviour between library managers and managers in other industries.

This literature review examines the key Library and Information Studies research in the area of time management, as well as pertinent studies from other fields. It will explore the following key areas:

- Attitude to time management
- Time wasters that are experienced
- Time management techniques that are used
- Sector and time management
- Level of management and time management
- Self care and time management
- Out-of-work commitments and time management
- Time management training and time management

The Nature of the Literature, with a Focus on Library Studies Research

The literature discussed in this review was identified from a range of sources. The most useful databases were *LISA* and *Library Literature* for library studies material; management studies databases *Emerald, ProQuest* (which includes *ABI/Inform*), *EBSCO Business Source Premier* and *Expanded Academic ASAP*; and specialist databases *PsychInfo, ERIC* and *Digital Dissertations*. Additional literature was identified from the bibliographies of books and articles. Citation searches on key articles were undertaken using *Social Sciences Citation Index*. *Te Puna* and the online catalogues of Victoria University of Wellington and The University of Auckland Libraries were searched for books and research documents, and the Internet was searched using several search engines for relevant literature, and for specific items. Key dissertations were obtained from EDRS and UMI. Unless noted, all literature that has been referred to has been examined in print or .pdf.

Most of the literature on time management falls into the popular “how-to-do-it” category. Since Drucker, many books have been published to assist managers obtain balance in their lives and achieve some degree of mastery over their time. Some are targeted at specific industries, such as librarianship (Berner 1988; Cochran 1992; Walster 1993; Masterton 1997; Siess 2002), whereas others are aimed at a general audience (such as Mackenzie 1972; Black

1987; Covey 1989; Covey, Merrill, and Merrill 1994; Morgenstern 2000). Similarly, hundreds of popular “how to do it” articles on time management are published each year in general-interest and industry-specific serials. There has been little variation in the techniques and approaches that have been outlined in these publications over time, and while recent publications do include reference to laptops, desktops, PDAs and mobile phones, and allude to the consequential issues of email management and expectations of constant availability and instant answers (discussed by Todaro 1999), the core time management strategies that are recommended have remained remarkably constant.

Macan points out that this popular material is not built on a critical research base (Macan 1994). This is as true in library studies literature as in other areas: very little empirical research has been conducted on time management in libraries. Most are studies of one workplace, focussing on issues such as improving workflow efficiency for operational tasks (e.g. Rogers 1995; Sears 1998; Watkins 1999). Both key time-management studies of library managers use some form of time-log methodology (Thomas and Ward 1973; Gothberg and Riggs 1988; Gothberg 1991a, 1991b, 1991c).

The largest and most broad-based research into the time management practices of library directors was undertaken by Gothberg in the United States between 1986 and 1989. She surveyed large populations of library directors across four different sectors: Academic (Gothberg and Riggs 1988), public (Gothberg 1991a), special (Gothberg 1991b)and state libraries (Gothberg 1991c). Her research explored five areas: ‘profile of the respondent, hours per week spent in the traditional management activities, delegation skills, perceived time wasters, and management styles’ (Gothberg 1991b, 119). Not all of these areas are being replicated in the current study, but her exploration of time wasters, which is discussed below, has been repeated. Gothberg’s focus on library directors in the largest libraries of each sector that she surveyed makes comparisons with the New Zealand context difficult. A very small subset of the New Zealand library community can be directly compared to her research population: this is explored further in the discussion of Research Question One.

Beyond the field of library studies, research is being undertaken in several areas relevant to this study. These include time management within workplaces; the relationship between home and work life; the relationship between time management and management style, personality style, boredom, stress and a range of similar factors; and the effectiveness of time management training. Oshagbemi provides an overview and comparison of several of the key studies of managerial time management (Oshagbemi 1995). Relevant research is discussed below.

Research Methodology and Survey Instruments

Many pieces of time management research include some form of time logging or systematic time estimation exercise, to ascertain how subjects use their time. Although the current research makes only slight use of this methodology, the research instruments that have been used have been developed out of the experience of researchers who have used this approach, and a brief summary of various approaches is useful here in terms of the validity of research findings. Surveys which ask respondents to estimate their own time use (such as LeBoeuf 1980; Gothberg and Riggs 1988) use the least intrusive method of logging time but are considered to be the least reliable, whereas diary-based systems (such as Ferguson and Taylor 1980; Boice, Scepanski, and Wilson 1987) and structured, non-participant observation (first used by Mintzberg 1973), are labour intensive, can only be used with small samples, but are considered to be the most accurate methods (Thomas and Ayres 1998).

The few small timelog-based pieces of research that have been undertaken in libraries are difficult to compare as methodologies used are not consistent (Brown 2001). Although some of these surveys include categories that cover professional study in worktime, and involvement in professional activities outside the workplace, they are not clearly differentiated, and are not useful for comparison with the current study.

Macan points out that “little research has been conducted on the relationship between job performance and time management” (Macan 1994, 383). Some studies have explored time management in relationship to students’ Grade Point Averages (such as Macan et al. 1990) but this is not the same as assessing workplace behaviour. Orpen attempted to address this

by having the employees' managers assess their time logs for effective use of time(Orpen 1994), and Macan also used supervisor ratings of job performance to assess the impact of time management training (Macan 1994).

Attitude to Time Management

Time is both an objective reality, in that every person has the same number of hours in a day available to them, and a subjective element, in that attitude to and use of time differs between individuals (Harung 1998). The extent of control that an individual feels they have over their time is a key factor in a range of time management research (Bond and Feather 1988; Macan et al. 1990; Covey, Merrill, and Merrill 1994).

In his analysis of time management research instrumentation, Mudrack considers Macan's *Time Management Behavior Scale (TMBS)* (Macan et al. 1990) and Bond and Feather's *Time Structure Questionnaire (TSQ*) (Bond and Feather 1988) to be "among the most promising of this new crop of time-oriented scales" (Mudrack 1997, 223). These two instruments are being used in a growing number of empirical studies. Each lists a range of time management behaviours, and each groups these behaviours into factors or subscales. The *TMBS* lists more specific detail for each item than *TSQ,* and Macan recommends that it be analysed at the subscale level, whereas the results of *TSQ* are more often analysed as an overall score. The *TMBS* has been modified by Macan over time (the current study uses the most recent version, obtained from the author at the end of 2002), and has not been published in its entirety. As a consequence, researchers who have used this instrument have used different versions of it, which may reduce the validity of inter-study comparisons. Bond and Feather's instrument is freely available.

Macan, Shahani, Dipboye and Phillips investigated whether the self-reported time management behaviours of students were related to their academic achievement. They found that students who scored higher on the *TMBS* subscale *Perceived Control Over Time* felt more satisfied with their life and work, less role ambiguity, and reported lower stress, thereby

drawing the link between attitude to time and attitude towards other aspects of life (Macan et al. 1990).

Distasio developed a 40 item *Executive Time Management Inventory (ETMI)* which measures attitudes and use of time management skills across work environment, self management, staff supervision, planning/goal setting, and communications (Distasio 1988). This was used by Slaven and Totterdell (1993) and adapted to an 8-item scale for use by Orpen (1994).

The relationship between time management and time estimation has been explored by several researchers, although these studies have been conducted in experimental rather than workplace settings. It has been found that people who feel more control over time are not necessarily better at estimating how long a task would take (Burt and Kemp 1994; Francis-Smythe and Robertson 1999a), which may imply that the level of actual task performance is not related to the perception of one's own behaviour. However, it has been found that the quality of decision making decreases under time pressure (Meyer, Sonoda, and Gudykunst 1997), but people who feel more in control of time report feeling less stress (Misra and McKean 2000).

When considering attitudes to time, there are many ways of categorising people. Studies have explored the *Myers Briggs Type Indicator (MBTI)* Types, Type A/B Personalities, and monochronic/polychronic personalities. A monochronic person is one who prefers to focus on one thing at a time. They would, for example, consider an unexpected phonecall an interruption, and attempt to reschedule it. Conversely, a polychronic person is more comfortable with multitasking, and so would feel comfortable in handling the call and then returning to their previous job (example and definition from Bluedorn, Kaufman, and Lane 1992). Traditional time management strategies tend towards a monochronic behaviour pattern. However, a polychronic person may use the same techniques (e.g. may make a list of tasks to perform) but will do so in a different way to a monochronic person (who may schedule exact start and finish times for tasks) – and both will be perceived as being equally successful by their colleagues (Barry, Cramton, and Carroll 1997).

Polychronicity is an anthropological concept, first discussed by Hall (1959). Kaufman, Lane and Lindquist developed a four item scale, the *Polychronic Attitude Index (PAI),* to measure polychronicity (Kaufman, Lane, and Lindquist 1991). They found that people with higher polychronic tendencies experienced less role overload, had higher education levels, worked more than 40 hours a week, and were more likely to be involved in social groups and clubs, although they found no correlation with age, gender, marital status or income. Bluedorn, Kaufman and Lane developed the *Monochronic/Polychronic Orientation Scale* for organisations, based on *PAI,* exploring the extent of polychronicity in the work team and in an organisation's culture (Bluedorn, Kaufman, and Lane 1992). In 1999, Bluedorn, Kalliath, Strube and Martin expanded the *PAI* to a 10-item scale, the *Inventory of Polychronic Values (IPV)* which has a higher level of validity than *PAI* (Bluedorn et al. 1999). This instrument is used in the current study.

Several studies have found that Type A personalities, "characterised by a chronic sense of time urgency and an excessive competitive drive" (Robbins et al. 2003, 370), are more likely to be monochronic in their approach to their job (Frei, Racicot and Travagline 1999; Palmer and Schoorman 1999) in that they are more likely to use structured time management techniques (Bond and Feather 1988), although no evidence has been found for a link between level of polychronicity and productivity (Conte, Rizzuto, and Steiner 1999; Bluedorn and Denhardt 1988).

Perceptions of the structure of time vary between polychrons and monochrons (Bond and Feather 1988). The link between polychronicity and the *Perceived Control Over Time* subscale of the *TMBS* will be explored in the current study: the need for this was suggested by Macan (Macan 1994, 389).

Time Wasters that are Experienced

Drucker said “the difference between time-use and time-waste is effectiveness and results” (Drucker 1967, 35), and pointed out that time waste is more of a problem for managers than for manual workers who are tied to quantitative output measures.

Time logging reveals which time wasters are experienced by individuals, and lists of commonly-reported time wasters have been developed. Studies of time wasters have shown that there is a high degree of consistency between the top-ranked time wasters reported by managers across different industries, although one difference that is noted, which may be significant for a study of libraries, is that democratic cultures, such as educational institutions, place more emphasis on communication within and outside the workplace, in areas such as democratic decision making (Mackenzie 1975). For example, Thomas and Ayres concluded that interruptions were a core part of the job for school principals (Thomas and Ayres 1998). Perlow discussed the distracting impact interruptions have on engineers in a software company, and explored the contradictory fact that the interruptions are necessary to keep their colleagues’ work flowing, and that all members of the team contribute to the interruptions of other members (Perlow 1999; also noted by Mintzberg 1973). In such an environment, the perception of what constitutes a time waster may be different to a process-focussed managerial context.

Mackenzie developed a list of the 15 most significant time wasters which he tested in 14 countries, versions of which have since been used by several time management researchers (Mackenzie 1972). This list was first referred to in library literature in 1980 (Leach 1980). LeBoeuf used Mackenzie’s list to survey sales representatives and engineers (LeBoeuf 1980), and Gothberg used it for her surveys of Library Managers between 1986 and 1989, with the aim of identifying whether library managers reported the same time-waster problems as LeBoeuf’s engineers and sales reps. LeBoeuf’s survey was of professional but not managerial staff, which was a difference in population that Gothberg did not discuss. Gothberg found that there is a statistically low positive relationship between the time wasters identified by academic library managers, and those identified by engineers, and a very low

negative correlation between library managers and sales representatives. ((Gothberg and Riggs 1988, 137). A slightly modified version of Mackenzie's instrument has been used in the current survey, to assess whether there is difference between sector and level of management, as well as to explore whether the time wasters identified by library directors in America in the late 1980's are consistent with those reported by New Zealand library managers in 2003.

Time Management Techniques that are Used

The time management techniques that library managers use will depend upon a range of factors, including level of management, availability of support staff, nature of the job, and personality type. Many time management books and articles are focussed on task oriented work, whereas most managers combine task and people oriented demands. Gothberg's research included a management style instrument in an attempt to explore this aspect of managerial jobs (Gothberg and Riggs 1988).

The most widely used research instruments to measure time management techniques are Bond and Feather's *Time Management Questionnaire*, and Macan's *Time Management Behavior Scale* (used by several researchers including Francis-Smythe and Robertson 1999a; Misra and McKean 2000). These surveys test the extent to which certain time management behaviours are used, rather than their perceived effectiveness. Macan's list was developed from the tips and techniques that are found in the popular literature, refined through a stringent validation testing process (discussed in Macan et al. 1990), and further refined since then. It establishes four subscales of time management behaviour: *Setting Goals and Priorities*; *Mechanics of Time Management (Planning and Scheduling)*; *Preference for Organisation* and *Perceived Control Over Time* (Macan et al. 1990). Macan found that there is a low correlation between people who are good at one aspect of time management (e.g. setting goals) and another (e.g. using lists), indicating that "time management" is not a single set of behaviours, but a multi-faceted, complex construct.

Studies of managerial behaviour regularly show that managers work more than 40 hours a week, but there is considerable debate in the literature as to whether the excessive number of hours that are reported by some managers are in fact accurate. Timelog exercises reveal that fewer extra hours are actually worked than are reported in self-reporting surveys (Oshagbemi 1995). It seems that managers across a range of industries work an average of 45 hours a week, and there is a tendency for senior managers to work longer hours. Managers may choose to work longer hours in order to get uninterrupted time (Perlow 1999) or they may choose to work at home rather than in the office in order to spend time with their family (Seron and Ferris 1995). Setting firm limits on the number of hours worked in order to maintain a healthy work-life balance is a powerful time management tool (Covey, Merrill, and Merrill 1994; Becker and Moen 1999).

Sector and Time Management

Gothberg found distinct sectoral differences in her research into the time management practices of library directors which was repeated across four sectors - academic (Gothberg and Riggs 1988), public (Gothberg 1991a), special (Gothberg 1991b) and state libraries (Gothberg 1991c).

Time Wasters	Public Library Directors	Academic Library Directors	Special Library Directors
	(Gothberg 1988)	*(Gothberg, Riggs 1986)*	*(Gothberg 1989)*
Telephone interruptions	1	8	2
Meetings (scheduled and unscheduled)	2	3	1
Drop-in visitors	3	6	3
Attempting to do too much and estimating time unrealistically	4	1	5
Inability to say no	5	-	7
Inadequate, inaccurate or delayed information	6	7	4
Crises	7	5	6
Indecision and procrastination	8	-	8
Cluttered desk and personal disorganization	9	2	-
Leaving tasks unfinished	10	-	10
Ineffective delegation and involvement in routine and detail	-	9	-
Lack of, or unclear, communication or instruction	-	4	-
Lack of self-discipline	-	10	9
Lack of objectives, priorities and deadlines	-	-	-
Confused responsibility and authority	-	-	-

Table 1. Ranked Time Wasters from Gothberg's Public, Academic and Special Library Studies[1].

She found that telephone interruptions were less of a problem for academic library managers than those in other sectors, possibly indicating that they had more access to support staff. The nature of special libraries, where fast, accurate information is vital, was reflected in the

[1] State Libraries are omitted from this table, as they are not relevant to the current study.

prioritised list of time wasters. Special library directors reported fewer problems with attempting to do too much, which is perhaps indicative of the nature of the job, where special librarians operate in a business timeframe. She found that special librarians delegated more authority to their staff than did library managers in other sectors.

Berner and Seiss have written extensively, both articles and books, on time management in small or one-person libraries (Berner 1987, 1988, 1997; Siess 2002). Berner points out that special libraries are more like businesses, and that one would therefore expect to see similarities between the time management environment of a special library and an office from an 'ordinary' business (Berner 1987). Law librarians must be aware of billable time, but this is unlikely to be a routine concern for tertiary or public library managers. It must be remembered that non-billable time is what constitutes pure management (planning, organising, leading and controlling), as opposed to billable operational time where time is spent working on projects for clients (Maister 1996). In a law library setting, it therefore behoves a manager to be very efficient in their non-billable time, in order to maximise income.

The libraries in Gothberg's special library survey had twenty or more staff, but even so it is reasonable to assume that there would be a higher degree of operational management and direct contact with customers required of the directors of these libraries than would be expected from the directors of the large academic, public or state libraries that she surveyed. Gothberg acknowledges the size difference but does not explore the implications of this on her results (Gothberg 1991b).

In the current study, the law libraries that have been surveyed are much smaller (three or more staff) than Gothberg's Special Libraries population (20 or more staff), and therefore Berner's discussion of the role of the solo librarian is very relevant. He points out that, while a librarian in a small library has to perform many roles, they also know exactly what work needs to be done, and therefore must balance it (Berner 1987). Some research has been done to explore aspects of this: for example, Roberts used work sampling to identify how much clerical work is done by solo librarians (Roberts 1994).

In America, several pieces of research have been conducted on the time implications of academic librarians undertaking research to fulfil the requirements for faculty status, on top of their administrative and operational duties (discussed by Brown 2001). This work references research undertaken on the time management activities of academic staff in universities and colleges (such as Singell 1996; Milem 2000). New Zealand librarians are not required to undertake research as part of their jobs, but there is an emerging research culture within the profession and the impact of research on the time management of librarians is likely to gain significance in the future (discussed by Turner 2001).

Level of Management and Time Management

Most time management studies in libraries have focussed on senior managers (i.e. library directors) or on non-managerial workers. Although Thomas and Ward included managers from different levels in their survey, the small size of the sample means that generalisations cannot be drawn (Thomas and Ward 1973). There does not appear to be any published research that specifically focuses on the time management behaviours of different layers of library management.

A British Institute of Management survey in 1994 found that junior and middle managers were more vulnerable to their priorities being changed by the actions of others than were senior managers (Cole 1995), and Barry, Cramton and Carroll quotes senior managers who are aware that their position allows them freedom to pursue their preferred time management strategies (Barry, Cramton, and Carroll 1997).

Certainly, managers at different levels report varying time focus: senior managers are more likely to have a time focus over several years, whereas middle managers tend to focus more on annual or shorter goals, and line managers on immediate timeframes. Younger managers tend to have shorter time horizons (Jaques 1990). Spero discusses the implications of this on lower level managers who may feel less job satisfaction due to less involvement in the big picture (Spero 1992).

Self Care and Time Management

For the purpose of this study, self-care is defined as regular exercise and/or activities such as hobbies, deliberate relaxation activity, spiritual reflection, meditation or yoga – activities undertaken to nurture the mind and body which may have a positive influence on the managers' approach to their job.

This review does not attempt to explore the literature of exercise on health and wellbeing, but rather focuses on the small amount of time management research that addresses this aspect.

Macan proposes that people who perceive themselves to have control over time should experience less stress, and therefore be healthier people (Macan 1994). In her 1996 study of the effectiveness of time management training, she observed that her sample had also been taught relaxation and tension-relieving exercises as part of their time management training programme, and wondered if this had had an impact on the feeling of control over time that her sample revealed (Macan 1996, 4). This study explores whether there is a relationship between people who engage in high levels of self care and those who feel they have control over time.

Although research undertaken within a particular religious or theological framework may be perceived as lacking objectivity, several interesting pieces of research have been conducted on aspects of time management by researchers from the Maharishi University in America. Harung found that the more happy and mature the consciousness of the individual, the more positively they feel about time. He cites research on the Maharishi Transcendental Meditation (TM) program which states that the nature of life is to grow, and that TM can assist with stress reduction and happiness (Mahesh Yogi 1975, cited in Harung 1998). In controlled studies of American workers (Alexander et al. 1993) and executives (De Armond 1996), TM has been found to reduce job anxiety and enhance job satisfaction. Although these studies do not specifically measure time management, the results are similar to Macan's findings that perceived control of time correlates positively with lower stress levels.

Obviously spiritual beliefs are very important for many managers, but apart from the time management literature cited above, some popular time management articles about life balance from Christian publications, and one book which discusses time management and life balance in a theological framework (Bass 2000), no research on the effect of spiritual belief on time management behaviours of managers could be found.

Out-of-Work Commitments and Time Management

For most managers, attaining an acceptable work-life balance is a very real struggle. Family, community and social groups, involvement in professional committees, and study are all demands on a busy manager's time. Covey's theories of value-driven balanced time management have been widely read by managers since they were first published (Covey 1989; Covey, Merrill, and Merrill 1994), and are popular because of the wholistic approach they take.

In New Zealand, the majority of library managers are female. Spain and Bianchi point out that balancing work and family is more often framed in the literature as a women's problem (Spain and Bianchi 1996), but alongside the considerable body of research that has been undertaken on the strategies used by working women, there has also been exploration of dual-earner couples and the strategies they use to adapt their roles and maintain a balance in their lives (such as Moen and Wetherington 1992; Seron and Ferris 1995). Brines found that stress is created if career women retain primary responsibility for childcare and domestic activities (Brines 1994), while Macan's research revealed that working parents of both genders with pre-school age children report more conflict between work and home life than people with older or no children (Macan 1994), although Ezra and Deckman found that working fathers were more satisfied with the balance between work and home than were working mothers, and they suggest that this may be because women assume the primary caregiving role (the "second career" outside work). They found that the level of dissatisfaction was greatest for women with pre-school children (Ezra and Deckman 1996).

Becker and Moen found that middle class American couples are actively seeking more life balance by using three 'scaling back' strategies: placing limits on their time commitments, one partner having a job and the other a career, and trading off things at different stages of their lives. The strategies used change as life phases develop. Trading off is more likely to occur with couples with young children, and wives are more likely to scale back their careers or place limits on their working time than husbands, although she notes that the gender patterns have changed significantly over the previous 30 years (Becker and Moen 1999). Interestingly, both Becker and Moen's study and Hochschild's found that the language of time management was now being used in discussion of home life by dual-income middle class professional couples, (Hochschild 1997).

Managers who undertake work-related advanced degrees while working full time are aware that the time they spend on study has a dual purpose – it is both personal and professional time. The implications of this ambiguity are touched on by Brown in her discussion of timelogging for academic librarians (Brown 2001).

Time Management Training and Time Management

Time management training covers the same core strategies and advice that is found in the popular literature. Some, such as that provided by Franklin Covey, are highly professional international programmes with a solid theoretical basis, emphasising positive attitudes, values and life balance (Covey 1989; Covey, Merrill, and Merrill 1994). Time management training is part of many management courses, and is a very common topic of training in libraries.

Several studies (Hall and Hursch 1981; Woolfolk and Woolfolk 1986; Orpen 1994) have found that time management training (including the use of manuals as well as direct instruction) does have positive results in terms of both self-reported improvements and, in some cases, evaluation by supervisors or peers. However, the ability to generalise from the results of these surveys is questionable: Woodfolk and Woodfolk used a single small group with a pre-and post-test to measure effectiveness of the training, and Hall and Hursch did not use a control group in their research. Conversely, Macan's studies, with a more rigorous methodology,

found that time management training has little influence on whether respondents engaged in time management behaviours (Macan 1994; 1996).

Macan's research into the effectiveness of training has strongly influenced the current study. She explored "the effects of time management training on time management behaviours; perceived control of time; and stress responses, job satisfaction, and job performance." (Macan 1994, 381). Although Macan did not find a direct link between time management training and improved job performance (which is what the popular literature promises), she found that the techniques learned in training influence the perception of control over time, which in turn may reduce stress levels and improve job satisfaction and performance.

Drucker observed that a positive attitude is the key to successful management (Drucker 1967 25). A positive attitude of trainees has been identified as a critical factor in the successful adoption of time management practices as a result of time management training (Orpen 1994; Slaven and Totterdell 1993). Time management training in itself will not change behaviour unless the trainee is willing to be influenced by the training.

Does the nature of training make a difference? Macan et al found that attendance at a time management seminar correlates significantly with time management behaviour scores, but they found no correlation for those who reported that they had read time management books (Macan et al. 1990), which indicates that self-study may be less effective than formal programmes.

However, Macan was very aware of the range of influences upon a person's development of time management techniques. She suggests that 'individuals learn the components of time management in other ways besides a formal time management training program. For example, throughout life, a person may observe others making lists, scheduling, and leaving a clean work space and may choose to adopt these techniques.' (Macan 1994, 389).

Becker and Moen discuss the influence that managers, as educated professionals, may have within their workplace and also their communities, and suggest that the time management strategies that they model, such as work-home life balance, is significant (Becker and Moen 1999). If this is true in a social sense, then it should be doubly true in a workplace, where the strategies developed by influential members of the community (i.e. the work team) are emulated by their colleagues. She quotes a respondent who modelled her balanced lifestyle on a former supervisor who refused to work long hours.

What Contribution will this Research make to the Literature

The current research is one of the largest time management surveys undertaken in library studies, on a similar scale to Gothberg's studies. It continues the discourse on time management behaviour in libraries, and contributes an industry-specific study to the time management literature. Its cross-sectoral, cross-level focus provides a model that can be replicated in other countries and across other sectors or industries.

3 RESEARCH PROCEDURES

3.1 Research Methodology

The primary method of data collection in this study was an anonymous self-administered questionnaire (Appendix 3), which was distributed by mail to all managers in libraries around New Zealand that had agreed to participate in the survey (see discussion under Research Population). Using a sequential explanatory strategy approach, the data from the questionnaire was supplemented by a series of semi-structured individual interviews and focus groups held in the Auckland region (Appendix 7). The qualitative results of these interviews were used to "assist in explaining and interpreting the findings of [the] primary qualitative study" (Creswell 2003, 215).

The questionnaire is structured into five sections, three of which consist of published research instruments that have been used in a range of other studies (Mackenzie's *Time Waster Index*, Macan's *Time Management Behavior Scale* and Bluedorn et al's *Index of Polychronic Values*). The validity of these instruments has been tested in other studies, and by using them it is possible to build on the work of other researchers, compare results between studies, and to provide an industry-specific case study to the literature.

The semi-structured interview questions focussed largely on opinions as to what life and work events had influenced the development of time management behaviour. They were based on Section Five of the questionnaire, which asked respondents to indicate their opinions of what had influenced them, but this list was refined after the initial quantitative analysis of the questionnaire data had been undertaken. As Section Five was based upon self-reported opinion, the interviews and focus groups allowed the opportunity to explore the context and, where possible, causal factors of the trends revealed by the survey (Gorman and Clayton 1997, 124).

The initial contact with libraries was made between 24-30 March 2003 and questionnaires were distributed between 24 March and 30 April. The request for participation in focus groups was posted on nz-libs on 4 June, and interviews were held between 14 June-1 July 2003.

3.2 Instrumentation

The questionnaire (Appendix 3) took 15-20 minutes to answer, and therefore required a high level of engagement by respondents to complete. The order of sections was designed so that the most difficult section (as defined by the pilot group), the *Index to Polychronic Values*, was placed towards the end, after the interesting and relatively easy to answer *Time Management Behavior Scale*.

Section One collected demographic and personal information, measured mainly by 4 point interval scales.

Questions 1 and 2 explore the sector and size of library, and Questions 3 and 4 explore the level of management and span of control. The span of control question was included to gain information about the nature of managerial roles at different levels. Questions 5, 6 and 7 provide an indication of the employment background of library managers, indicating whether they have moved between library sectors or between industries, and how long they have held managerial roles. This allows examination of cross-sectoral and cross-industry influences upon their time management behaviour. Experience as a manager, age range (Question 8), qualification level (Question 9) and Gender (Question 10) were included to explore whether any there are any patterns in time management behaviour based upon these factors.

Question 11 asks whether the respondent is a caregiver for children or adult dependents. This is both a factual question, and an indication of time commitments outside work. Questions 12-18 ask respondents to estimate how much time is spent on a range of work-related and non-work related activities, outside work hours. Results from this section are not an objective measure, as self-reporting is known to be inaccurate (Oshagbemi 1995). They do, however, suggest patterns of behaviour.

Section Two is a modified version of Mackenzie's *Time Waster Index (TWI)* (Mackenzie 1972). This instrument has been used in several surveys across a range of industries since it was first published. The version used in the current study includes the full 15-item version of the *TWI* plus four additional items. These have been added to update the instrument, making it relevant in a computerised environment. They explore *access to technology*, *technology malfunctions*, *email interruptions* and *access to administrative support*. Respondents were asked to rank the top ten time wasters or time consumers from the list, with 1 being the greatest time waster. A space for 'other' time wasters was included.

Section Three is the most recent version of Macan's *Time Management Behavior Scale (TMBS)* (Macan 2002)[2]. The *TMBS* consists of 34 questions measured on a five point likert scale ranging from *Seldom True* (1) to *Very Often True* (5). The questions are listed in random order, but for the purpose of analysis some were reverse scored, as directed by Macan. They were grouped into four sub-scales, and analysis based upon the means of each of these subscales rather than overall score. Higher scores (above 3) indicate a stronger preference for each aspect of time management behaviour. A detailed discussion on the development of the *TMBS*, its internal correlation and validity is given in Macan et al's 1990 article.

Section Four consists of Bluedorn, Kalliath, Strube and Martin's *Inventory of Polychronic Values (IPV)* (Bluedorn et al. 1999), a 10 question instrument used without modification. Responses are measured on a 7 point likert scale ranging from *Strongly Disagree* (1) to *Strongly Agree* (7), and half of the ten statements are reverse scored. Higher scores (above 4) indicate a tendency towards polychronic attitudes in the workplace. The *IPV* has high internal validity[3].

Section Five explores respondents' opinions about which factors they believe have influenced the development of their time management behaviour. The first five can be answered in a

[2] The survey as used in the current study is the updated, authorised version of the *TMBS*, which differs slightly from that used by Macan in earlier studies (Macan used 46 questions for her 1990 research: the current version has 34 questions). The refinement of this instrument is discussed in (Macan 1994, 385). This instrument is used with permission of the author, and questions have not been included in the Appendix of the report, to protect her copyright.

[3] Chronbach's alpha was calculated at 0.86 by Bluedorn et al and at 0.85 in the current study, indicating a high level of internal validity and inter-study consistency.

factual manner, such as “I have read about time management”, whereas the remaining questions seek opinions as to what other factors may have influenced them. Checkboxes are provided, as well as an invitation to describe significant influences.

The semi-structured set of questions used in Phase Two were derived from Section Five of the Questionnaire. They are listed in Appendix 7.

3.3 Pilot Study

3.3.1 Questionnaire

The initial draft of the questionnaire was emailed to twenty experienced library managers who have in the past but do not currently work in managerial positions in the public, tertiary, law or special libraries sectors. This group included special librarians because the potential pool of law librarians is very small. These people were selected from the researcher’s personal contact list because they fitted the above demographic, and also because they represented a range of experience, personality and communication styles, which would provide a variety of feedback on the survey instrument.

Recipients were asked to complete the questionnaire, imagining themselves in the role of a manager in a public, tertiary or law library. They were also asked to provide written feedback on the content, phrasing, layout and length of the questionnaire. A considerable amount of valuable feedback was received. Also, because the pilot group was not anonymous, and consisted of people who the researcher was personally acquainted with, it was possible to undertake an analysis of how the questions were being interpreted, and to discuss unexpected results with the respondents. This revealed that some of the questions in Section One and instructions throughout the questionnaire were ambiguously worded. As a result of feedback from this process, some demographic questions were rewritten, instructions clarified, and the layout of the likert scales modified.

The revised questionnaire was then piloted by the senior staff of the UNITEC Library in Auckland. Apart from a covering note inviting them to provide comments and feedback on the

instrument, the distribution and completion of the questionnaire was identical to the general distribution. A small number of comments were received, slight modifications made, and the questionnaire was finalised.

Most of the informal pilot group, and some of the UNITEC staff, expressed frustration with the *Index of Polychronic Values* instrument, saying it was confusing and repetitious. However, an analysis of the mean and standard deviation of the results of this instrument from the combined pilot groups revealed that almost identical results were returned to those gathered by Bluedorn et al in their application of the instrument (1999). As the instrument is considered to be an accurate indicator of polychronicity, and as polychronicity is a key variable in the research design, it was decided to retain it. However, the order of the sections was altered so that the *Time Management Behavior Scale* was completed before the *Index of Polychronic Values*, in the hope that fewer people would abandon the questionnaire due to frustration.

3.3.2 Interview Questions

The questions for the focus groups were piloted on a single group of four library managers, who had participated in the piloting of the survey instrument. No modifications to the question guide were made, although as a result of discussion during the first individual interview, a question exploring the influence of parents or other childhood influences on the development of time management behaviours was added.

3.4 Research Population

The population for this study consists of managers in three library sectors in New Zealand: public, tertiary and law. The public and tertiary library sectors are the largest sectors in New Zealand, and this study proved that there is significant movement between these sectors. It was found that 58% of respondents (n=243) had worked in a library sector other than the one they were currently employed in. 43.8% (n=60) of tertiary library managers reported having worked in public libraries, while 24.44% (n=66) of public library managers reported having worked in tertiary sector libraries. In terms of time management behaviour, this means that there is considerable potential for cross-sectoral influence, which suggests that the time management behaviours between these sectors might be similar

The law libraries sector is much smaller: only 15 Libraries with three or more staff were identified. This sector was chosen because it can be clearly differentiated from other types of special libraries based upon its subject and specialist client base. It therefore provides the opportunity to explore whether there are differences in time management behaviour between publicly funded and a specific group of privately funded libraries. It was recognised from the outset that the small population size of law libraries meant that results would not be able to be compared statistically.

As the intention of the study was to explore differences between levels of management, and as it was suspected that size of library may make a difference to time management behaviour, it was decided to take a census approach to the distribution of the questionnaire and to survey the full population of managers in public, tertiary and larger law libraries in New Zealand, rather than to use a sampling methodology. This meant that the size of sub-groups (levels of management and sectors) within the population would be large enough to provide meaningful results. Leedy and Ormrod state that “the larger the sample, the better” and recommend that the whole population be sampled if it is under 100 members (2001, 221).

The second phase of data collection consisted of a combination of focus groups and individual interviews. This was a secondary method of data collection, being used to support the data gathered through the survey. Due to cost and timeframe constraints, participants were recruited from within the Auckland region. The intention was to conduct nine focus groups of up to six participants consisting of three groups from each level of management. However, within the available time it proved to be impossible to gather the full number of groups, so the methodology was modified to a combination of individual interviews and focus groups. Eight individual interviews and four focus groups were held, with a total of seventeen managers participating in this data collection phase. Of these, four were line managers, ten middle managers and three senior managers. All three sectors were represented, with nine from tertiary, seven from public and one from law.

3.5 Specific Procedures

3.5.1 Human Ethics Approval

Human Ethics approval was sought through Victoria University of Wellington twice. The first application concerned the questionnaire, while the second, following preliminary analysis of the questionnaire results, was made for the interview phase of data collection.

3.5.2 Identifying Contacts and Establishing Contact with Libraries

The most comprehensive directory of managerial positions in New Zealand libraries is the most recent edition of *Contacts in New Zealand Libraries* (June 2002). Most entries in this directory list the names and position titles of staff in key managerial positions. Additional information about which law libraries were of an appropriate size was gathered from two senior law librarians.

A list of all libraries within each sector was created, and for each library the name and contact details of the senior manager was recorded, as well as a list of the position titles of all identifiable managerial positions. Position titles were used rather than names to depersonalise the request for participation. Where libraries had published staff lists on their websites, these were checked and the list of position titles updated, on the assumption that information on the website would be more recent than in the published directory.

The initial request for participation was sent to the senior manager in each library via e-mail (Appendix 1). In the event that an email address was not available, a letter was mailed to them. This was in three parts: the first section explained the project and asked for permission to distribute questionnaires to the managers in that library, and the second listed the position titles that had been identified and asked that the list be updated. In most cases, the list required some modification or expansion. The third part asked that a contact person be designated for distribution of the surveys. If no response was received after one week, a follow-up message was sent. E-mail was chosen as the primary method of contact for this task because it is a quick and direct method of communication.

By this method, an accurate list of managerial positions in those libraries that were willing to participate was created (Hernon 1994, p118). 80.95% (*n*=102) of all libraries approached agreed to participate: this level of response was consistent across all three sectors. This exceeds the number required to achieve 95% confidence in the results of a survey of a population of 126. Fourteen libraries declined to participate, and no response was received from ten.

3.5.3 Questionnaires

An appropriate number of copies of the survey questionnaire were posted to the designated contact person in each library with a covering letter asking that they be distributed to each manager. Each copy included an explanation sheet and a stamped return envelope, to encourage a higher rate of return (Leedy and Ormrod 2001, 204). The position titles that had been supplied to the researcher by the Library were written on a detachable slip stapled to the information sheet of the survey, to ensure that the distribution list was followed[4]. The envelopes were coded so that the return rate could be monitored.

The survey was self-administered, with instructions given at the head of each section, and an information sheet attached to each copy. Participation in the survey was voluntary.

584 questionnaires were distributed to the managers in these 102 libraries, and 71.75% (*n*=419) were returned: there was no significant variation in return rate between sectors or level of management. A return of 231 would have been sufficient at 95% confidence rate, so the survey population can be considered representative of the whole group of managers in these three sectors (Hernon 1994, 120). Twelve people returned notes saying they did not wish to participate, and three completed questionnaires were returned after the statistical analysis had been completed. Because the return rate was so high (62% had been returned within three weeks of distribution), no follow-up message was sent out. A late flurry of 21 questionnaires were returned in the week following the Easter break, which indicated that many people had left the completion of the survey to a time when they could concentrate on interesting but not important things. The response rate was somewhat lower from larger

[4] 34 returned questionnaires still had these name labels attached when they were returned to the researcher. They were removed from the questionnaire immediately upon receipt to ensure anonymity.

libraries (Metronet public libraries and universities) than from smaller libraries (see Table 2). At the time the survey was distributed, several libraries responded saying that they were unable to participate as fully as they would like because they were at a critical phase of implementing new computer systems, were in the process of restructuring, or were operating under reduced managerial staffing due to recruitment, illness or annual leave.

In two cases, completed questionnaires were returned with comments that the person completing the survey did not consider that they were in a managerial position, and an annotation describing their roles was included. As their position title had been supplied to the researcher by their manager, their responses were included in the analysis, and based upon their descriptions of their roles they were coded as Middle Managers – people with specific responsibility but no staff management role.

	Number of libraries approached	Number that agreed	% that agreed to participate	Number of questionnaires distributed	Number of questionnaires returned	% that were returned
Public Libraries						
Metronet	18	15	83.33%	211	139	65.88%
Other	63	51	80.95%	170	131	77.06%
Sector Total	*81*	*66*	*81.48%*	*381*	*270*	*70.87%*
Tertiary Libraries						
University	8	7	87.50%	123	85	69.11%
Polytechnic*	18	15	83.33%	51	42	82.35%
College of Education	4	2	50.00%	13	10	76.92%
Sector Total	*30*	*24*	*80.00%*	*187*	*137*	*73.26%*
Law Libraries						
Combined**	15	12	80.00%	16	12	75.00%
TOTAL	***126***	***102***	***80.95%***	***584***	***419***	***71.75%***

Notes

**Otago Polytechnic was included under Dunedin College of Education*

*** Includes 3 District Law Societies, 8 Law Firms and 4 Government Libraries*

Table 2. Research Population

3.5.4 Focus Groups and Interviews

An email message was placed on the nz-libs email discussion list, inviting Auckland librarians to participate in focus groups. This was reposted one day later, clarifying that all levels of management were invited to respond. Participants were provided with an information sheet

about the research, and were asked to sign a consent form before the interview. These interviews were conducted in a range of settings that was convenient to participants, and lasted between 45 minutes and two hours, with the average length being one and a quarter hours. The interviews were tape recorded and later transcribed, and notes of significant comments or insights also taken during the interview. Participants were sent copies of the transcript of what they had said for correction or clarification (Leedy and Ormrod 2001).

3.5.5 Storage of Data

Electronic records have been kept in passworded files, and survey responses, cassettes, transcriptions and copies of working documents have been coded and stored in a locked file. Tape recordings will be destroyed when they are no longer required. Based upon a Human Ethics Committee recommendation, focus group participants have been provided with transcripts of their own contributions, and have agreed to respect the confidentiality of their fellow group members.

3.6 General Treatment of Data

- To ensure anonymity of responses, questionnaires were removed from their coded envelopes immediately upon receipt and the questionnaires and envelopes placed in separate piles (Leedy and Ormrod 2001, 207). The coding on the envelopes was checked against the distribution list to ascertain the level of response by type of library (recorded in Table 2). This checking was done in three main batches: three weeks after distribution, and six weeks after distribution, and at the end of the data entry process, so there was no possibility that responses could be identified. Any other identifying features were removed from the completed questionnaires upon receipt. Questionnaires were coded and the data entered into an Excel spreadsheet.

- Statistical analyses were undertaken using Microsoft Excel, and two Excel add-in programmes: 'Analyse-it for Microsoft Excel,' and a spreadsheet designed by Del Siegel from the University of Connecticut called "reliabilitycalculator2" which was used to calculate Chronbach's alpha scores.

- Frequencies and percentages were calculated for the nominal and ordinal data. Results were summarised into tables and pie charts drawn where they would be useful to communicate patterns in the data.

- Incomplete returns were excluded from analysis of *TMBS* and *IPV* before means were calculated.

- Distribution patterns, means and standard deviations were calculated for the interval data.

- The *TMBS* was analysed following the author's instructions: "scores for the individual factors are calculated by averaging across the particular items within the subscale after reverse scoring." (Macan 2002). As the instructions are to calculate the mean for each subscale, the data was treated as interval data in this study.[5] The means for each of the four subscales were calculated for each respondent, with higher values representing a greater preference for the behaviour in the factor. An analysis of the data reveals that it is not skewed, so the mean is an appropriate measure of central tendency.

- Independent samples t-tests and 1-way ANOVA were used to explore differences between groups, and Pearson's r was used to calculate the correlations between the subscales of the *Time Management Behaviour Scale* and the *Inventory of Polychronic Values*.

- As ANOVA and t-test results are more robust when the sample sizes are even (Vaughan, 132), random sampling was used to create even sized samples wherever these tests were undertaken.

[5] There is divided opinion in statistical literature as to whether it is appropriate to calculate the mean and standard deviation on likert scales (Miller, 1991). Macan's instructions on interpreting the *TMBS* are to use the mean, and so this methodology has been followed in the current study. Therefore, the likert scales in Sections Three (*TMBS*) and Four (*IVP*) have both been treated as interval data and analysed using mean and standard deviation.

- Spearman's rho was used to explore the difference between rank results of the *Time Wasters Index*. This data was analysed using the methodology recommended by Gothberg, using means to calculate rank order. Missing data is excluded from the rank calculations.

- Chronbach's alpha was calculated to explore the internal validity of the *IPV* and the *TMBS* subscales, and these were compared with alpha scores from other studies.

- Qualitative data was gathered in two ways: from the survey (chiefly from the open questions in *Section Two: Time Wasters* and *Section Five: Influences on Time Management Behaviour*, but also from marginal comments), and through the focus groups and individual interviews. This data was transcribed, coded and collated under key themes which relate to the research questions, and used to support and illuminate the quantitative data gained from the questionnaire (Leedy and Ormrod 2001, 153-4).

3.7 Shortcomings of Survey Methodology

Although the pilot study resulted in considerable clarification of the questionnaire, some questions could have been clarified further. This section outlines the most obvious shortcomings of the research instrument.

3.7.1 Section One: Demographics

Question 9 in the Demographics section explored what qualifications are held by the respondent. The option to record "other" qualifications was given, but an example (e.g. B.A.) should have been included in the question to provide guidance. Of 165 who said they hold graduate library qualifications (e.g. DipLibr, MLIS), admission to which requires that a first degree has been completed except in rare circumstances, only 31% (n=51) indicated that they held other tertiary qualifications.

35 people said that they held a bachelor's degree in library and information studies or a related subject. It is suspected that, in at least some of these cases, this box was ticked to indicate a first degree in a subject other than library studies. However, managers who

qualified in other countries may have completed a bachelor's degree in library studies, and several people have completed the recently established bachelor's degrees in Information and Library Studies from The Open Polytechnic of New Zealand, although it is not known whether any of these graduates participated in the current study. In one case an annotation revealed that this was a teacher's college qualification in school librarianship. However, of the 165 who said they hold graduate library qualifications, 9 said they also hold a Bachelor's degree in Library or related studies. This information, while not crucial to this study, may be misleading.

3.7.2 Section Three: *TMBS*

The internal validity for three of the four subscales of the *Time Management Behavior Scale,* measured using Chronbach's alpha, did not meet the acceptable lower level of .80 for congruence coefficients (Barrett 1986, referred to in Macan 1994), although Nunnally "argues that reliabilities of approximately 0.70 or higher will suffice in the early stages of research" (Nunnally 1978, 245 cited in Kaufman, Lane, and Lindquist 1991). More work should, therefore, have been done on the data collected in this survey to improve the internal reliability of three of the four subscales, particularly the *Perceived Control Over Time* subscale. However, the scores for *Mechanics of Time Management* and *Preference for Organisation* are similar to those reported by others who have used the *TMBS* (such as Lay 1992). Chronbach's alpha in the current study was calculated as follows: *Mechanics of Time Management* (.73), *Setting Goals and Priorities* (.83), *Preference for Organisation* (.71), *Perceived Control Over Time* (.64).

3.7.3 Section Four: *IPV*

The *Index of Polychronic Values* obviously frustrated and/or confused some respondents. Marginal comments from some pointed out that there was repetition between questions, sought clarification of terminology used, and indicated that they would respond differently depending on which of their staff they were considering, or whether they were saying what they thought should happen in an ideal world, as opposed to the constraints of the real work scenario. One person commented that the seven-point likert scale required unnecessary specificity as to the extent of agreement or otherwise. Two people did not attempt this section,

and three only answered some of the questions. In 27 cases, more than half of the ten questions (6 or more) were answered with the neutral "4" – 'neither agree nor disagree", which, based upon the feedback from the pilot group, was interpreted as being at least in part due to frustration with the instrument rather than a true reflection of their polychronicity attitudes.

Due to a printing error, approximately 30 copies of the questionnaire were distributed with an eleventh factor included in Section Four, repeating one of the questions. This error was not identified until part-way through the data entry process. For the purposes of data analysis, the responses to the second occurrence of the question were removed.

3.7.4 Bookmark

A bookmark containing time management tips was attached to 75% of the questionnaires that were distributed, and this was omitted from the remaining 25%. In order to ascertain whether the inclusion of this information influenced responses to the survey, a comparison between the two groups of respondents was undertaken. This involved analysis of the subscale responses to Section Three, the *Time Management Behavior Scale*, which required respondents to state how frequently they used a range of time management behaviours, which could have been influenced by the list of tips.

Independent t-tests were carried out to explore whether there is significant variation between the two groups. The whole of the no-bookmark group was analysed, and a comparative sample (Vaughan, 122) of the group that received the bookmark was extracted based on demographic match with the no-bookmark group. The analysis revealed that there is no significant variation between the two groups[6], and it may be concluded that the addition of the bookmark did not influence the respondents in the way they answered Section Three.

[6] *Mechanics of Time Management* (n=164, t=-0.94, p=0.3507), *Setting Goals and Priorities* n=164, t=-1.11, p=0.2696), *Preference for Organisation* (n=164, t=0.53, p=0.5996) *and Perceived Control over Time* (n=164, t=1.49, p=0.1379), at a significance level of <0.05.

3.7.5 Focus Groups

It was initially intended to gather all data in the second phase by focus groups, but the very short timeframe available meant that the methodology was modified to include individual interviews. The groups were smaller than had been planned, with between 2 and 4 participants, but this still achieved the purpose of a focus group, which allowed participants to develop ideas based on what other group members were saying, and allowing individual participants more opportunity to contribute (Morgan 1997; Fern 1982). As the managers within the focus groups knew one another (in each case, members of individual focus groups were colleagues from the same library, and in two cases one participant was another participant's direct supervisor), there may have been some self-censoring in comments (Fern 1982, 2; Gamson 1992), whereas participants in individual interviews were constrained only by the presence of the interviewer, and may have been more inclined to be self-revelatory or self-analytical. The need for confidentiality was emphasised in all cases. Inevitably, volunteers for focus groups have an interest in the subject, and there is therefore potential for bias in the opinions expressed by interviewees (Leedy and Ormrod, 104).

4 DATA ANALYSIS AND INTERPRETATION

4.1 RESEARCH QUESTION ONE: To what extent do time management behaviours differ between sectors?

Hypothesis One states: *that there will be no difference between the time management behaviours exhibited by sector.*

4.1.1 Demographics

419 usable questionnaires were returned. Of these, 64.44% (*n*=270) were from public library managers[7], 32.7% (*n*=137) from tertiary library managers, and 2.86% (*n*=12) from law library managers. Overall, this represented 71.75% of the surveys distributed.

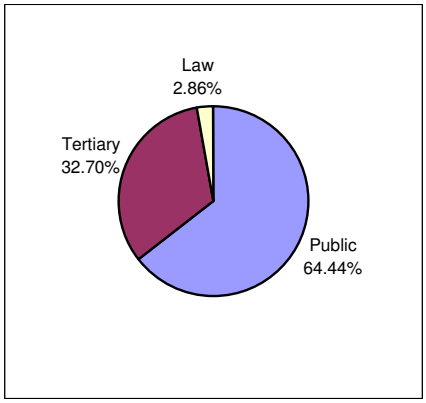

Figure 3. Total Participants by Sector

Size of Library

There is considerable variation in the size of libraries within the public and tertiary sectors. 10.5% (*n*=44) of the responses were from managers in very small libraries (fewer than six staff in total): although the law libraries population was limited to those libraries with three or more staff, some small sole-charge public libraries were included in the survey population. 17.9% (*n*=75) of libraries had between 6-15 staff. All law libraries fell into one of these two groups. The highest proportion of responses (43.44%, *n*=182) was from the large public and tertiary libraries which employ more than 50 staff.

[7] Three managers reported that they worked in combined school/community libraries, one in a combined public library/museum, and two in small libraries run by volunteers: these were all recorded as Public Libraries.

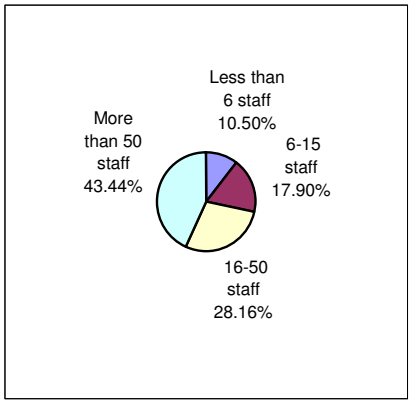

Figure 4. Total Participants by Size of Library

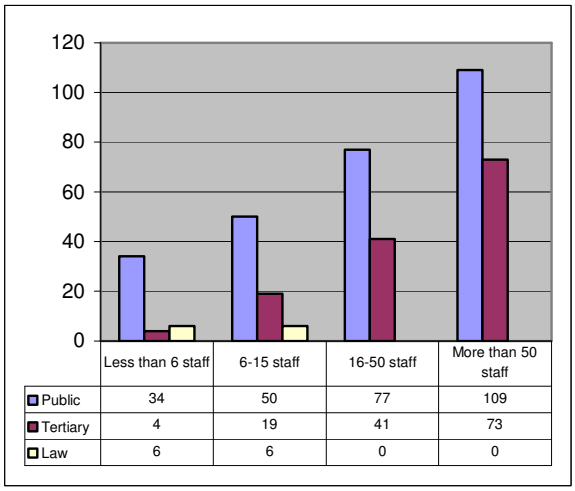

Figure 5. Size of Library by Sector

Span of Control

The number of staff reporting to each manager gives a rough indication of span of control of managers, although Question 3 in the questionnaire did not specifically allow respondents to indicate that they had no staff reports, as the smallest range was “fewer than six”: several people included marginal comments that they did not have any staff reporting to them. The definition of what constitutes a middle manager for this study included people with strategic responsibility who may not have supervisory responsibility.

There has been a change in management thinking about the most appropriate span of control for managers: at one time, 6 direct staff reports was considered to be ideal to maintain effective control, but in flatter organisational structures, wider spans of control are inevitable (Robbins et al. 2003, 279). In the current study, 52.98% of respondents report having fewer than six staff reporting to them, and 27.21% report having between 6-10 staff report to them.

Of the remaining 19.8% (*n*=83) of managers who report having over 11 staff reporting to them, 54 were public library managers, 28 were tertiary library managers, and one was a law library senior manager. Seven public library managers included notes that their span of control included managing large numbers of volunteer staff, which, as each staff contact requires managerial time and effort, was recorded as a large span of control. A manager who

has a wider span of control may have more interruptions and personnel-related demands upon their time than those with fewer staff.

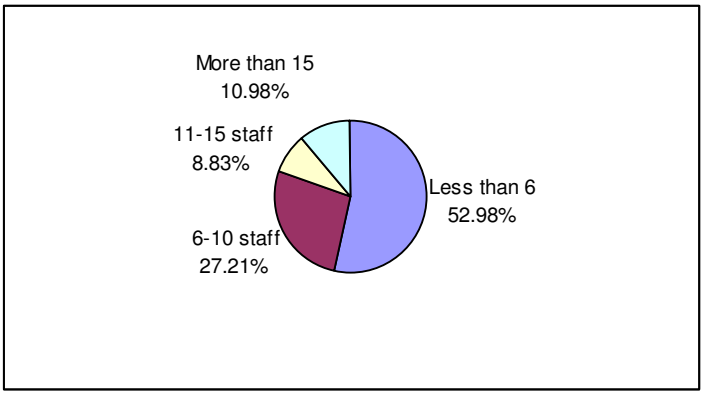

Figure 6. Span of Control

4.1.2 Time Wasters

The first part of this section will explore the relationship between the current study and Gothberg's studies of the public, academic and special library sectors of the late 1980's. The second part will look at cross-sectoral comparisons within the New Zealand study.

A. Comparison with Gothberg's Studies.

Public Libraries

Gothberg surveyed the public library directors of the 200 largest cities in the United States of America, and achieved 66% (*n*=132) response rate. The senior managers of the Metronet libraries in New Zealand are the equivalent group in the current survey. 83.3% (*n*=15) of Metronet libraries participated in the survey. 13 senior managers from public libraries with more than 50 staff responded, and 16 senior managers from libraries with between 16-50 staff responded. These groups have been separated out from the total New Zealand population and combined for the purposes of direct comparison with Gothberg's survey.

Gothberg analysed the top five ranked time wasters, to see which were most important in each sector. She found that the *telephone* was listed as the greatest timewaster for senior

public library managers (Gothberg 1991a, 352), followed by *meetings, drop-in visitors, attempting to do too much*, and the *inability to say no*.

In the current study, four additional factors, reflecting the technological changes now facing library managers, were added to the list used by Gothberg. If these factors are ignored, it is found that public library senior managers returned almost identical ranked lists to those in Gothberg's study, although *crises* were ranked as a greater priority time waster than the *inability to say no*. This indicates a high level of agreement with the earlier study.

Time Wasters	**Gothberg**	**Current Study**
Public Libraries	***Public Library Directors***	***Senior Managers in Public Libraries with 16+ staff***
	(USA 1988)	*(N.Z. 2003)*
Telephone interruptions	1	3
Meetings (scheduled and unscheduled)	2	1
Drop-in visitors	3	2
Attempting to do too much and estimating time unrealistically	4	4
Inability to say no	5	8
Inadequate, inaccurate or delayed information	6	6
Crises	7	5
Indecision and procrastination	8	10
Cluttered desk and personal disorganization	9	9
Leaving tasks unfinished	10	-
Ineffective delegation and involvement in routine and detail	-	7
Lack of objectives, priorities and deadlines	-	-
Lack of, or unclear, communication or instruction	-	-
Confused responsibility and authority	-	-
Lack of self-discipline	-	-

Table 3. Ranked Time Wasters for Public Library Senior Managers, Gothberg and NZ

However, when the complete ranked list is examined, it is found that two of the added technological factors are amongst the top five timewasters for senior managers in New Zealand public libraries: *email interruptions* are ranked 2nd, and *computer or technology malfunctions* 5th, while *lack of access to secretarial/administrative staff* is ranked 8th. Email is simply a variation on the previous study's telephone and drop-in visitors factors, but the move to a more automated office environment, where typists and access to administrative support have largely been replaced by desktop computers, signals a significant change in the time management behaviour required by this group compared with the earlier pre-automation study.

Tertiary Libraries

Gothberg and Riggs (1988) surveyed the directors of 105 Academic Research Libraries (ARL) and the 89 non-ARL libraries with the largest research collections in the United States. They achieved an 82% response rate (*n*=159). The senior managers of the university libraries in New Zealand are the equivalent group in the current study, but it is not possible to separate this group from other tertiary managers. Therefore, the whole group of senior managers from the tertiary sector (*n*=24) have been included[8].

Gothberg and Riggs found that *attempting too much and estimating time unrealistically* was listed as the greatest timewaster for senior academic library managers, followed by *cluttered desk, meetings, lack of or unclear communication and instructions*, and *crises* (Gothberg and Riggs 1986, 20). Two of these were also listed in the top five for the New Zealand managers: *meetings* and *crises,* but overall no significant correlation was found between the rankings given by American academic library directors and senior managers of New Zealand tertiary libraries (*n*=8, *rs*=0.05, *p*=0.9108, <0.05). It is suspected that the difference in size between the largest American university libraries and the aggregated group of New Zealand academic libraries is a key explanation of the difference in results.

Time Wasters	Gothberg	Current Study
Tertiary Libraries	***Academic Library Directors***	***Senior Managers in Tertiary Libraries***
	(USA 1986)	*(N.Z. 2003)*
Attempting to do too much and estimating time unrealistically	1	6
Cluttered desk and personal disorganization	2	8
Meetings (scheduled and unscheduled)	3	1
Lack of, or unclear, communication or instruction	4	-
Crises	5	3
Drop-in visitors	6	5
Inadequate, inaccurate or delayed information	7	2
Telephone interruptions	8	4
Ineffective delegation and involvement in routine and detail	9	-
Lack of self-discipline	10	9
Indecision and procrastination	-	10
Leaving tasks unfinished	-	7
Inability to say no	-	-
Lack of objectives, priorities and deadlines	-	-
Confused responsibility and authority	-	-

Table 4. Ranked Time Wasters for Tertiary Library Senior Managers, Gothberg and NZ

[8] Within this group, 1 library has fewer than six staff, 4 have between 6-15 staff, 11 have between 16-50 staff, and 8 have more than 50 staff. As almost 80% of the group have over 16 staff, the whole group has been analysed and compared with Gothberg's results.

As with the public library sector, when the new factors are reinserted it is found that *email interruptions* were ranked 2nd, and *computer or technology malfunctions* were ranked 8th.

Law Libraries

Gothberg surveyed special libraries (Gothberg 1991b), and although this is broader than law librarians, useful comparisons may be drawn with the New Zealand law library sector. The special libraries in Gothberg's study are smaller than the libraries in her other studies, which means that senior managers are more likely to be engaged in a range of both managerial and operational duties. She surveyed the directors of the 150 largest special libraries in the USA in 1989 with the intention of surveying libraries with 20 or more staff, but some reported fewer staff in their survey responses.

80% (n=12) of law libraries participated in the current survey, and 75% (n=12) of the questionnaires distributed to this group were returned. Owing to the small size of this group, this analysis will treat all law library managers as a single group, and will not divide them into management levels.

Gothberg found that *meetings* were listed as the greatest timewaster for special library directors, followed by *telephone interruptions, drop-in visitors, inadequate inaccurate and delayed information*, and *attempting to do too much* (Gothberg 1991b, 123). This is remarkably similar to the rankings given by the New Zealand law librarians, where four of the five same factors are listed, with *lack of or unclear communication or instruction* replacing *drop-in visitors*. Discussions within the focus groups indicated that, in law libraries, drop in visitors are most likely to be clients or client related, so they tend not be seen as an interruption but rather as part of the daily work.

A high level of rank correlation was found between these groups (n=7, r=0.82, p=0.0234), suggesting that participants in both studies have much in common despite the time between studies and changes caused by automation.

Time Wasters ***Law Libraries***	***Gothberg*** ***Special Library Directors***	**Current Study** ***Law Library Managers***
	(USA 1989)	*(NZ 2003)*
Meetings (scheduled and unscheduled)	1	1
Telephone interruptions	2	3
Drop-in visitors	3	6
Inadequate, inaccurate or delayed information	4	2
Attempting to do too much and estimating time unrealistically	5	4
Crises	6	-
Inability to say no	7	7
Indecision and procrastination	8	-
Leaving tasks unfinished	10	8
Lack of, or unclear, communication or instruction	-	5
Cluttered desk and personal disorganization	-	9
Lack of objectives, priorities and deadlines	-	10
Lack of self-discipline	9	-
Ineffective delegation and involvement in routine and detail	-	-
Confused responsibility and authority	-	-

Table 5. Ranked Time Wasters for Law and Special Library Managers, Gothberg and NZ

Once the new technological factors are reintroduced into the ranked list, it is found that *computer or technology malfunctions* is ranked 1st, and *email interruptions* ranked 4th, again indicating the dependence upon technology in a library.

Summary

The time wasters listed by Gothberg's public library managers in the late 1980s are very similar to those listed by the senior managers in New Zealand's large public libraries today. Similarly, the time wasters listed by American special librarians display a high level of rank correlation with New Zealand law libraries in 2003. However, there is no significant correlation between Gothberg's findings from the academic library sector and the New Zealand tertiary library managers. This may be related to size of institution, as most New Zealand tertiary libraries are significantly smaller than America's ARL university libraries. Significantly, *email interruptions* and *computer or technology malfunctions* were ranked in the top five time wasters of all three sectors, reflecting the dependence upon technology in modern libraries.

B. Sectoral analysis within the New Zealand study.

Having established that there is a high degree of consistency within two of the three sectors between Gothberg's and the current studies, it is necessary to examine whether there are differences between the sectors in the current study.

Table 6 summarises the highest ranked time wasters listed by managers in each of the three sectors. For all three groups, *meetings* are listed as one of the top two time wasters or time consumers, and the pair of "communication interruption" factors (*email interruptions* and *telephone interruptions*) also rank among the top five of all groups. However, whereas in Gothberg's studies "*drop-in visitors"* was also linked with this group, this scores considerably lower in the current study. Many law and public librarians, particularly in smaller libraries, included comments to the effect that drop-in visitors represented customers and therefore could not be considered time wasters. Varying opinions were expressed in relation to meetings from respondents across all sectors, with some people considering them useful while others thought most were time wasters.

Computer or technology malfunctions is listed in the top five time wasters of managers in all three sectors, which is a clear message about the necessity for systems support in automated libraries. All three groups mention *attempting to do too much* and *inadequate inaccurate or delayed information* are also significant time wasters.

Time Wasters	**Public Library**	**Tertiary Library**	**Law Library**
Sectors	***All Levels of Management***	***All Levels of Management***	***All Levels of Management***
	(NZ 2003)	*(NZ 2003)*	*(NZ 2003)*
Meetings (scheduled and unscheduled)	1	2	2
Telephone interruptions	2	5	5
Email interruptions*	3	1	4
Drop-in visitors	4	6	8
Computer or technology malfunctions*	5	4	1
Attempting to do too much and estimating time unrealistically	6	3	6
Inadequate, inaccurate or delayed information	7	7	3
Crises	8	9	-
Inability to say no	9	12	9
Cluttered desk and personal disorganization	10	8	11
Indecision and procrastination	11	10	-
Ineffective delegation and involvement in routine and detail	12	-	-
Leaving tasks unfinished	-	11	10
Lack of, or unclear, communication or instruction	-	-	7
Lack of objectives, priorities and deadlines	-	-	12
Lack of self-discipline	-	-	-
Confused responsibility and authority	-	-	-
Lack of access to secretarial/administrative staff*	-	-	-
Lack of access to printers, copiers and other equipment*	-	-	-

Table 6. Ranked Time Wasters in the Public, Tertiary and Law Sectors
*Note: 12 factors are included in this table, and 12 or 13 included in subsequent tables, to include the extra technological factors added to Mackenzie's list in this study. These are marked**

Similar items are ranked by all three groups, but analysis of the priority rank order using Spearman's rho indicates that, while there are significant similarities between the rank order assigned by public and tertiary library managers, and also between tertiary and law library

managers, there is no significant correlation is between the rankings of public and law library managers. This indicates that the priority assigned to the greatest time wasters differs between these sectors.

*Spearman's rho (<0.05)**	NZ Public Libraries	NZ Tertiary Libraries
NZ Tertiary Libraries	*n*= 11 *rs*= 0.83 *p*= 0.0017*	
NZ Law Libraries	*n*= 9 *rs*= 0.57 *p*= 0.1116	*n*= 10 *rs*= 0.57 *p*= 0.0289*

Table 7. Time Waster Rank Correlations between Public, Tertiary and Law Sectors

Variations by Size of Library

The discussion of the sectoral comparison between New Zealand tertiary and American academic libraries suggested that the size of libraries may make a difference to the list of perceived time wasters. This section explores whether there were differences between libraries of different size in the same sector, and also whether any conclusions can be drawn based on size of library rather than sector or level of management. Law libraries are not included in this analysis, as they are all small.

1. Public Libraries

Time Wasters	Public Library	Public Library	Public Library	Public Library	Public Library
Public Library by Size	***All Sizes***	***Fewer than 6 staff***	***Between 6-15 staff***	***Between 16-50 staff***	***More than 50 staff***
	(NZ 2003)	*(NZ 2003)*	*(NZ 2003)*	*(NZ 2003)*	*(NZ 2003)*
Meetings (scheduled and unscheduled)	1	4	6	1	1
Telephone interruptions	2	3	1	2	3
Email interruptions*	3	5	5	4	2
Drop-in visitors	4	2	3	3	4
Computer or technology malfunctions*	5	1	2	5	8
Attempting to do too much and estimating time unrealistically	6	6	4	6	5
Inadequate, inaccurate or delayed information	7	7	7	7	12
Crises	8	11	-	8	6
Inability to say no	9	8	9	9	9
Cluttered desk and personal disorganization	10	-	8	11	-
Indecision and procrastination	11	9	-	12	10
Ineffective delegation and involvement in routine and detail	12	-	-	-	7
Leaving tasks unfinished	13	13	11	13	11
Lack of, or unclear, communication or instruction	-	10	13	10	-
Lack of objectives, priorities and deadlines	-	-	-	-	-
Lack of self-discipline	-	-	-	-	-
Confused responsibility and authority	-	-	12	-	-
Lack of access to secretarial/administrative staff*	-	-	-	-	13
Lack of access to printers, copiers and other equipment*	-	12	10	-	-

Table 8. Ranked Time Wasters in Public Libraries by Size

There is a high level of agreement within the top five listed time wasters (*telephone*, *email* and *drop-in visitors* appear in the top five of each group), but distinct differences can be observed based on library size. The lower ranking items for the third group, which has a wide range of staff sizes (16-50 staff), at times tends more towards the smaller libraries and other times towards the larger ones. *Meetings* are a time waster in all public libraries, but particularly so for larger libraries where a more bureaucratic structure would be common. *Computer or technology malfunctions* was rated as a lower time waster in the large libraries, possibly because there is greater resource available to manage and maintain systems in larger organisations. Traditional "management" issues – *ineffective delegation* and *lack of access to administrative or secretarial support*, were only listed as problems in the largest libraries. The Spearman's rank correlation analysis indicates that size of library is significant in terms of the rank order assigned to time wasters in the public library sector. Although the top four factors listed are the same, when the overall rank order is compared, there is no rank correlation between very large public libraries and libraries with fewer than 16 staff.

Spearman's rho (<0.05)*	**< 6 staff**	**6-15 staff**	**16-50 staff**
6-15 staff	*n*= 11 *rs*= 0.91 *p*= 0.0001*		
16-50 staff	*n*= 12 *rs*= 0.85 *p*= 0.0004*	*n*= 11 *rs*= 0.77 *p*= 0.0053*	
50+ staff	*n*= 11 *rs*= 0.58 *p*= 0.0604	*n*=9 *rs*= 0.48 *p*= 0.1875	*n*= 11 *rs*= 0.85 *p*= 0.0010*

Table 9. Time Waster Rank Correlations between Public Libraries by Size

2. Tertiary Libraries

Time Wasters	**Tertiary Library**	**Tertiary Library**	**Tertiary Library**	**Tertiary Library**
	All Sizes	***Between 6-15 staff***	***Between 16-50 staff***	***More than 50 staff***
	(NZ 2003)	*(NZ 2003)*	*(NZ 2003)*	*(NZ 2003)*
Email interruptions*	1	3	4	1
Meetings (scheduled and unscheduled)	2	8	1	2
Attempting to do too much and estimating time unrealistically	3	2	2	5
Computer or technology malfunctions*	4	1	3	-
Telephone interruptions	5	6	8	3
Drop-in visitors	6	5	7	4
Inadequate, inaccurate or delayed information	7	4	9	6
Cluttered desk and personal disorganization	8	7	5	13
Crises	9	13	6	8
Indecision and procrastination	10	11	10	7
Leaving tasks unfinished	11	-	12	9
Inability to say no	12	-	11	10
Lack of self-discipline	-	-	13	12
Lack of, or unclear, communication or instruction	-	9	-	-
Lack of objectives, priorities and deadlines	-	10	-	-
Confused responsibility and authority	-	12	-	11
Ineffective delegation and involvement in routine and detail	-	-	-	-
Lack of access to secretarial/administrative staff*	-	-	-	-
Lack of access to printers, copiers and other equipment*	-	-	-	-

Table 10. Ranked Time Wasters in Tertiary Libraries by Size[9]

[9] Note: As there is only one tertiary library with fewer than 6 staff, it has been omitted from this table.

As was found with public libraries, *meetings* are ranked lower as a time waster in the small libraries than they are in larger libraries. *Computer and technology malfunctions* are not perceived as a time waster for the managers of large libraries, whereas they rank in the top three for managers in smaller libraries. A significant correlation in rankings was found between the libraries with 16-50 staff and those with 50+ staff, but there is more diversity of rank order reported across the tertiary sector than in the public sector.

Spearman's rho (<0.05)*	**6-15 staff**	**16-50 staff**
16-50 staff	*n*= 10 *rs*= 0.35 *p*= 0.3282	
50+ staff	*n*=10 *rs*= 0.54 *p*= 0.1076	*n*= 12 *rs*= 058 *p*= 0.0479*

Table 11. Time Wasters Rank Correlations between Tertiary Libraries by Size

3. Similarities by size of library across sectors

The above analysis indicates that, within sectors, there is a significant difference in the time waster rankings identified by managers in large libraries compared with those in smaller libraries. Is there any similarity between libraries of the same size from different sectors?

Table 12 compares the ranked time wasters by size of library across the public and tertiary library sectors. The smallest category, under 6 staff, has been omitted as there is only one tertiary library in this category. While there is a high level of agreement in the top five items, an analysis of the overall rankings reveals the rankings given by managers in libraries of the same size sectors differ widely between the public and tertiary sectors. There is only one case, in libraries with between 16-50 staff, that a significant correlation is found between the rank order (n=11, rs=0.79, p=0.0037).

Time Wasters	Public Library	Tertiary Library	Public Library	Tertiary Library	Public Library	Tertiary Library
	Between 6-15 staff	***Between 6-15 staff***	***Between 16-50 staff***	***Between 16-50 staff***	***More than 50 staff***	***More than 50 staff***
	(NZ 2003)	*(NZ 2003)*	*(NZ 2003)*	*(NZ 2003)*	*(NZ 2003)*	*(NZ 2003)*
Email interruptions*	6	3	1	4	1	1
Meetings (scheduled and unscheduled)	1	8	2	1	3	2
Attempting to do too much and estimating time unrealistically	5	2	4	2	2	5
Computer or technology malfunctions*	3	1	3	3	4	-
Telephone interruptions	2	6	5	8	8	3
Drop-in visitors	4	5	6	7	5	4
Inadequate, inaccurate or delayed information	7	4	7	9	12	6
Cluttered desk and personal disorganization	-	7	8	5	6	13
Crises	9	13	9	6	9	8
Indecision and procrastination	8	11	11	10	-	7
Leaving tasks unfinished	-	-	12	12	10	9
Inability to say no	-	-	-	11	7	10
Ineffective delegation and involvement in routine and detail	11	-	13	-	11	-
Lack of, or unclear, communication or instruction	13	9	10	-	-	
Lack of objectives, priorities and deadlines	-	10	-	-	-	-
Lack of self-discipline	-	-	-	13	-	12
Confused responsibility and authority	12	12	-	-	-	11
Lack of access to secretarial/administrative staff*	-	-	-	-	13	-
Lack of access to printers, copiers and other equipment*	10	-	-	-	-	-

Table 12. Ranked Time Wasters in Public and Tertiary Libraries by Size

Usefulness of time waster rankings

Time waster rankings are one way of analysing the time management behaviour of managers within a sector. The differences in the priority assigned to the time wasters indicates that there are variations in the experience of managers by sector and by size of library.

For each of these time wasters, a raft of practical time management strategies exist that can be implemented to alleviate the problem: these are discussed in most of the popular literature on time management, including Mackenzie (1997). These may be used as the basis of training or mentoring, to help improve efficiency and reduce workplace frustration.

4.1.3 *TMBS* and Sector

Table 13 shows the mean and standard deviations for each of the four *Time Management Behavior Scale* (*TMBS)* subscales for each of the three sectors.

(Range 1-5)	**Public**	***n*=259**	**Tertiary**	***n*=134**	**Law**	***n*=11**
	Mean	**Std Dev**	**Mean**	**Std Dev**	**Mean**	**Std Dev**
Mechanics of Time Management	3.26	0.73	3.19	0.68	3.03	0.75
Setting Goals and Priorities	3.31	0.66	3.23	0.66	3.33	0.62
Preference for Organisation	3.94	0.63	4.03	0.64	3.76	0.61
Perceived Control Over Time	3.25	0.71	3.32	0.68	3.33	0.52

Table 13. Mean and Standard Deviation for the TMBS Subscales by Sector

Independent t-tests were used to explore whether there is a statistically significant difference between the mean scores of the public and tertiary library managers on each of the four sub-scales of the *TMBS*. As with all of the following statistical tests, the groups were reduced to the same size using random sampling. The law library group was too small for meaningful comparison. At a significance level of p=<0.05, no significant variation in any of the TMBS subscale scores was found between the two sectors.

4.1.4 Polychronicity and Sector

(Range 1-7)	**Public**	***n*=269**	**Tertiary**	***n*=132**	**Law**	***n*=10**
	Mean	**Std Dev**	**Mean**	**Std Dev**	**Mean**	**Std Dev**
Polychronicity	3.99	1.08	3.97	1.05	4.2	1.14

Table 14. Mean and Standard Deviation for IPV Polychronicity Score by Sector

Independent t-tests were also undertaken to explore whether there is a significant difference between the *IPV* polychronicity scores of managers in the public and tertiary library sectors. No significant difference in polychronicity scores was found between the two groups (n=264, t=0.14, p=0.8852, <0.05). The mean of each group is very close to the neutral central point on the scale (4), and the wide standard deviations indicate there is a wide spread of results within the normal range (between approximately 2.95 and 5.05).

4.1.5 Conclusion

The null hypothesis H_1, *that there will be no difference between the time management behaviours exhibited by sector,* has been supported by this study. No evidence has been

found that time management behaviours, as measured by the *Time Management Behavior Scale* and *Index of Polychronic Values* differ significantly between the public and tertiary library sectors.

However, distinct sectoral differences were noted in the priorities given to time wasters. Similarities were found between public and tertiary libraries, and between tertiary and law libraries, but not between public and law libraries. These results support those of Gothberg's American studies of public and special library directors, despite the fact that approximately 15 years has elapsed since those studies, but there was less agreement between the tertiary sector studies. As suggested by Driscol, Cowger and Egan (1979), it was found that the size of library does make a difference to the priority assigned to time wasters in public and academic libraries, which may explain the difference between the current study and Gothberg and Riggs' study.

This is supported by the opinions of participants in the focus groups and interviews, who agreed that time management behaviour was dependent upon the personal style of the manager and the demands of the job, rather than the sector. As there is a considerable amount of movement between these three sectors, it is inevitable that the cultures will be cross-influenced. Interviewees commented that they felt there was more variation in the time management behaviours required by different levels of management and type of job, particularly between customer service and technical service jobs, where the workflow was perceived as being more even for technical services managers who are not tied to a roster.

The consultative management environment which is common in public and tertiary libraries was mentioned by several interviewees as a factor which increases decision making time, and adds to the number of meetings that are required. While consultative management is generally perceived as beneficial, the fact that meetings are listed as one of the top ranking time wasters indicates there are also disadvantages to this approach (Mackenzie 1975).

Email was highly ranked as a time waster across all sectors, but comments made by people who had worked in different libraries indicated that it may be more of a problem in larger or more technologically enabled environments. Managers from all three sectors commented that electronic diaries, mobile phones and PDAs had impacted on their time management behaviour, but these tools are not available in all libraries. Several managers who work in large library systems with multiple sites reported that they are often travelling to meetings or visits and need tools to ensure that their diaries and email are kept up-to-date.

Overall, the time management behaviours of managers in the public and tertiary sectors seems to be quite similar, with variations based upon the size of the library. In smaller libraries, managers are more involved in operational activities, whereas in larger libraries it was considered possible to plan the day. In a smaller library "you might plan your day but are always responding. It's more coalface – more hands on." Several comments were received that time management training did not adequately address how to deal with a job that was driven by customer interactions.

In a law library it is also necessary to maintain flexibility, but there is greater pressure to respond instantly to supply full, reliable and often packaged information within a tight deadline, which is not a common occurrence in the other sectors. Within the academic and public library sectors the opinion was expressed that this was only occasionally required, and that time pressure could be artificial. One tertiary manager commented "it's only a library" while another said, in relation to the time pressure that librarians put upon themselves, that it is necessary to remember that "we're not brain surgeons."

The predictability of annual cycles within the tertiary sector was commented on several times. However, the consensus amongst interviewees was that, while the environments and pressures may differ, time management behaviour did not really vary between sectors. "A library is a library is a library," commented one law librarian who had also worked in several other sectors.

4.2 RESEARCH QUESTION TWO: To what extent do time management behaviours differ between levels of management?

Hypothesis Two states: *that there will be no difference between the time management behaviours exhibited by management level.*

4.2.1 Demographics

52.98% (*n*=222) of respondents to the questionnaire were line managers; 26.25% (*n*=110) middle managers and 20.76% (*n*=87) senior managers[10].

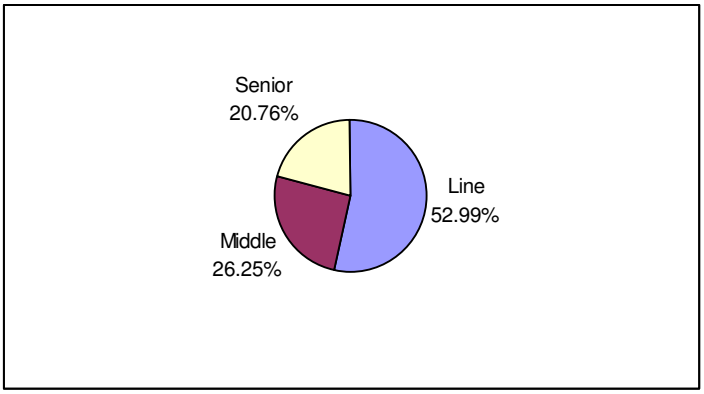

Figure 7. Total Participants by Level of Management

4.2.2 Time Wasters

There is a high level of commonality in the top five ranked time waste factors, with *meetings* being identified as the top time waster or time consumer for managers at all levels, and *telephone, email*, and *drop-in visitors* being in the top five of each group, with *computer or technology malfunctions* and *attempting to do too much and estimating time unrealistically* also being significant factors.

[10] Two public library managers included marginal comments saying that they were middle managers within their Council hierarchy. For the purpose of this research, these were coded as senior managers, as they were the senior person in the library, but there may be other instances where senior library managers have been coded as middle managers, depending on how they interpreted this question.

Time Wasters	Line Managers	Middle Managers	Senior Managers
	All Types of Library	***All Types of Library***	***All Types of Library***
	(NZ 2003)	*(NZ 2003)*	*(NZ 2003)*
Meetings (scheduled and unscheduled)	1	1	1
Email interruptions*	2	2	3
Telephone interruptions	3	5	2
Computer or technology malfunctions*	4	6	5
Drop-in visitors	5	3	4
Attempting to do too much and estimating time unrealistically	6	4	6
Inadequate, inaccurate or delayed information	7	7	7
Crises	8	12	8
Inability to say no	9	8	13
Cluttered desk and personal disorganization	11	10	10
Indecision and procrastination	13	9	11
Ineffective delegation and involvement in routine and detail	-	13	-
Leaving tasks unfinished	10	-	12
Lack of, or unclear, communication or instruction	12	-	-
Lack of objectives, priorities and deadlines	-	-	-
Lack of self-discipline	-	12	-
Confused responsibility and authority	-	-	-
Lack of access to secretarial/administrative staff*	-	-	9
Lack of access to printers, copiers and other equipment*	-	-	-

Table 15. Ranked Time Wasters by Level of Management – All Levels

The Spearman's rho rank correlation finds that the overall rankings are significantly similar across the three levels of management. This may be influenced by the size of the public library population, but as the sectoral analysis indicated that there was no significant difference in the time waster rankings between public and tertiary libraries, this should not skew the results.

Spearman's rho (<0.05)*	Line	Middle
Middle	*n*= 11 *rs*= 0.86 *p*= 0.0006*	
Senior	*n*= 12 *rs*= 0.92 *p*<0.0001*	*n*= 11 *rs*= 0.84 *p*= 0.0013*

Table 16. Time Wasters Rank Correlations between Levels of Management

An analysis by management level across sectors reveals significant levels of rank correlation within the line and middle manager groups across all three sectors, but for senior managers the correlation is significant only between public and tertiary managers. This may be due in part to the size of library or differences in the nature of the work, as discussed above, or simply because the size of the law library population was too small to be generalisable.

Time Wasters	Line Managers	Line Managers	Line Managers	Line Managers
	All Sectors	***Public***	***Tertiary***	***Law***
	(NZ 2003)	*(NZ 2003)*	*(NZ 2003)*	*(NZ 2003)*
Meetings (scheduled and unscheduled)	1	2	2	5
Email interruptions*	2	3	1	2
Telephone interruptions	3	1	5	3
Computer or technology malfunctions*	4	4	4	4
Drop-in visitors	5	5	7	10
Attempting to do too much and estimating time unrealistically	6	6	3	-
Inadequate, inaccurate or delayed information	7	7	6	1
Crises	8	8	8	-
Inability to say no	9	9	11	11
Leaving tasks unfinished	10	10	12	7
Cluttered desk and personal disorganization	11	13	10	13
Lack of, or unclear, communication or instruction	12	11	-	8
Indecision and procrastination	13	-	9	-
Ineffective delegation and involvement in routine and detail	-	12	-	-
Lack of objectives, priorities and deadlines	-	-	-	12
Lack of self-discipline	-	-	-	-
Confused responsibility and authority	-	-	13	9
Lack of access to secretarial/administrative staff*	-	-	-	-
Lack of access to printers, copiers and other equipment*	-	-	-	6

Table 17. Ranked Time Wasters by Level of Management – Line Managers

Spearman's rho (<0.05)*	Public	Tertiary
Tertiary	*n*= 11 *rs*= 0.82 *p*= 0.0021*	
Law	*n*= 10 *rs*= 0.64 *p*= 0.0479*	*n*= 10 *rs*= 0.64 *p*= 0.0479*

Table 18. Time Wasters Rank Correlations between Levels of Management – Line Managers[11]

Time Wasters	Middle Managers	Middle Managers	Middle Managers	Middle Managers
	All Sectors	***Public***	***Tertiary***	***Law***
	(NZ 2003)	*(NZ 2003)*	*(NZ 2003)*	*(NZ 2003)*
Meetings (scheduled and unscheduled)	1	1	1	1
Email interruptions*	2	2	2	4
Drop-in visitors	3	4	3	2
Attempting to do too much and estimating time unrealistically	4	3	5	6
Telephone interruptions	5	5	4	5
Computer or technology malfunctions*	6	6	9	9
Inadequate, inaccurate or delayed information	7	9	7	7
Inability to say no	8	10	6	-
Indecision and procrastination	9	7	11	-
Cluttered desk and personal disorganization	10	12	8	8
Lack of self-discipline	11	-	10	-
Crises	12	8	-	13
Ineffective delegation and involvement in routine and detail	13	11	-	-
Leaving tasks unfinished	-	13	12	-
Lack of, or unclear, communication or instruction	-	-	-	3
Lack of objectives, priorities and deadlines	-	-	13	-
Confused responsibility and authority	-	-	-	10
Lack of access to secretarial/administrative staff*	-	-	-	12
Lack of access to printers, copiers and other equipment*	-	-	-	11

Table 19. Ranked Time Wasters by Level of Management – Middle Managers

[11] Results for public:law and tertiary:law are identical – this is not a typographical error.

*Spearman's rho (<0.05)**	Public	Tertiary
Tertiary	*n*= 11 *rs*= 0.83 *p*= 0.0017*	
Law	*n*= 9 *rs*= 0.78 *p*= 0.0125*	*n*= 8 *rs*= 0.98 *p*= <0.0001*

Table 20. Time Wasters Rank Correlations between Levels of Management – Middle Managers

Time Wasters	Senior Managers	Senior Managers	Senior Managers	Senior Managers
	All Sectors	***Public***	***Tertiary***	***Law***
	(NZ 2003)	*(NZ 2003)*	*(NZ 2003)*	*(NZ 2003)*
Meetings (scheduled and unscheduled)	1	1	1	3
Telephone interruptions	2	2	5	6
Email interruptions*	3	5	2	8
Drop-in visitors	4	3	6	12
Computer or technology malfunctions*	5	4	8	2
Attempting to do too much and estimating time unrealistically	6	6	7	1
Inadequate, inaccurate or delayed information	7	7	3	4
Crises	8	8	4	-
Lack of access to secretarial/administrative staff*	9	9	13	11
Cluttered desk and personal disorganization	10	10	10	10
Indecision and procrastination	11	12	12	-
Leaving tasks unfinished	12	-	9	9
Inability to say no	13	11	-	7
Ineffective delegation and involvement in routine and detail	-	13	-	-
Lack of, or unclear, communication or instruction	-	-	-	5
Lack of objectives, priorities and deadlines	-	-	-	13
Lack of self-discipline	-	-	11	-
Confused responsibility and authority	-	-	-	-
Lack of access to printers, copiers and other equipment*	-	-	-	-

Table 21. Ranked Time Wasters by Level of Management – Senior Managers

*Spearman's rho (<0.05)**	Public	Tertiary
Tertiary	*n*= 11 *rs*= 0.63 *p*= 0.0388*	
Law	*n*= 9 *rs*= 0.23 *p*= 0.5457	*n*= 10 *rs*= 0.39 *p*= 0.2600

Table 22. Time Wasters Rank Correlations between Levels of Management – Senior Managers

4.2.3 TMBS and Management Level

Table 23 shows the mean and standard deviations for each of the four *TMBS* subscales for each of the three levels of management.

	Line	*n*=216	Middle	*n*=107	Senior	*n*=84
	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
Mechanics of Time Management	3.13	0.67	3.29	0.75	3.42	0.72
Setting Goals and Priorities	3.23	0.68	3.24	0.59	3.49	0.65
Preference for Organisation	3.99	0.63	3.93	0.67	3.97	0.62
Perceived Control Over Time	3.27	0.67	3.17	0.72	3.41	0.72

Table 23. Mean and Standard Deviation for the TMBS Subscales by Management Level

Analysis of whether there is variance between the three levels of management by any of the *TMBS* subscales was explored using ANOVA and Tukey's HSD. Samples of line and middle managers each totalling 84 (the number of senior managers) were created. The ANOVA of the *Mechanics of Time Management* score (f=3.19, p=0.0430, <0.05) revealed that there is a significant difference between levels of management. An analysis of the pattern of difference using Tukey's HSD reveals that there is a statistically significant difference between line and senior management, with senior managers scoring higher on the mechanics subscale than line managers.

Tukey's HSD (n=249) Sig 0.266*	**Line**	**Middle**
Middle	0.164	-
Senior	0.284*	0.120

Table 24. Mechanics Subscale of TMBS related to Management Level

The ANOVA of the *Setting Goals and Priorities* score (f=4.75, p=0.0095, <0.05) also showed a significant difference between levels of management. As with the *Mechanics of Time Management* subscale, there is a statistically significant difference in behaviours between line and senior management, with senior managers reporting more use of these behaviours.

Tukey's HSD (n=249) Sig 0.245*	**Line**	**Middle**
Middle	0.097	-
Senior	0.314*	0.217

Table 25. Goal Subscale of TMBS related to Management Level

However, the ANOVA of the *Preference for Organisation* score (f=0.22, p=0.7996, <0.05) and the *Perceived Control Over Time* score (f=2.39, p=0.0933, <0.05) shows that there is no significant difference between levels of management on these two attitudinal subscales.

4.2.4 Polychronicity and Management Level

	Line	***n*=221**	**Middle**	***n*=108**	**Senior**	***n*=87**
	Mean	**Std Dev**	**Mean**	**Std Dev**	**Mean**	**Std Dev**
Polychronicity	3.87	1.05	4.04	1.08	4.26	1.08

Table 26. Mean and Standard Deviation for IPV Polychronicity Score by Management Level

The ANOVA of the *IPV* polychronicity score (n=258 f=4.06 p=0.0183, <0.05) revealed that there is a significant difference between levels of management. An analysis of the pattern of difference using Tukey's HSD reveals that there is a statistically significant difference

between line and senior management, with senior managers scoring higher on the polychronicity scale than line managers.

*Tukey's HSD (n=258) Sig 0.385**	Line	Middle
Middle	0.249	-
Senior	0.469*	0.220

Table 27. IPV Polychronicity Score related to Management Level

4.2.5 Conclusion

The null hypothesis H_2, *that there will be no difference between the time management behaviours exhibited by management level,* has not been supported by this study. Significant differences have been found between line and senior managers in the *IPV* polychronicity scale and two subscales of the *TMBS*, with senior managers reporting significantly higher use of *Mechanics of Time Management* and *Setting Goals and Priorities* behaviours. These are traditional time management techniques: list making, diary keeping, scheduling, prioritising and managing multiple projects. However, no significant difference was found in the *Preference for Organisation* or *Perceived Control Over Time* subscales of the *TMBS*.

For line managers across all three sectors, there is a high level of common perception as to the priority time wasters. This is also true for middle managers. The time wasters experienced by senior managers in public and tertiary libraries are also very similar.

That there are differences in the time management behaviour exhibited by different levels of management supports Katz's theory that the managerial skills required at different levels of management varies (Katz 1974). The significant difference in behaviour is between line and senior managers, which suggests that the time management behaviour of middle managers bridges these two groups. Barry, Cramton and Carroll found that more senior managers deal with broader issues than lower level managers, and that the more people and functions a manager is responsible for the more likely they are to use formal and systematic goal setting and control mechanisms (Barry, Cramton, and Carroll 1997). The qualitative data supported this: one manager commented that senior managers "need to look at a longer time frame.

Our job is to think strategically. We're the ones charged with planning and that's always time bound. Lower levels are more time bound on a daily basis."

Interviews and focus groups revealed that line managers often feel constrained by rostered duties, and are exposed to frequent interruptions. They commented that they were driven by their staff, customers, and supervisors, often on very short timeframes (such as when the library computer system goes down and must be restored). They must be flexible in their approach to planning their work day, and often have difficulty finding uninterrupted time or space to undertake managerial responsibilities. Middle managers commented that they were driven more by their staff, colleagues and their senior manager, whereas senior managers were driven as much by the management and other units of their organisation as by their staff. Senior managers and some middle managers reported that they focus on projects that have big picture implications, on strategic priorities and on demands external to the library (such as their council or tertiary institution management), and must ensure that they have uninterrupted time to think and plan. Several middle and senior managers commented that they work from home or come to work outside core hours in order to get uninterrupted time, but were aware that this took them away from their staff, and was not good role model behaviour. One manager commented that their most productive thinking time was in the morning but they felt obliged to assist with shelving at that time of day.

One middle manager summed this up by saying "the middle manager has that tug from the operational level to the policy level so you do a bit of a dance between what the boss wants and what the operation requires and it is about adding value to both ends of that." Another pointed out that "the further down you go, the fewer people you have to delegate to. You need to delegate responsibility. [Senior managers have] got everyone to delegate to… I suppose you've got more confidence the higher up you go, and you have priority over other people's tasks." A senior manager observed that "there is a greater demand on you the higher up you go" and pointed out that the level of resourcing is not equal between libraries of similar sizes, meaning that some managers have less access to support and technology than others. Several senior managers commented that they are frustrated at being unable to complete

tasks themselves, but are constrained because they must seek input from others, or must delegate tasks to ensure completion. Middle and senior managers in larger libraries are more likely to have access to administrative support, which was considered to be beneficial in that this person could undertake administrative and routine tasks that the manager would otherwise have to do.

The nature of roles at different levels of management appears to demand that different time management behaviours are used. However, in the interviews and focus groups, managers expressed the opinion that you use the same principles regardless of level of management. One said “it is the duties that are different, responsibilities that are different…but your time management stays the same.” Another commented “they have adapted not so much changed…I now have to be a lot more detailed about what I do in terms of record keeping: I never used to bother with that before.” It would seem that the nature of managerial work does vary between levels of management, and that managers develop more systematic time management techniques, including the ability to manage multiple projects, in response to the changing demands of their jobs. Newly promoted managers may benefit from explicit mentoring in the time management techniques that they will need in their new role.

4.3 RESEARCH QUESTION THREE: Is there a relationship between regular self care and perceived control of time?

Hypothesis Three states: *that library managers who regularly engage in self-care activities will have no greater perceived control over time than those who rarely engage in self-care activities.*

Macan found that the *Perceived Control Over Time* subscale of the *Time Management Behavior Scale* was the most significant indicator in terms of stress perception (Macan 1994). Although the current study does not explicitly explore stress levels, it does set out to measure whether people who spend more time each week on self-care, spiritual reflection activities and/or exercise feel more in control of time, or exhibit any other time management behaviours to a greater extent, than those who spend less time on relaxing and recharging.

4.3.1 Discussion of Data

In order to explore this question, demographic data gathered from Questions 16 and 17 of Section One of the questionnaire was analysed in relation to the *TMBS* and *IPV*. Question 16 explored how many hours per month was spent in deliberate relaxation activities. A description of what was meant by this question, including list of examples which ranged from hobbies through to spiritual reflection[12], was given to ensure that individuals clearly understood what was meant. Question 17 asked about the frequency of engagement in exercise.

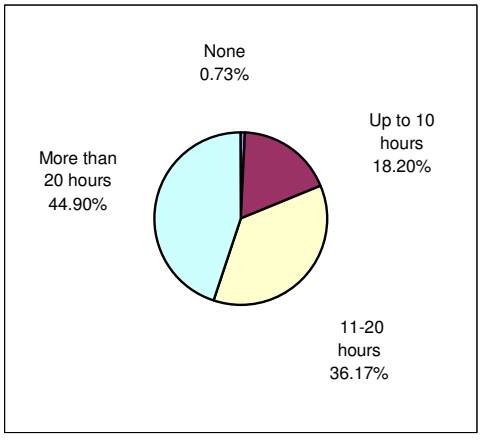

Figure 8. Hours/Month Spent on Relaxation and Self Care Activities

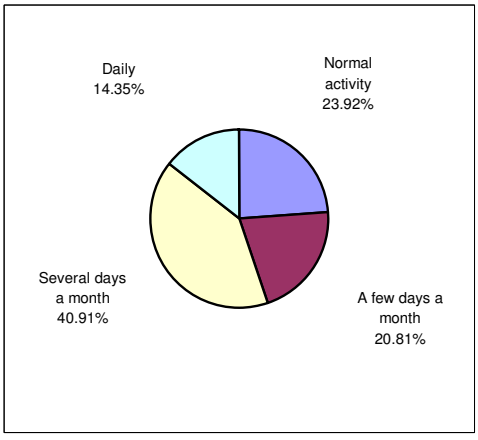

Figure 9. Hours/Month Spent on Exercise

[12] Examples were: *reading for pleasure, hobbies, gardening, spa treatments, religious worship, meditation, yoga*

Respondents were grouped according to the number of hours they spent in relaxation activities, and ANOVA and Tukey's HSD were used to explore differences the mean *TMBS* subscale scores for each group. It was found that managers who spend more than 20 hours a month on relaxation and self care score significantly higher on the *Setting Goals and Priorities* scale of the *TMBS* than people who spend between 11 and 20 hours looking after themselves (n=222 f=3.96 p=0.0205, <0.05).

Tukey's HSD (n=222) sig=0.2499*	**<10**	**11-20**
11-20	0.192	-
Over 20	0.297*	-0.106

Table 28. Goal Subscale of TMBS related to Hours/Month Spent on Relaxation and Self Care Activities

This may imply that finding 11-20 hours a month for self-care (which equates to 2¾ to 5 hours a week) is possible to achieve without the need to actively plan for it, but people who want to spend more than 5 hours a week on self care are better at setting goals to make this happen.

However, no significant differences were found in any of the *TMBS* subscale scores between groups that exercised for different amounts of time.

4.3.2 Conclusion

The null hypothesis H_3, *that library managers who regularly engage in self-care activities will have no greater perceived control over time than those who rarely engage in self-care activities,* has been supported. Although the current study has found significant differences between the mean *Setting Goals and Priorities* scores of those who engage in more than twenty hours a month 'relaxation and recharging' activities and those who engage in fewer hours, no significant difference was found in *Perceived Control Over Time* scores. Nor was there any difference in *Perceived Control Over Time* scores between those who exercised daily and those who exercised less frequently.

The finding that a person who places priority on self-care through making sufficient time for relaxation and spiritual reflection scores significantly higher on *Setting Goals and Priorities,* is interesting. This indicates that the decision to engage in regular self care may be related to the ability to set goals, which supports what is written in popular self-help books (such as Covey, Merrill and Merrill's *First Things First* (1994).

However, this may lead to the expectation that those who find the time to fit daily exercise into a routine should also display greater use of the practical time management techniques of goal setting, but this is not supported. Most people, when asked why they do not exercise regularly, say that they do not have enough time. Conversely, most people manage to make time for what is really important, or for the demands of others such as family and employer. A combination of goal setting (seeing exercise as a personal self-care goal) and scheduling (making time) is the best way to achieve something that is important to an individual (Piccone 1996). One manager commented that, in their private life, "I am not organised about everything, but I am so organised about the things I care about."

For people with strong spiritual convictions, a theological or spiritual approach to time management may provide a useful framework for establishing and maintaining life balance. Traditional time management strategies can be re-framed in the context of Christian theory, such as keeping Sabbath, which provides time for self-care and spiritual reflection (Bass 2000; Hughes, 1991). The theories of Covey et al are mostly secular, and take a wholistic approach to using time management to create life balance, but utilising very similar principles to religious theorists (Covey 1989; Covey, Merrill, and Merrill 1994). Several writers have explored time management from a Transcendental Meditation perspective, and TM is gaining widespread support in mainstream business culture, particularly in America. Harung's theory of time management is that time is perceived as positive when one is satisfied, and that a person's perception of control over time will improve as their consciousness matures through Transcendental Meditation (Harung 1998). All of these theorists recommend using sound time management techniques within an understood and meaningful theoretical framework, in order to create a good life/work balance.

In focus groups, one manager credited training for marathons as a key influence in developing time management tools such as scheduling. However, this person's description of fitting ongoing exercise into her day seems to be as much about taking time out for self-care as for exercise, which implies that her goal of taking time for personal needs is strong. She clearly indicated through her choice of language that she makes a conscious effort to place her own needs first in order to achieve this: "sometimes I have a swim in my lunch break, and feel guilt because I am not sitting in the tearoom" and "I'm a morning person. I'm selfish – I will get up early and have my walk." This emphasises how difficult it is for many people to carve time for self care out of a busy week where they are predominantly focussed on their work and family roles, as discussed by Covey, Merrill and Merrill (1994). Another manager commented that they used to be heavily involved in competitive sport but that this was no longer possible with the time demands of a senior position. However, she had made a conscious decision not to work weekends, and to spend time with her partner, which she firmly adheres to. Value-driven goal setting underlines these decisions about time allocation.

Many managers who are parents commented about the need to plan to create time for themselves, and to create time alone with their partners. Several managers who are working full time and studying indicated that they had decided to take fewer courses each year in order to ensure that they had time to spend with their families.

It is alarming to find that only 45% of library managers report taking more than five hours a week to 'recharge their batteries', which implies that most managers have little deliberate relaxation and reflection time. Conversely, that 76.08% of managers engage in deliberate exercise of some sort, rather than just normal daily activity, is encouraging. However, although these activities may make a manager feel better about themselves, there appears to be no statistical relationship between the time spent in these activities and perceived control over time.

4.4 RESEARCH QUESTION FOUR: Is there a relationship between out of work commitments and perceived control of time?

Research Questions Four and Five both relate to Hypothesis Four, but will be examined separately. Hypothesis Four has therefore been divided into two parts. H_4a explores the position *that library managers who have a high level of out-of-work commitments will exhibit no more systematic time management behaviours than those who have few commitments.*

This question was designed to explore whether busy people felt more in control of their time, as measured by the *Perceived Control Over Time* subscale of the *TMBS*, than people with fewer out of work activities. It explores a range of factors. Out of work commitments were analysed against the *TMBS* subscales using independent t-tests.

4.4.1 Demographics

Caregiver Responsibilities

Question 11 of the questionnaire explored whether managers were caregivers for preschool children, school-age children, and/or adult dependents. Macan's research indicates that working parents of both genders with pre-school age children have more conflict between work and home life than people with older or no children (Macan 1994). This question was included to test whether there is any variation in time management behaviour between New Zealand library managers with dependents and those without.

69.38% (*n*=290) of respondents did not respond to this question, implying that they have no dependents in these categories. Of those that did respond, proportions reflect the overall demographic by sector, management level and gender. Eleven managers have dependents that fall into two of the categories, and three managers commented that their adult dependents were children studying at university.

The most notable difference is that only 5.5% (*n*=23) of all managers have preschool children, compared with 27.51% (*n*=115) who have school-age children. As the preschool group was so small, statistical comparison was not undertaken between groups.

Time Worked in Excess of Core Hours

Question 12 explored how many hours a week in excess of core hours (37.5 or 40 hours, depending on institution) a manager works. Timelog exercises from a range of other studies reveal that managers work an average of 45 hours a week. The figures given in this and subsequent questions may be inflated, as self-reported time estimates are less valid than those based on time logs (Oshagbemi 1995). However, they give an indication of trends within the population.

Extra Hours	Line	%	Middle	%	Senior	%	Total	%
Public Libraries								
No extra hours	43	29.66%	21	31.34%	9	15.79%	**73**	27.14%
Up to 10 hours	98	67.59%	39	58.20%	35	61.40%	**172**	63.94%
11-20 hours	0	0.00%	4	5.97%	7	12.28%	**11**	4.09%
More than 20 hours	4	2.76%	3	4.48%	6	10.53%	**13**	4.83%
Sector Total	*145*		*67*		*57*		***269***	
Tertiary Libraries								
No extra hours	27	37.5%	11	26.83%	10	41.67%	**48**	35.04%
Up to 10 hours	42	58.33%	23	56.10%	10	41.67%	**75**	54.74%
11-20 hours	3	4.17%	7	17.07%	3	12.50%	**13**	9.49%
More than 20 hours	0	0.00%	0	0.00%	1	4.16%	**1**	0.73%
Sector Total	*72*		*41*		*24*		***137***	
Law Libraries								
No extra hours	1	33.33%	1	50.00%	2	28.57%	**4**	33.33%
Up to 10 hours	2	66.67%	1	50.00%	5	71.43%	**8**	66.67%
11-20 hours	0	0.00%	0	0.00%	0	0.00%	**0**	0.00%
More than 20 hours	0	0.00%	0	0.00%	0	0.00%	**0**	0.00%
Sector Total	*3*		*2*		*7*		***12***	
Combined Total								
No extra hours	71	32.27%	33	30.00%	21	23.86%	**125**	29.90%
Up to 10 hours	142	64.55%	63	57.27%	50	56.82%	**255**	61.01%
11-20 hours	3	1.36%	11	10.00%	10	11.36%	**24**	5.74%
More than 20 hours	4	1.82%	3	2.72%	7	7.95%	**14**	3.35%
TOTAL	***220***		***110***		***88***		***418***	

Table 29. Excess Hours/Week Worked, by Management Level and Sector

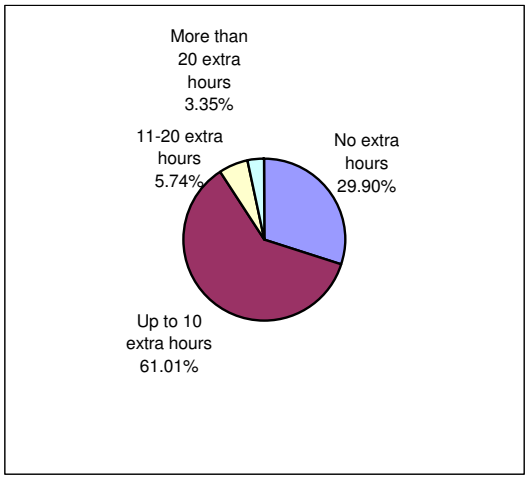

Figure 10. Extra Hours/Week Worked

Hours worked in excess of core hours are not necessarily a negative time management behaviour: making occasional use of personal time in order to avoid feeling time pressure or to complete a special project can be a positive technique, if it is deliberately chosen and controlled. However, a manager who feels forced into working longer hours on a regular basis can feel additional stress because they cannot realistically achieve their targets (DeMarco 2001). As less than half of this study's population manage to take more than five hours a week for their own relaxation, extra hours at work must cut into precious personal time.

Most organisations expect managers to work additional hours as required to get the job done, and in many organisations managers above a certain pay level or grade are not entitled to overtime payments as compensation. This was summed up in one focus group: "staff have a contract that they should work x hours. There's an expectation that managers will work the hours to do the job…. If you're given a responsibility to do a job then you try and get it done to the best of your ability. You can't say "it's 5 o'clock and I'm going home" at a particular level of the organisation."

91% of library managers work fewer than 50 hours a week, but 70.1% report that they work more than their core hours each week.[13] A survey conducted by the Cutter Consortium in

[13] In responding to this question, three people indicated that they worked both "None" (i.e. no extra hours) and "Up to 10". One of these people included a comment to the effect that they tried not to work additional hours but frequently worked a few extra. Based on the logic of that comment, all three of these were coded as "Up to 10." One person commented that they take time off in lieu of extra hours worked, which is a common practice in libraries. One, who reported working more than 20 hours extra, commented that they had been involved in a long-term major project which had just been completed.

2003 found that 60% of IT/IS managers from large organisations work between 40 and 50 hours a week, although the current study found that library managers were much less likely to work longer hours than the Cutter respondents (36% of whom worked 11 or more extra hours a week compared with 8% of library managers)(Charette, 2003).

Time Spent in Professional Development Activities Outside Work Hours

Question 13 explored how many hours a month respondents engage in professional development activities outside work hours. Nearly a third (31.41%, *n*=131) indicated that they do not participate in professional development activities outside work time. All law library respondents reported participating in up to ten hours a month professional development activities, while over half of the respondents from the other two sectors reported being actively engaged in professional development activities in their own time. Tertiary librarians were slightly more likely to participate in such activities than public librarians. The level of participation in such events may be related to the size of libraries: larger libraries may organise more in-house professional development, and/or support release time within work time to attend professional development. Conversely, there may be more funding available for managers to travel to conferences and other external activities, thereby attending them "in their own time."

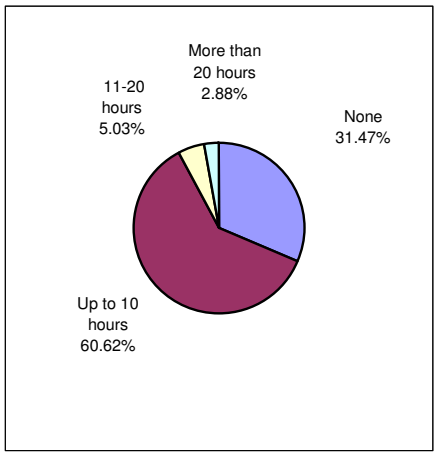

Figure 11. Hours/Month Spent on Professional Development Activities Outside Core Hours

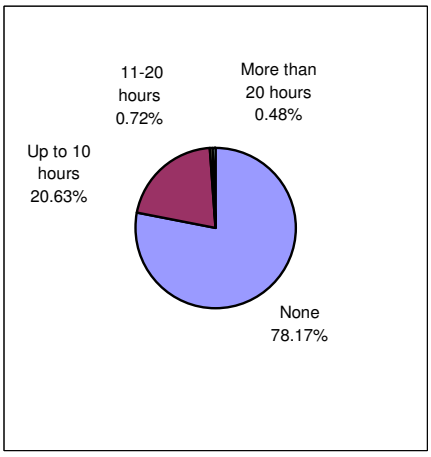

Figure 12. Hours/Month Spent in Professional Committees or Groups

Membership of Professional Committees

Question 14 explored how many hours per month are spent as a member of professional (i.e. work-related) committees and groups, outside work hours. Fewer than one quarter of respondents are involved in such activities. Most of these managers spend up to ten hours a month on them, which would equate to one or more monthly meetings/activities. 41.38% of senior managers are involved in such activities, compared with 20.91% of middle managers and 14.61% of line managers. This supports Richards' findings that senior managers were more likely to be involved in professional associations such as LIANZA or NZLLG (Richards 2001).

Membership of Non-Work Administrative Committees

Question 15 explored how many hours per month are spent as a member of non-work related administrative committees or groups. 40% of respondents were involved in some way, with 8% devoting more than 10 hours a month to these activities. As was observed with membership of work-related committees, senior managers are proportionately more likely to be engaged in such activities (55.17%) than were middle (33.64%) or line managers (39.27%). The higher proportion suggests that many people use their managerial experience in the community as well as in the workplace. One person commented that they had ceased to be involved in such activities whist studying.

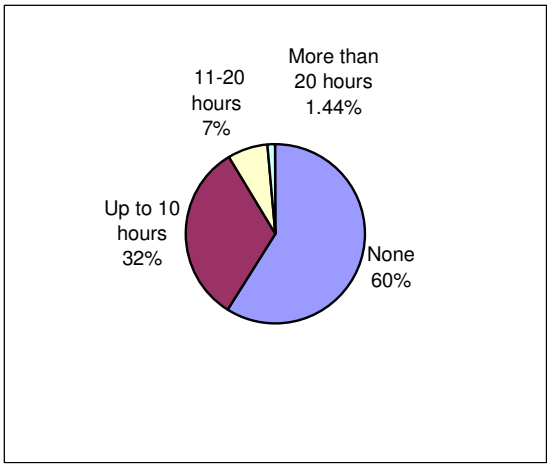

Figure 13. Hours/Month Spent in Non-Work Administrative Committees

Study While Working

Question 18 explored whether managers had embarked upon any form of tertiary-level study for a semester or more, while employed full time as a manager. 54.18% (*n*=227) of respondents reported having undertaken one or more types of study. This is explored in detail under Research Question Six.

4.4.2 *TMBS* and Out-of-Work Commitments

In order to create sample sizes large enough for statistical analysis, the results for each of these factors were split into two groups: those who indicated that they spent some time per month on these activities, and those who do not participate on these activities. This is, therefore, a preliminary analysis of the data, undertaken using independent sample t-tests to explore whether there was a significant difference in mean *TMBS* subscale scores between groups of respondents.

t-test (<0.05)*	**Caregiver Yes=135**	**Hours a week in excess of core hours Yes=284**	**Hours a Month Prof Devt Yes=277**	**Hours a Month Prof Comm Yes=91**	**Hours a Month Non-Work Comm Yes=162**	**Study while working Yes=220**
Mechanics	*n*=272 *t*=2.37 *p*=0.0185*	*n*=240 *t*=-0.52 *p*=0.6003	*n*=128 *t*=3.56 *p*=0.0004*	*n*=182 *t*=1.93 *p*=0.0495*	*n*=326 *t*=0.78 *p*=0.4387	*n*=372 *t*=2.14 *p*=0.0333*
Goals	*n*=272 *t*=1.26 *p*=0.2077	*n*=240 *t*=-1.15 *p*=0.2499	*n*=128 *t*=1.94 *p*=0.0533	*n*=182 *t*=0.95 *p*=0.3431	*n*=326 *t*=0.78 *p*=0.4332	*n*=372 *t*=2.45 *p*=0.0150*
Organisation	*n*=272 *t*=1.01 *p*=0.3137	*n*=240 *t*=-0.96 *p*=0.3360	*n*=128 *t*=-0.64 *p*=0.5249	*n*=182 *t*=-1.88 *p*=0.0619	*n*=326 *t*=-0.65 *p*=0.5185	*n*=373 *t*=-0.33 *p*=0.7405
Control	*n*=272 *t*=0.18 *p*=0.8562	*n*=240 *t*=-03.41 *p*=0.0008*	*n*=128 *t*=-0.90 *p*=0.3684	*n*=182 *t*=-1.50 *p*=0.1356	*n*=326 *t*=-0.96 *p*=0.3353	*n*=373 *t*=-0.41 *p*=0.6842

Table 30. Out-of-Work Commitments related to TMBS Subscales

It was found that there is a significant difference in the *Mechanics of Time Management* score between those who have some dependents (*n*=135) and those who do not. As this question asked whether people currently have children or other dependents, it does not include those who have had responsibility for dependents in the past. It may indicate that a higher level of list making and scheduling is required during the time that one has the added

responsibility of being a caregiver, but that these techniques are no longer required to the same extent once caregiving responsibilities have ended.

The mean scores of the *Perceived Control Over Time* subscale are significantly lower for the group who work in excess of core hours (*n*=284), compared with those who work no extra hours. This indicates that people who often work extra hours tend to score lower on factors such as avoiding procrastination and estimation of time, than do those who can mostly complete their jobs within core hours. This subscale also includes the statement "I feel in control of my time", which is a direct indicator of attitude. This suggests that people who feel that they can complete their work within the allotted time may have a more positive attitude towards time.

The mean *Mechanics of Time Management* scores of managers who are undertake some professional development outside work hours (*n*=277), and of those who are involved in professional committees outside work hours (*n*=91) are significantly higher than those who do not engage in such activities. This suggests that people who are involved in work-related activities in their own time make use of diaries and other mechanical time management tools to keep track of what they need to do. Interestingly, no difference in time management behaviour was found between managers who were involved in non-work administrative committees and those who were not. This may indicate that involvement in non-work committees is better integrated into the lives of those who are involved in them, and does not require the use of any specific time management techniques.

Managers who had undertaken study of any kind while working returned a significantly higher mean *Mechanics of Time Management* score than those who had not undertaken study, and also scored significantly higher on the *Setting Goals and Priorities* scale. This is discussed under Question Six.

4.4.3 Conclusion

The null hypothesis H_4a, *that library managers who have a high level of out-of-work commitments will exhibit no more systematic time management behaviours than those who have few commitments,* has not been supported by this study, with most factors displaying an increase in the *Mechanics of Time Management* subscale score.

Comments from the focus groups and questionnaire comments indicate that many working parents feel the need to be highly organised: “if anyone saw what I did between 6 and 8 in the morning, they wouldn’t believe it.” One manager commented that they had observed that people with children and part-time staff were often more focussed at work, as “you’ve only got that time to do the job, so you work smarter.”

Many members of the focus groups and interviews reported that they have, or expect in the future to have, responsibility for caring for elderly parents, at times alongside childcare responsibilities, and one interviewee reported actively working to raise awareness of this issue in the workplace. This is an international trend. Ezra and Deckman discuss the change to more family friendly policies in the American federal government service, how policies can be changed to accommodate “child care, elder care, family emergencies and other personal commitments” as the proportion of women in the workforce has risen sharply (Ezra and Deckman 1996, 174). They cite a study by Rodgers and Rodgers (1989) which links rigid workplace policies to increased stress and absenteeism, and lowered job satisfaction.

4.5 RESEARCH QUESTION FIVE: Is there a relationship between out-of-work commitments and level of polychronicity?

This (along with Research Question Four) relates to Hypothesis Four, and will be referred to as H_4b: *that library managers who have a high level of out-of-work commitments will have no higher polychronicity scores than those who have few commitments.*

4.5.1 Polychronicity and Out-of-Work Commitments

The *IPV* polychronicity scale measures attitudes and preferences about multitasking. In the context of the current survey, respondents were asked to complete this part of the questionnaire thinking about the work environment. Several people included comments to the effect that their responses would vary depending upon individuals or contexts. As Research Question Five explores polychronicity levels in relation to out-of-work behaviour, it is in effect exploring whether there is any relationship between attitudes within work, and behaviour in a manager's personal life, which may lead to bias in the results.

Many managers commented in the focus groups that they had learned to be more systematic and single-task focussed (i.e. more monochronic) as a result of work pressure and organisational cultures.

Using independent t-tests, the difference in *IPV* polychronicity scores between groups within the out-of-work commitment data was explored. No significant differences at <0.05 were found in the caregiver, hours a week worked in excess of core hours, hours a month spent on professional development activities, study while working or hours spent on administrative committees.

The only significant difference between groups was found between the *IPV* scores of those who participated in professional committees and those who did not (n=184, t=2.31, p=0.0219), indicating that polychrons are more likely to be willing to get involved in work-related activities during their own time. Polychrons score significantly lower in *Preference for*

Organisation scores on the *TMBS* (discussed under Research Question Seven), which may indicate that they have a higher level of flexibility in their approach to time allocation.

4.5.2 Conclusion

The null hypothesis H_4b, *that library managers who have a high level of out-of-work commitments will have no higher polychronicity scores than those who have few commitments,* has been supported. The finding that people who are members of professional administrative committees with higher *IPV* polychronicity scores have lower preference for organisation than others supports the finding that there is a negative correlation overall between polychronicity score and *Preference for Organisation*. The fact that this only emerges as a significant difference in work-related committees is interesting and may indicate that managers with a flexible attitude to time are more likely to get involved in out-of-work professional groups.

Within the qualitative data, parents repeatedly commented that they multi-task a great deal: one interviewee commented that "multi-tasking gets upgraded when you are a mother." However, the significant difference in time management behaviour that was found for caregivers was in the area of *Mechanics of Time Management*, rather than polychronicity. This implies that busy people make use of lists and schedules in order to achieve what they need to do, but do not necessarily prefer to behave in a polychronic fashion in their worklife. This challenges the definition of polychronicity – people who prefer to work on tasks in a sequential manner (a monochromic approach) may use lists and scheduling to achieve what is, in effect, polychronic behaviour – keeping many balls in the air at once.

4.6 RESEARCH QUESTION SIX: What training, life and employment factors have influenced the development of personal time management behaviours?

Research Question Six explores in what ways personal time management behaviours have been influenced by time management training, life events and different employment scenarios. Two hypotheses have been posed in relation to this question:

H_5: *that time management behaviour is not influenced by time management training or life changes.*

H_6: *that library managers who have undertaken tertiary level study while employed will exhibit no more systematic time management behaviours than those who have not undertaken such training.*

These influences were explored in Section One (Demographics) and Section Five of the questionnaire, and also explored at length in the focus groups and interviews.

Francis-Smythe and Robertson ask:

> "What exactly is time management and how should we measure it? Is it a set of learned behaviours or the manifestation of a combination of personality traits?"
>
> (Francis-Smythe and Robertson 1999a, 333)

Instruments such as Macan's *Time Management Behavior Scale* allow exploration of the multi-dimensional nature of time management behaviour, but the network of conscious and unconscious influences throughout life is so complex that none can be positively identified as being the primary cause of any given behaviour set. However, many people believe that a significant event, such as the birth of a child or undertaking a course of study while working, has influenced their time management behaviour. This section explores whether time management behaviour varies based on a number of life event factors.

While time management techniques can be learned throughout life, the techniques that one learns as a child, and the attitudes that one absorbs in early years, form a very powerful foundation for adult behaviour. A 1990 survey of Australian MBA graduates found that "parents were volunteered as the most important sources of influence while growing up, supplying a commitment to education and role model." (Sinclair and Hintz 1991). Macan flagged the influence of life events on time management behaviour as an area that requires investigation (Macan 1994).

4.6.1 Discussion of Data

Many people in the current study reported that, when they were children, their families had been run to a set timetable, often because both parents worked. One commented "my mother would have been capable of running the United Nations in harmony single handed. I learned a lot from watching her." These managers tended to report more systematic time management behaviours in their adult life than people who were exposed to more flexible time management behaviour as children.

Two people commented that they grew up in a rural environment with a very flexible attitude to time, and both stated that they had developed more systematic time management behaviour in order to succeed in the workplace, but that the flexibility that they preferred was a useful attribute. This is supported by Barry, Cramton and Carroll, who found that once people assumed managerial roles, where others were reliant upon their time management, they tend to adopt more systematic time management behaviours (Barry, Cramton, and Carroll 1997). Several people commented that they were raising their own children in a more flexible time management structure than they themselves had grown up in, although others commented that the lives of all family members are very busy, and that formal structures, such as family calendars, whiteboards, and set bedtimes for children are tools that they find essential.

Macan found that temporal constructs of time management are unlikely to change as a result of time management training, which implies that a person's natural inclination is a stronger

predictor than skills they have learned in formal training (Macan 1994). The influence of life events may, therefore, be a much stronger influence on time management behaviour than formal training.

Section Five of the questionnaire asked respondents to indicate which of a list of time management training and life events they thought had influenced their time management behaviour. As the data collected in this section was self-reported opinion, it is indicative of trends but cannot be considered to be absolutely reliable.

Independent t-tests were used to explore whether there was a significant difference in the mean time management behaviour scores of the groups who indicated that each factor was an influence, compared with those who did not think they had been influenced by that factor. The responses are summarised in Tables 31 and 32, below.

t-test (<0.05)*	**Formal Training Yes=287**	**Conf Papers Yes=165**	**Reading Yes=288**	**Coach/ Mentor Yes=78**	**Watching Others Yes=166**	**Log Billable Time Yes=53**
Mechanics	n=242 t=1.89 p=0.0601	n=330 t=2.34 p=0.0201*	n=238 t=3.57 p=0.0004*	n=156 t=2.16 p=0.0320*	n=332 t=1.61 p=0.1092	n=106 t=1.49 p=0.1399
Goals	n=242 t=0.12 p=0.9061	n=330 t=1.08 p=0.2823	n=238 t=1.55 p=0.1230	n=156 t=3.10 p=0.0023*	n=332 t=2.88 p=0.0043*	n=106 t=1.26 p=0.2111
Organisation	n=242 t=0.457 p=0.6531	n=330 t=-0.79 p=0.4302	n=238 t=2.11 p=0.0361*	n=156 t=1.83 p=0.0695	n=332 t=3.07 p=0.0023*	n=106 t=1.66 p=0.1009
Control	n=242 t=-0.16 p=0.8758	n=330 t=0.75 p=0.4531	n=238 t=-0.89 p=0.3768	n=156 t=2.79 p=0.0060*	n=332 t=-0.11 p=0.9141	n=106 t=0.82 p=0.4142
IPV Polychronicity	n=242 t=0.07 p=0.9438	n=330 t=2.00 p=0.0461*	n=238 t=1.13 p=0.2617	n=156 t=-0.51 p=0.6131	n=332 t=-0.26 p=0.7935	n=106 t=-0.40 p=0.6916

Table 31. Influences on Time Management Behaviour related to TMBS Subscales and IPV Polychronicity Score (1)

*t-test (<0.05)**	New Job Yes=206	New Sector/ Industry Yes=95	Study Yes=208	Child or Family Yes=152
Mechanics	n=402 t=4.64 p=<0.0001*	n=190 t=2.02 p=0.0445*	n=398 t=1.86 p=0.0641	n=304 t=2.50 p=0.0128*
Goals	n=402 t=3.54 p=0.0005*	n=190 t=2.32 p=0.0215*	n=398 t=2.92 p=0.0037*	n=304 t=2.00 p=0.0469*
Organisation	n=402 t=2.55 p=0.0113*	n=190 t=0.81 p=0.4199	n=398 t=1.03 p=0.3042	n=304 t=1.52 p=0.1308
Control	n=402 t=3.34 p=0.0009*	n=190 t=0.93 p=0.3511	n=398 t=0.74 p=0.4574	n=304 t=1.43 p=0.1540
IPV Polychronicity	n=402 t=-0.48 p=0.6299	n=190 t=0.86 p=0.3902	n=398 t=1.91 p=0.0568	n=304 t=2.09 p=0.0374*

Table 32. Influences on Time Management Behaviour related to TMBS Subscales and IPV Polychronicity Score (2)

The key finding for libraries organising workplace training is that, although formal time management training was considered to be an influence by 287 respondents, this group shows no significant difference in any aspect of time management behaviour compared with people who had not been trained. However, the group that credited attendance at conference papers and motivational speakers (*n*=165) scored significantly higher on both the *Mechanics of Time Management* and *IPV* polychronicity scores. In the focus groups, several managers commented that they had been inspired to modify their time management behaviours by motivational speakers or by trainers who had inspired them to see their own time management behaviour in context: several clearly remembered the name of the speaker and the message that they conveyed that was meaningful to them. Several others cited one key message from training activities, such as "I learned I didn't have to be late," "I learned don't handle the same piece of paper twice." This result also suggests that a polychronic person may be more likely to draw inspiration from a charismatic presentation, although this needs to be explored further.

In training sessions and presentations to groups of people, the content is usually generic, and concentrates on a small number of common sense techniques which many participants can remember and implement when they return to their workplaces. Several people in focus groups commented that they had attended training that was too generic and a waste of time,

although others commented that training which focussed on finding solutions that met the needs of different personality styles was very useful.

These findings partially support the work done by Macan (1989) who found that, several months after receiving time management training in the workplace, no significant changes in time management behaviour, stress levels or job performance were detected amongst participants. She explored this again in 1996 after refining her instrumentation, with the same result. She found that the *Perceived Control Over Time* score increased after the training, even though participants did not use time management behaviours any more frequently as a result of the training (Macan 1996). This suggests that time management training may have a placebo effect: if training makes a person feel more in control of their time, they may feel less stressed, and therefore happier and healthier, which leads to a more productive workplace (Macan 1994).

The remainder of the influencing factors require active personal commitment and reflection, and the behavioural variations indicate that experiential learning, where the trainee is highly motivated to succeed, is indeed the best way to change behaviour (Drucker 1967; Knowles 1984; Slaven and Totterdell 1993; Orpen 1994). The mean scores for those who indicated that they had read about time management or been coached or mentored are significantly higher on the *Mechanics of Time Management* subscale, which may imply that these are the easiest time management behaviours to learn and implement.

Interestingly, the mean score of the group of managers (n=288) who credit reading about on time management as being influential to them score significantly higher on both *Mechanics of Time Management* and *Preference for Organisation* than those who have not read such books. This runs contrary to Macan et al's findings in 1990, where no correlation was found between *TMBS* scores and reading about time management. However, Macan's study was of students, whereas the current study is of managers who may have read about time management in relation to a real problem with their own workplace behaviour. It may be that people who prefer to be organised are more likely to read self-help books on the subject of time management, and the mechanical techniques that can be learned from reading are the easiest to integrate into working behaviour.

In the focus groups and interviews, participants were asked whether they have ever actively sought out books on time management, and whether they would read a book or article on the subject if they happened to come across one. A few people who have a personal interest in the subject said they would definitely choose to read a new publication, but most said they might scan an article in a professional magazine in passing, and would only seek out books if they or one of their colleagues had a particular time management problem. Many had encountered Stephen Covey's Four Quadrant Leadership Model as part of management training and, even if they were not aware that they were citing Covey's theory, referred to doing the important things first. During the focus groups, several key authors and/or titles were mentioned as having been particularly influential, including Declan Treacy's *Clear Your Desk*, the works of Stephen Covey, and *Time Management for Unmanageable People* by Ann McGee-Cooper.

The group who have received individual attention in the workplace, and those who are conscious of the time management behaviour of colleagues or what is required in a particular workplace, scored significantly higher on *TMBS* scores than managers who did not feel they had been influenced by these factors. Managers who have been coached or mentored (*n*=78) in time management behaviour score higher in the *Mechanics of Time Management*, *Setting Goals and Priorities* and, most interestingly, *Perceived Control Over Time* subscales of the *TMBS*, implying that individual attention within a specific context, resulting in a tailored set of strategies, is highly effective in changing both behaviour and attitudes. One senior manager said that they intervene when they see staff members with time management problems and provide coaching to help them correct their behaviour. This is supported by Sinclair and Hintz, who found that informal mentoring (what they call "psychosocial mentoring" from "those who provide examples, moral support and a belief in self") may have a greater influence on managerial career development than formal mentoring programmes (Sinclair and Hintz 1991, 56).

Many respondents (*n*=166) ticked "watching others" as an influential factor, and in the focus groups and questionnaire comments, an awareness of good and bad role models was

frequently commented upon. Unusually, a significant difference was noted where people who rated this as important scored high on both *Setting Goals and Priorities* and *Preference for Organisation* subscales, implying that people who are aware that they have been influenced in this way have a strong sense of priorities and of the way their workplace is organised.

As very few managers in the three sectors being studied are currently required to log billable time, most of the 53 people who ticked that they have had to do this would be referring to previous employment situations. As "general administrative" time (that is, the time spent on 'management' rather than operational activities) is not normally considered billable, there is an expectation that this aspect of a library manager's job will be completed in the most efficient manner (Maister 1996). However, being monitored in this way does not seem to be an important influence on time management behaviour. Managers who have had to log billable time exhibited no different time management behaviours than those who had never had to do this, and feedback from focus groups was almost uniformly negative about using any form of time logging methodology, seeing it as a waste of time unless being used for a specific purpose which the individual can see has personal benefit.

However, being appointed to a new job seemed to focus people's minds on all aspects of time management and create powerful learning opportunities. Half of respondents (204 vs 202) indicating that a new job was an important influence on their time management behaviour, and this was reflected in significantly higher scores in all four *TMBS* subscales than people who did not credit this as an influence. Although starting work in a new sector or industry was considered significant by 94 managers, whose mean scores show a significant difference in the *Mechanics of Time Management* and *Setting Goals and Priorities* scales, it is obvious that it is possible to learn new time management behaviours within the same sector.

People who credited "birth of a child or other family situation" as being influential scored significantly higher on *Mechanics of Time Management* and *Setting Goals and Priorities* but not *Preference for Organisation* or *Perceived Control Over Time*, perhaps implying, as was suggested in the focus groups, that a working parent or caregiver adopts a range of time management techniques that may not be their preferred way of managing time, and may still not feel like they are in control of time. In feedback, being a parent and working part or full

time was repeatedly mentioned as being a very strong influence on the development of time management strategies.

4.6.2 Influence of tertiary-level study while working

This section explores whether there is any difference in the *TMBS* and *IPV* scores of managers who have undertaken some form of tertiary study while employed compared with those who have not undertaken study, and draws on the qualitative data revealed in Section Five of the Questionnaire and in the focus groups and interviews to identify possible influences and trends to support the statistical analysis.

Tertiary-level study, when undertaken while in full-time employment, places extra time-demands upon the student. They must find time to prepare for classes, attend class and complete assignments. This may require other activities to be scaled back or stopped, and may result in an increased use of time management strategies such as time allocation, prioritisation and goal setting. Several people commented that despite studying while working and juggling family responsibilities, they were more prepared and better organised than full-time students in their class who faced fewer time demands.

Question 18 in Section One of the questionnaire explored whether managers had embarked upon any form of tertiary-level study, for a semester or more, while employed full time as a manager, and identified a range of options[14]. 62.93% (*n*=264) of respondents reported having undertaken one or more types of study while employed full-time, and most of this was work related (this is broken down in Figure 14). 17.42% (*n*=73) of all managers report having completed a professional qualification in library and information studies or a related field (including Business and IT) while employed as a manager. Two people reported doing education degrees (a BA in Education and a MEd) as "upgrading my library qualification". 6.21% (*n*=26) of all managers had undertaken or were currently undertaking study in a

[14] 18. Since becoming a manager, have you enrolled in tertiary level study of a semester or more duration while working full time? (tick all that apply)

- ☐ No
- ☐ I have done one or more courses for personal interest
- ☐ I have done one or more courses of work related study
- ☐ I have completed my first library studies or related qualification
- ☐ I have upgraded or gained a higher library studies or related qualification
- ☐ I have completed a business qualification (e.g. Dip.Business, MPP, MBA)
- ☐ I have completed a legal qualification (e.g LLB)
- ☐ I have completed an IT-related qualification (e.g. DipBusComp)

business related area. One manager noted that they had undertaken a DipBus (InfoSystems) which combined IT and Business, while another commented that they had done a MPM, but did not consider this a business qualification.

Study while working	Line	%	Middle	%	Senior	%	Total	%
Public Libraries								
No study	69	38.33%	30	40.00%	23	27.38%	**122**	35.99%
Personal Interest	32	17.78%	13	17.33%	20	23.81%	**65**	19.17%
Work Related	47	26.11%	19	25.33%	22	26.19%	**88**	25.96%
First Library Qual	13	7.22%	5	6.67%	7	8.33%	**25**	7.37%
Upgraded Library Qual	11	6.11%	5	6.67%	3	3.57%	**19**	5.60%
Business	7	3.89%	3	4.00%	9	10.71%	**19**	5.60%
Law	1	0.55%	0	0.00%	0	0.00%	**1**	0.29%
IT	0	0.00%	0	0.00%	0	0.00%	**0**	0.00%
Sector Total	*180*		*75*		*84*		***339***	
Tertiary Libraries								
No study	37	43.53%	19	37.25%	10	31.25%	**66**	39.29%
Personal Interest	12	14.12%	9	17.65%	4	12.50%	**25**	14.88%
Work Related	25	29.41%	9	17.65%	5	15.63%	**39**	23.21%
First Library Qual	2	2.35%	0	0.00%	1	3.13%	**3**	1.79%
Upgraded Library Qual	4	4.71%	8	15.69%	3	9.38%	**15**	8.93%
Business	5	5.88%	4	7.84%	8	25.00%	**17**	10.12%
Law	0	0.00%	0	0.00%	0	0.00%	**0**	0.00%
IT	0	0.00%	2	3.92%	1	3.13%	**3**	1.79%
Sector Total	*85*		*51*		*32*		***168***	
Law Libraries								
No study	0	0.00%	2	100.00%	2	22.22%	**4**	26.67%
Personal Interest	2	50.00%	0	0.00%	3	33.33%	**5**	33.33%
Work Related	1	25.00%	0	0.00%	2	22.22%	**3**	20.00%
First Library Qual	0	0.00%	0	0.00%	0	0.00%	**0**	0.00%
Upgraded Library Qual	1	25.00%	0	0.00%	1	11.11%	**2**	13.33%
Business	0	0.00%	0	0.00%	1	11.11%	**1**	6.67%
Law	0	0.00%	0	0.00%	0	0.00%	**0**	0.00%
IT	0	0.00%	0	0.00%	0	0.00%	**0**	0.00%
Sector Total	*4*		*2*		*9*		***15***	
Combined Total								
No study	106	39.41%	51	39.84%	35	28.93%	**192**	37.07%
Personal Interest	46	17.10%	22	17.19%	27	22.31%	**95**	18.34%
Work Related	73	27.14%	28	21.88%	29	23.97%	**130**	25.10%
First Library Qual	15	5.58%	5	3.91%	4	3.31%	**24**	4.63%
Upgraded Library Qual	16	5.95%	13	10.16%	7	5.79%	**36**	6.95%
Business	12	4.46%	7	5.47%	18	14.88%	**37**	7.14%
Law	1	0.37%	0	0.00%	0	0.00%	**1**	0.19%
IT	0	0.00%	2	1.56%	1	0.83%	**3**	0.58%
TOTAL	***269***		***128***		***121***		***518***	

Table 33. Study Undertaken While Working, by Management Level and Sector

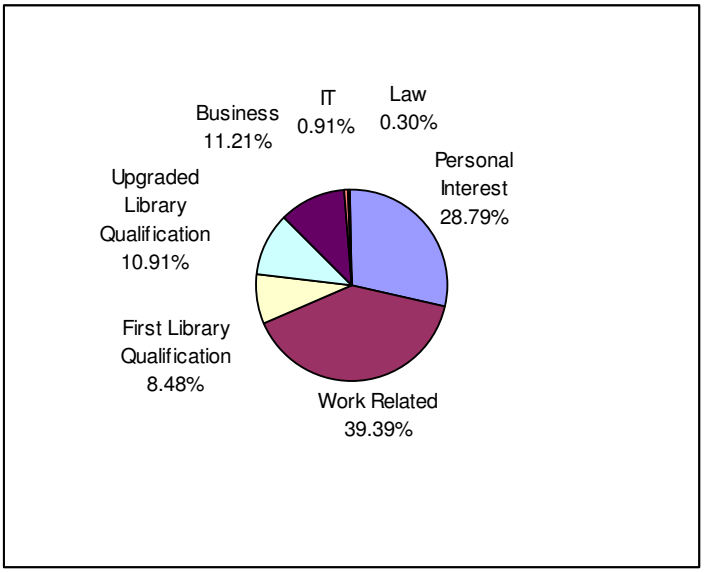

Figure 14. Types of Study Undertaken
(n=264, but multiple responses were ticked by many people)

An examination of the detail in Table 33 shows that senior managers are more likely to have undertaken some form of study than line or middle managers, and a higher proportion have undertaken study in the area of business. Middle and senior managers in the academic sector are less likely to have engaged in general work-related study than are their colleagues in public libraries, and public library managers are more likely to complete their first library qualification while in a managerial role than are tertiary or law library managers.

In Section Five of the questionnaire, respondents were asked to indicate what they considered to be influences on their time management behaviour, one of which was "study while working." Section Five, therefore, explored people's perception of study (of any kind) as an influence on their behaviour, whereas Question 18 identifies specific types and fields of study.

Independent t-tests were used to explore whether there was a difference between the time management behaviour, measured by the *TMBS* subscale scores, of managers who had done no study, and those who had undertaken study. These tests were conducted on the

data gathered from Question 18 and also from those who ticked “study while working” in Section Five. The results are given in Table 34.

*t-test (<0.05)**	Q18 Yes=220	Section 5 Yes=208
Mechanics	n=372 t=2.14 p=0.0333*	n=398 t=1.86 p=0.0641
Goals	n=372 t=2.45 p=0.0150*	n=398 t=2.92 p=0.0037*
Organisation	n=373 t=-0.33 p=0.7405	n=398 t=1.03 p=0.3042
Control	n=373 t=-0.41 p=0.6842	n=398 t=0.74 p=0.4574

Table 34. Study While Working related to TMBS Subscales

Significant differences were found in the *Mechanics of Time Management* scores for those who indicated that they had undertaken study while employed as a manager in response to Question 18, and for the *Setting Goals and Priorities* scores of those who said they had studied in both Question 18 and Section Five.

This implies that people who undertake tertiary-level study while working may already have good goal setting and mechanical time management skills, and/or that they may develop these during the course of their study. This is true of both work related and personal interest study for a semester or more. Whatever the causal relationship, managers who undertake such study do show more systematic time management behaviours than those who have not studied.

4.6.3 Conclusion

Null Hypothesis Five, *that time management behaviour is not influenced by time management training or life changes,* has been partially disproven. It would seem that life events, where one learns from experience, have more influence on time management behaviour than does formal training in a group setting.

Null Hypothesis Six, *that library managers who have undertaken tertiary level study while employed will exhibit no more systematic time management behaviours than those who have*

not undertaken such training, has been disproven. The group of managers who have undertaken some form of study while working show significantly higher average scores on *Mechanics of Time Management* and *Setting Goals and Priorities* than do those who have not undertaken study. This was supported consistently through the qualitative data, where people talked about the need to be very organised in order to fit study into their work and family lives. The ability to plan when to do study, scheduling it around work and family commitments, is a key factor to being able to succeed. “I had to discipline myself to do 1.5 hours a night at least three times a week, and a half day at the weekend.” The availability of partners or family members to care for children was mentioned by several people as essential support systems: “my husband and I split up so I used to lose the kids every second weekend and that was when I did my assignments.” The high scores in *Setting Goals and Priorities* indicates that people who succeed in study have made a conscious commitment to this being an important part of their lives, and the high scores in *Mechanics of Time Management* recognise the necessity to make lists and schedule carefully to ensure all the work gets done.

4.7 RESEARCH QUESTION SEVEN: Is there a relationship between level of polychronicity and perception of control over time?

Research Question Seven explores whether managers who prefer to work on several tasks in the same time period feel any more or less in control of time than managers who prefer to work on one task at a time. The null hypothesis posed (H_7) was: *that there will be no correlation between perceived control of time and the level of polychronicity score.*

4.7.1 Discussion of Data

This was explored by examining whether the level of polychronicity, as measured by Bluedorn et al's (1999) *Index of Polychronic Values* (*IPV*), had any significant correlation with the score on the *Perceived Control Over Time* subscale of Macan's *Time Management Behavior Scale* (*TMBS*), using the Pearson r test to examine the statistics.

The mean polychronicity scores in the current study are clustered around the middle of the scale (4, on a scale of 1-7), with wide standard deviation results (see Table 26). The mean score for line managers (3.87) is slightly below 4, whereas middle managers (mean=4.04) and senior managers (mean=4.26) tend to exhibit more polychronic behaviour. Reflecting the influence of the line managers, which make up 52.99% of the population, the means for all three sectors are very close to the middle of the scale (public mean = 3.99, tertiary mean=3.97 and law mean=4.2).

No significant correlation was found between *IPV* score and the *Perceived Control Over Time* subscale score amongst the overall population at a significance level of <0.05 (n=402, r=0.08, p=0.1297).

As this finding supports the null hypothesis, the results from the other three subscales of the *TMBS* were examined in relation to the *IPV* polychronicity scores to see if any significant correlations were found. No significant correlation was found between the *IPV* score and the *Mechanics of Time Management* subscale (n=402, r=0.03, p=0.5811), nor with the *Setting Goals and Priorities* score (n=402, r=0.02, p=0.6949). However, a relatively weak negative

correlation was found between *IPV* score and the *Preference for Organisation* subscale score (n=402, r= -0.17, p=0.0007), which indicates that people with a higher preference for polychronic behaviour may have a lower need for organisation in the workplace/day (this scale includes factors such as preference for a clear workspace, and explores attitude towards keeping to lists of planned activities during the day). This is consistent with the results of earlier studies, which have used a range of survey instruments. Conte et al used the *IPV* and *TMBS* to explore differences between American and French students, and found a weak negative correlation between *IPV* score and *Preference for Organisation* (r=-0.19, p=<0.001), but no significant correlation with the other *TMBS* subscales (Conte et al 1998, 281). Bond and Feather found that people who scored highly on preference for organisation in their *Time Structure Questionnaire* were less likely to drift between activities (Bond and Feather, 1988).

Macan suggested that "future research could also explore the relation between the perception of time control held by monochronic people who make lists and that held by polychronic people who make lists" (Macan 1994, 389). As no correlation between *Perceived Control Over Time* and polychronicity had been found when analysing the whole population, it was decided to explore this further by testing Macan's question. Two groups were formed: those with a mean score of between 1-3.9 on the *IPV* polychronicity scale (monochrons, n=188), and those whose mean score was between 4.1 and 7 (polychrons, n=204). 13 people whose mean *IPV* score was 4 were excluded from this calculation. It was found that both groups had exactly the same mean score on the *Mechanics of Time Management TMBS* subscale (mean =3.27). No significant correlation was found between the *Perceived Control Over Time* scores and the *Mechanics of Time Management* score for either of these groups using Pearsons r (monochrons: n=188, r=0.06, p=0.4037; polychrons: n=204, r=12, p=0.0907).

The results closest to the central, neutral on the *IPV* scale were then removed, to create groups that displayed a stronger preference for monochronicity and polychronicity. No correlation was found at any level for monochrons, even those who scored very low on the *IPV* scale. However, those whose mean polychronicity score was higher than 4.5 showed a

weak but significant correlation between the *Mechanics of Time Management* score and the *Perceived Control Over Time* score (n=148, r=0.21, p=0.0097). This suggests that managers with a significant tendency towards polychronicity, (who may have many tasks underway at once) may feel more in control if they make use of lists and schedules.

4.7.2 Conclusion

The null hypothesis $H_{7,}$ *that there will be no correlation between perceived control of time and the level of polychronicity score,* has, therefore been partially disproven. Some evidence of a correlation between specific time management behaviours and *Perceived Control Over Time* has been found for the group with mean *IPV* polychronicity scores of above 4.5, but in the overall population there is no significant correlation. This has the potential to be explored further.

Individuals have different approaches to undertaking their work, reflecting their time management behaviour preferences. Some will break down a project into subtasks and work steadily through these over a period of time, while others will begin concentrated work on a project as the deadline approaches. Each approach may seem unnatural to a person who works in the opposite manner, and the processes and pressures of the managerial workplace require both types to work in ways that are not their natural style at times. This difference emerged clearly in one focus group where managers who work closely together reported divergent styles, but acknowledged the validity of both:

A: "Being a last minute completer is a perfectly valid way of managing time… I seldom miss a deadline, but am seldom a long way ahead of it."

B: "I'm the opposite as I plan and tend to be 95% completed one day out."

A: "… if the goal is to complete then both tactics are equally valid."

Traditional time management strategies are mostly monochronic – they have been developed by management theorists focussing on large, western (chiefly American) organisations, which tend to be monochronic in culture (discussed in Bluedorn, Kaufman, and Lane 1992). It is therefore logical to assume that there would be a correlation between the *Mechanics of Time* subscale of the *TMBS* and monochronic behaviour, but this has not been supported in the current study. The focus group discussions explored this, revealing that the same tools are used by managers at all levels of polychronicity, but in divergent ways. While almost all make lists of some sort, some control these tightly while others are much more free-flowing. For example, several managers mentioned that they used PDAs as a time management tool. Some use PDAs only for diary/scheduling, while three managers reported that they downloaded their email to their PDAs and one reported that they preferred to take electronic versions of documents to meetings on the PDA, rather than carry hard copies. Without access to a PDA, some managers print copies of their electronic diaries to carry with them. Others use paper diaries or a combination of a scheduling diary and planning daybook.

The workplace culture requires certain behaviours from managers, such as that a diary always be carried so that meetings can be scheduled. It is increasingly common for libraries to use online meeting scheduling software, which requires managers to record their commitments and work plans in their electronic diaries so that others can schedule meetings around available time. This was mentioned by many middle and senior managers, and was seen as a valuable tool by some, and an unwelcome constraint by others. One interviewee commented “electronic meeting scheduling forced me to put the time I was planning to work on projects at my desk into my diary, or else my colleagues would think it was free time and fill it up with meetings.”

Almost all library managers have worked, and most still do work, in environments where they are required to multitask. 54.65% (*n*=229) of respondents reported that they had worked in industries other than librarianship, summarised in Table 35.[15]

[15] ANZIC Industry Codes taken from http://www.arc.gov.au/apply_grants/anzsic_codes.htm#a

ANZSIC Code	Scope Notes	Public	Tertiary	Law	Total
Wholesale/Retail		48	20	2	**70**
Property and Business Services		42	18	2	**62**
Accommodation, Cafes and Restaurants	*(incl Tourism)*	43	10	0	**53**
Education		33	17	2	**52**
Health and Community Services		27	8	1	**36**
Financial and Insurance		27	3	0	**30**
Manufacturing	*(incl. Printing/Publishing)*	20	6	1	**27**
Government Administration and Defence		17	6	0	**23**
Cultural and Recreational Services	*(incl. Media)*	16	7	0	**23**
Agriculture, Forestry and Fishing	*(incl. Horticulture)*	14	5	1	**20**
Communication Services	*(incl. Postal/Telecommunications)*	10	1	0	**11**
Construction	*(incl. Engineering)*	4	1	0	**5**
Personal and Other Services	*(incl. Domestic, Fire service, Religion)*	3	2	0	**5**
Transport and Storage		2	1	0	**3**
Mining		0	0	0	**0**
Electricity, Gas and Water Supply		0	0	0	**0**

Table 35. Other Industries Respondents Have Worked In

It may be seen that service, business and other people-focussed industries predominate, which suggests that time management behaviours brought from other careers may be similar to those within the library profession. Kaufman-Scarborough and Lindquist point out that many organisations expect people to operate in polychronic ways, such as dealing with constant interruptions, and that monochrons may benefit from training in polychronic time management methods (Kaufman-Scarborough and Lindquist 1999)

5 CONCLUSION

This study has explored whether there is any difference in the time management behaviours exhibited by New Zealand Library managers in the public, tertiary, and law sectors, based upon sector and level of management. It has found that there is a high level of similarity between public and tertiary libraries, and that law libraries, being smaller and more focussed on tight deadlines and provision of specialist information, require somewhat different behaviour. The size of library within sectors, and level of management are significant indicators of difference. The results of this study are comparable with a large-scale study conducted in America in the late 1980's, which implies that aspects of time pressure have remained consistent over time.

This study has also explored whether a range of factors have influenced the time management behaviour of library managers. Although statistical analyses were undertaken, the differences between groups who identified particular factors as being significant influences do not necessarily indicate causation, and the discussion in this report has been careful not to make assumptions, attempting to draw together quantitative and qualitative information to support discussion of the results (Leedy and Ormrod 2001, 193).

Seven null hypotheses are explored, at a significance level of p=<0.05. The results were as follows:

H_1. *That there will be no difference between the time management behaviours exhibited by sector* [Research Question 1]. **Supported**. No differences were found between the public and tertiary library groups, and the population size of the law library group was too small for statistical comparison. Differences were noted in the time waster rankings between law libraries and public libraries, and by size of library.

H_2. *That there will be no difference between the time management behaviours exhibited*

by management level [Research Question 2]. **Not supported.** Significant differences were found between senior and line managers, with senior managers exhibiting significantly higher mean scores on *Mechanics of Time Management*, *Setting Goals and Priorities*, and polychronicity.

H_3. *That library managers who regularly engage in self-care activities will have no greater perceived control over time than those who rarely engage in self-care activities* [Research Question 3]. **Supported**. No difference was found in the *Perceived Control Over Time* score of those who exercised or engaged in high levels of regular self-care activities. However, the group of managers who spend more than five hours a week on self care activities score significantly higher in *Setting Goals and Priorities* than those who spend less time on such activities.

H_4. *That library managers who have a high level of out-of-work commitments will exhibit no more systematic time management behaviours or have higher polychronicity scores than those who have few commitments* [Research Questions 4 and 5]. **Partially supported**. The mean *Mechanics of Time Management* scores were found to be higher for almost all groups who engage in out-of-work activities when compared with managers who do not participate in such activities. No significant difference in polychronicity scores was found between groups who engage in out of work activities and those who do not.

H_5. *That time management behaviour is not influenced by time management training or life changes* [Research Question 6]. **Partially supported**. A range of factors were found to be significant influences on time management behaviour, including parenthood, appointment to a new job and being coached or mentored. While managers who had attended formal time management training exhibited no difference in behaviour to those who had not attended training, the influence of motivational speakers, some of whom were trainers, was found to be significant.

H_6. *That library managers who have undertaken tertiary level study while employed will exhibit no more systematic time management behaviours than those who have not undertaken such training* [Research Question 6]. **Not supported.** Managers who have studied while working exhibit higher mean scores on the *Mechanics of Time Management* and *Setting Goals and Priorities* scales.

H_7. *That there will be no correlation between perceived control of time and the level of polychronicity score* [Research Question 7]. **Partially supported.** While no correlation was found between these scores in the overall population, there is an indication that, for people with higher polychronicity scores (between 4.5 - 7), there is a weak positive correlation between *Perceived Control Over Time* and *Mechanics of Time Management* scores.

Practical Implications and Areas for Further Study

There is opportunity for more detailed analysis of the results in several areas, including increasing the Chronbach's alpha score of the *TMBS* subscales, undertaking regression analysis of the factors in Section Five, and exploring questions that were beyond the scope of the hypotheses in the current study. This study could be repeated in other sectors, including the National Library, special libraries and school libraries, to explore whether the results may be generalised to the wider profession.

Future studies could explore whether differences are evident between different types of job (customer services versus technical service), different types of manager (people with no staff responsibility versus those with supervisory roles), and whether there are variations in the time management behaviour of non-managerial staff.

No significant differences in time management behaviour, as measured by the *Time Management Behavior Scale* and *Index of Polychronic Values*, were found between sectors, and there is a high degree of agreement as to the top five time wasters listed by managers across the three sectors. That the results are very similar to Gothberg's findings in public and

law sectors is remarkable considering the differences in size of libraries between the studies, and the workplace changes that have occurred since the late 1980s: this indicates that there is a distinct set of time wasters that are experienced in these sectors. An analysis of the time wasters within a specific workplace may indicate trends that can be addressed in a practical manner (such as the high level of concern about computer and technology malfunctions), or may provide a useful basis for individual coaching and mentoring, or team discussion, on how to overcome the main problems.

The most significant variation in time management behaviour is between line managers and senior managers, with senior managers exhibiting more systematic mechanical and goal setting behaviour. While there is a wide variety of time management behaviour it would seem that certain techniques such as list keeping and scheduling are adopted as a manager progresses through the hierarchy, in response to the changing demands of the job. An understanding of these could assist with job training for newly promoted managers.

Time management behaviour is definitely influenced by life events, some of the most significant being parenthood, study while working, appointment to a new job and being coached or mentored in time management. Formal training in a group setting appears to be the least effective method of learning time management techniques, whereas situations where the learner is highly motivated seem to be very influential. As suggested by adult education theory (Knowles 1984), mentoring and coaching in the workplace to develop appropriate time management behaviours would appear to be particularly fruitful.

Polychronicity, as measured by the *Index of Polychronic Values*, is described as a preference for multi-tasking. However, it has been found that people with high scores in the *Mechanics of Time Management* and *Setting Goals and Priorities* areas may be working in a "multi-tasking" manner, but do not necessarily display high polychronicity scores. As the preference for organisation is negatively correlated to polychronicity, it may be suggested that true polychrons are people who don't mind being somewhat disorganised and are happy to be flexible in their approach to time. An awareness of the polychronicity preferences of

members of a workteam may be useful in terms of assigning work and undertaking training. A monochronic worker can be taught to handle several tasks in the same time period through the use of traditional, monochronic, time management tools such as lists, schedules and prioritising. A polychronic worker may also use the same tools to organise their workday, but may need to use them in different ways to enable an appropriate level of focus on activities.

Time management behaviour develops over the course of an individual's life. Each person has a core set of time management behaviour, often strongly influenced by their parents or other family members during childhood, which changes over time in response to life events such as a new job, study or parenthood. A library manager will be required to utilise a range of time management techniques that are appropriate to their work environment, which will be influenced by size of library and level of management.

APPENDIX 1 Text of initial E-mail contact message

Subject: Request for participation in a library survey

Dear <senior manager's name>

I am undertaking a research project to determine how library managers in New Zealand's public, tertiary and law libraries manage their time. I am particularly interested in whether there is a difference in time management behaviours depending on size of library, library sector, or on management level.

My aim is to distribute a printed survey to every line, middle and senior manager in libraries in these three sectors. The libraries that participate in the survey will not be identified.

The questionnaire will be conducted in such a way that totally anonymity is guaranteed, will take up to 45 minutes to complete, and each copy will be supplied with a reply paid envelope.

1) May I send questionnaires to the managers employed in <name of library>?

If the answer to 1 is YES:

2) I have compiled a list of what appear to be the management positions in your library. The information has come from <your library's web site and/or New Zealand Contacts in Libraries (2002)>, and may be incomplete, misleading or out of date. Could you please correct this list so that I may send an appropriate number of questionnaires.

<Include list of position titles>

I am defining managers according to the following categories:
* SENIOR MANAGER (The head librarian)
* MIDDLE MANAGERS (heads of section, who report to the senior manager, and to whom line managers report. In some libraries there may be a deputy librarian or other strategic managers who do not supervise line managers. In this case, they are defined as a middle manager. Smaller libraries may not have middle managers.)
* LINE MANAGERS (heads of department, branch librarians, team leaders, etc. These managers will perform a mix of operational and supervisory management.)

3) Is there a contact person on your staff to whom I could send the questionnaires for distribution to your library managers?

I am undertaking this research as part of the requirements of the 550 Research Project for the MLIS through the School of Information Management at Victoria University of Wellington. I hope to publish my findings, and will supply a summary of the report and make an electronic copy of the full report available to each library that participates in the survey.

I look forward to hearing from you, and would be happy to answer any questions you may have about this research. My supervisor is Philip Calvert, Senior Lecturer at the School of Information Management. He can be contacted by email at philip.calvert@vuw.ac.nz or by phone on 04 463 6629.

Thank you for your time in considering this request,

APPENDIX 2 Questionnaire Cover information sheet

Participant Information Sheet for a Time Management Survey of Library Managers

Researcher: Lynley Stone: School of Information Management, Victoria University of Wellington.

I am a Masters student in Library and Information Studies at Victoria University of Wellington. This research is being undertaken as part of the requirements of the 550 Research Project, leading to the completion of the MLIS. The project I am undertaking involves examining the time management behaviour of library managers at senior, middle and line management level across the tertiary, public and law library sectors. The University requires that ethics approval be obtained for research involving human participants.

You have been sent this questionnaire because your library manager has agreed that I may distribute it to all managers within your organisation. Position titles, not names, have been used. You are free to choose whether you complete the survey. It will take up to 45 minutes to complete, and by completing and returning it to me, you are consenting to participate in the research project. However, if you do not wish to participate, please write a note on the back of the reply-paid envelope to that effect and return it, so that I do not trouble you with unwanted follow-ups.

The survey is totally anonymous, and there is no way that your responses can be linked to you as an individual, or to any particular library. The code on the reply-paid envelope will only be recorded so I can send a reminder to people who have not responded within two weeks of being sent the questionnaire. Envelopes will be separated from completed questionnaires before any data analysis to ensure your anonymity. All material collected will be kept in a locked filing cabinet and will be destroyed at the completion of the project. No other person beside me and my supervisor, Philip Calvert, will see the completed questionnaires. The research report will be submitted for marking to the School of Information Management and deposited in the Victoria University Library. It is intended that one or more articles will be submitted for publication in scholarly journals. I will supply a summary of the report and make an electronic copy of the full report available to each library that participates in the survey.

For any enquiries about this project, I can be contacted by email at lynley@informationworkshop.com, by phone at 09 815 7433, or by mail at 36 Mt Albert Road, Mt Albert, Auckland 1003.

My supervisor is Philip Calvert, Senior Lecturer at the School of Information Management, Victoria University of Wellington. He can be contacted by email at philip.calvert@vuw.ac.nz , by phone on 04 463 6629, or by mail at PO Box 600, Wellington.

Thank you for your assistance,

Lynley Stone

APPENDIX 3 Questionnaire

Time Management Survey

This survey explores the time management behaviours of library managers. It is being administered to library managers in New Zealand's public, tertiary and law libraries. The survey is completely anonymous, and no information that identifies individual managers or libraries is being collected. Thank you for taking the time to complete and return it.

SECTION ONE : Demographics

1. What type of library do you work in?
   - ☐ Public Library
   - ☐ Tertiary Library
   - ☐ Law Library

2. How many individual staff work in your library? (the whole library, not just your Branch)
   - ☐ Fewer than 6 people
   - ☐ 6-15 people
   - ☐ 16-50 people
   - ☐ More than 50 people

3. How many individual staff report directly to you?
   - ☐ Fewer than 6 people
   - ☐ 6-10 people
   - ☐ 11-15 people
   - ☐ More than 15 people

4. What level of management are you?
   - ☐ Line Manager (supervising operational staff, e.g. a Head of Department or Team Leader)
   - ☐ Middle Manager (reporting to the senior manager, and supervising line managers OR performing strategic management tasks without direct reports)
   - ☐ Senior Manager (the library director or library's chief executive officer)

5. How many years have you been a library manager (at all levels of management)?
   - ☐ Less than 6 years
   - ☐ 6-10 years
   - ☐ 11-15 years
   - ☐ more than 15 years

6. How many years have you been in your current job?
   - ☐ Less than 6 years
   - ☐ 6-10 years
   - ☐ 11-15 years
   - ☐ more than 15 years

7. Have you ever worked in a different library sector or different industry? (tick all that apply)
   - ☐ I have always worked in the same library sector that I am now employed in (i.e. public, tertiary or law).
   - ☐ I have worked in other library or related sectors. Which sectors?
     ……
     ……
   - ☐ I have worked in other industries (e.g. hospitality, retail). Which industries?
     ……
     ……

8. Which age range do you fit into?
   - ☐ under 35
   - ☐ 35-44
   - ☐ 45-54
   - ☐ 55 or over

9. What qualifications do you hold? (tick all that apply)
   - ☐ No tertiary qualifications
   - ☐ Undergraduate certificate or diploma in library studies or related field(e.g. NZLS Cert, Open Polytechnic ILS Diploma)
   - ☐ Bachelors degree in library studies or related field (e.g. BA(LIS))
   - ☐ Graduate diploma or masters degree in library studies or related field (e.g. Dip NZLS, DipLibr, MLIS)
   - ☐ Business qualifications (e.g. Dip.Bus, MPP, MBA)
   - ☐ IT-related qualifications (e.g. DipBusComp)
   - ☐ Other qualifications (please list) ……..

10. What is your gender?
    - ☐ Female
    - ☐ Male

11. Are you a caregiver for children or other dependents? (tick all that apply)
    - ☐ No
    - ☐ One or more preschool children
    - ☐ One or more school aged children
    - ☐ One or more adult dependents (e.g. a disabled or elderly person)

12. On average, how many hours a **week** do you work on your job in excess of your core hours of employment (e.g. starting work early, staying late, working in weekends, taking work home)?
    - ☐ I try not to work any extra hours
    - ☐ Up to 10 hours a week
    - ☐ 11-20 hours a week
    - ☐ More than 20 hours a week

13. On average, how many hours a **month** do you spend actively involved in professional development activities outside work hours (e.g. attendance at LIANZA or NZLLG training, business networking functions, professional reading)?
    - ☐ No involvement in such activities outside work hours
    - ☐ Up to 10 hours a month
    - ☐ 11-20 hours a month
    - ☐ More than 20 hours a month

14. On average, how many hours a **month** do you spend as a member of professional committees that meet for administrative purposes outside work hours (e.g. membership of a LIANZA or NZLLG committee, Chamber of Commerce committee)?
    - ☐ No involvement in such groups outside work hours
    - ☐ Up to 10 hours a month
    - ☐ 11-20 hours a month
    - ☐ More than 20 hours a month

15. On average, how many hours a **month** do you spend as a member of community, service or religious committees that meet for administrative purposes outside work hours?
    - ☐ No involvement in such groups outside work hours
    - ☐ Up to 10 hours a month
    - ☐ 11-20 hours a month
    - ☐ More than 20 hours a month

16. On average, how many hours a **month** do you spend engaging in relaxing pastimes or spiritual reflection – activities which provide you with an opportunity to "recharge your batteries" away from work (e.g. reading for pleasure, hobbies, gardening, spa treatments, religious worship, meditation, yoga)?
    - ☐ No involvement in such activities
    - ☐ Up to 10 hours a month
    - ☐ 11-20 hours a month
    - ☐ More than 20 hours a month

17. Do you do planned exercise of any sort (e.g. walking, swimming, gym workouts?)
    - ☐ Just normal daily activity
    - ☐ A few times each month
    - ☐ Several days each week
    - ☐ Every day

18. Since becoming a manager, have you enrolled in tertiary level study of a semester or more duration while working full time? (tick all that apply)
    - ☐ No
    - ☐ I have done one or more courses for personal interest
    - ☐ I have done one or more courses of work related study
    - ☐ I have completed my first library studies or related qualification
    - ☐ I have upgraded or gained a higher library studies or related qualification
    - ☐ I have completed a business qualification (e.g. Dip.Business, MPP, MBA)
    - ☐ I have completed a legal qualification (e.g LLB)
    - ☐ I have completed an IT-related qualification (e.g. DipBusComp)

SECTION TWO : Time Wasters and Time Consumers[16]

This is a list of the most common time wasters and time-consumers identified by managers from a range of industries. These are things that may prevent you from getting through all the tasks that you plan to do in a day.

From this list, please choose the **top 10** time wasters that you experience in your role as a manager, and **rank** them 1-10, with 1 being the greatest time waster.

— Attempting to do too much and estimating time unrealistically
— Cluttered desk and personal disorganisation
— Computer or technology malfunctions
— Confused responsibility and authority
— Crises (personal and/or staff)
— Difficult access to printers, copiers and other equipment
— Drop-in visitors
— E-mail interruptions
— Inability to say no
— Inadequate, inaccurate, or delayed information
— Indecision and procrastination
— Ineffective delegation and involvement in the routine and detail of your unit
— Lack of objectives, priorities and deadlines
— Lack of access to secretarial/administrative staff
— Lack of, or unclear, communications or instructions
— Lack of self-discipline
— Leaving tasks unfinished
— Meetings (scheduled and unscheduled)
— Telephone interruptions

Please list any other significant time wasters or time consumers for you:
……
……
……
……

[16] Adapted from the *Time Waster Index*. MacKenzie, 1975. *New Time Management Methods for You and Your Staff*. Chicago: Dartnell.

SECTION THREE : Time Management Behaviour[17]

To what extent do each of the statements on the following pages accurately describe your activities, experiences and opinions in your work?

Indicate how accurately each statement describes you by circling one of the alternatives on the scale.

This instrument has been used with permission of the author, and as such the full text of the 34 questions have been omitted from this report. Sample questions are included in the Definitions section.

	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True
	Seldom True	Occasionally True	True About As Often As Not	Frequently True	Very Often True

[17] *Time Management Behaviour Scale*, copyright Therese Macan, 2002. Used with permission.

SECTION FOUR : Preference for Task Order [18]

To what extent do each of the following statements accurately describe your activities, experiences and opinions in your work context?

Indicate how accurately each statement describes you by circling one of the alternatives on the scale.

"I like to juggle several tasks at the same time"	Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
"I would rather complete an entire task every day than complete parts of several tasks"	Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
"I believe people should try to do many things at once"	Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
"When I work by myself, I usually work on one task at a time"	Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
"I prefer to do one thing at a time"	Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
"I believe people do their best work when they have many tasks to do"	Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
"I would prefer to complete parts of several tasks every day than fully complete only one task"	Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
"I believe it is best to complete one task before beginning another"	Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
"I believe it is best for people to be given several tasks to perform"	Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree
"I do not like to work on more than one task at the same time"	Strongly disagree	Moderately disagree	Slightly disagree	Neither agree nor disagree	Slightly agree	Moderately agree	Strongly agree

[18] *Inventory of Polychronic Values (IPV).* Bluedorn et al, 1998. Polychronicity and the Inventory of Polychronic Values (IPV). *Journal of Managerial Psychology* 14 (3/4): 205-230.

SECTION FIVE : Influences on Time Management Behaviour

1. How did you develop the time management techniques that you use today? (Tick all that apply)
    - ☐ I have attended at least one formal training session on time management
    - ☐ I have attended at least one conference paper or motivational speaker on time management
    - ☐ I have read about time management
    - ☐ I was coached or mentored to develop time management skills
    - ☐ I worked in a job where I had to log billable time
    - ☐ I watch how other managers and colleagues manage their time
    - ☐ I learned over time by experience
    - ☐ I developed skills in response to a particular event in my life (tick whichever are appropriate):
        - ☐ Undertaking study while working
        - ☐ Appointment to a new job
        - ☐ Employment in a new sector or industry
        - ☐ Birth of a child or other family circumstance
        - ☐ A crisis or failure due to poor time management

2. If there have been any other specific influences on the development of your time management behaviour, such as the ones listed above, please describe them here.

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Thank you for your time in completing this survey.

APPENDIX 4 Text of message to nz-libs about focus groups

Text of email inviting participation in focus groups. It was posted to nz-libs email discussion list.

RESEARCH INTO TIME MANAGEMENT BEHAVIOUR OF LIBRARY MANAGERS IN NEW ZEALAND – PHASE TWO.

Are you a manager in a public, tertiary or law library located in the wider Auckland region?

Would you be interested in participating in a focus group to discuss the influences on time management behaviour amongst New Zealand library managers?

Recently, I invited library managers from a wide range of New Zealand tertiary, public and law libraries to participate in a written survey about their time management behaviours and influences. Following on from the survey, I am conducting a series of focus group interviews to gain a better understanding of the influences on time management behaviour.

Each focus group will be held at a time and in a location in the Auckland region which is convenient to participants of that group, and will take 60 minutes.

If you would like to participate, or would like more information about this project, please contact me by email on lynley@informationworkshop.com, or by phone at 09 815 7433.

This research is being undertaken as part of the requirements of the MLIS 550 Research Project through the School of Information Management at Victoria University of Wellington.

My supervisor is Philip Calvert, Senior Lecturer at the School of Information Management. He can be contacted by email at philip.calvert@vuw.ac.nz or by phone on 04 463 6629.

Thank you for taking the time to consider this request.

APPENDIX 5 Information Sheet for Focus Group Participants

Participant Information Sheet for Focus Group Participants in a study of Time Management of Library Managers

Researcher: Lynley Stone: School of Information Management, Victoria University of Wellington.

I am a Masters student in Library and Information Studies at Victoria University of Wellington. This research is being undertaken as part of the requirements of the 550 Research Project, leading to the completion of the MLIS. The project I am undertaking involves examining the time management behaviour of library managers at senior, middle and line management level across the tertiary, public and law library sectors. The University requires that ethics approval be obtained for research involving human participants.

You have been sent this invitation sheet because you have responded to my invitation to participate in a focus group. The focus group will be 60 minutes in duration, and you will be asked to sign the attached consent form indicating your willingness to participate. You may, however, withdraw your agreement to participate at any time prior to the final analysis of data for the research report.

Focus group interviews will be tape recorded and a transcription made, which will be sent to participants for the correction of factual or transcription errors before they are used. Comments made in the focus group will be kept confidential. Individuals will not be identified by name or the library that they work in, although level of management and sector may be used to provide context for specific comments.

All material collected will be kept in a locked filing cabinet and will be destroyed at the completion of the project. No other person beside me and my supervisor, Philip Calvert, will have access to the tapes and transcripts. The research report will be submitted for marking to the School of Information Management and deposited in the Victoria University Library. It is intended that one or more articles will be submitted for publication in scholarly journals. I will supply a summary of the report and make an electronic copy of the full report available to each manager who participates in focus groups.

For any enquiries about this project, I can be contacted by email at lynley@informationworkshop.com, by phone at 09 815 7433, or by mail at 36 Mt Albert Road, Mt Albert, Auckland 1003.

My supervisor is Philip Calvert, Senior Lecturer at the School of Information Management, Victoria University of Wellington. He can be contacted by email at philip.calvert@vuw.ac.nz , by phone on 04 463 6629, or by mail at PO Box 600, Wellington.

Thank you for your assistance,

Lynley Stone

APPENDIX 6 Focus Group Consent Form

INFLUENCES ON TIME MANAGEMENT PRACTICES OF LIBRARY MANAGERS

Please read, sign and return this consent form so that you can be included in the focus groups being formed for this research project. This form will be collected before the focus group interview.

I have been given an information sheet, have had opportunities to seek clarification or explanation, and I understand the purpose of this study. I understand that the information and opinions I provide will not be used for anything other than this purpose.

I understand that I am completely free to withdraw from this study at any time before the final analysis of data without providing any explanation, and, in the event of my doing so, that my comments will not be included in the final report.

I understand that any information or opinions I provide will not be attributed to me by name or as an employee of a particular library, but that they may be identified by level of management and/or the library sector that I work in.

I understand that the information and opinions I provide are to be used to aid in the understanding of the influences on the time management behaviours of library managers in New Zealand libraries. The primary purpose of this data collection is for the completion of a MLIS 550 research project, and the report of this project will be lodged in the Victoria University of Wellington Library and also made available to all libraries and managers who participated in the research. In addition, discussions of this research may be published in academic journals and may be reported at conferences. Use for any other purpose will require my written consent.

I understand that the focus group will be recorded on tape, that I will be given a transcript of the tape, and will have the opportunity to correct factual errors or errors of transcription.

I understand that the tape recordings and transcripts of this research will be kept in a secure place during the course of the research, and will be destroyed at the completion of the research.

I understand that I will receive a printed summary of the final report and will be offered an electronic version of the full report.

I agree to participate in this research:

Signature:_____

APPENDIX 7 Focus Group Question Guide

Influences on Time Management Behaviour

A semi-structured approach will be used, so that additional questions and exploration may be introduced to further explore points that occur during the interview.

Participants will have been sent a copy of the Information Sheet and the Consent Form before the Focus Group.

The Focus Groups will open with a brief introduction and explanation of research. Consent forms will be collected.

Questions:

1. **What are the main time management strategies that you use in your current job?**
2. **Did you use the same strategies in previous jobs, or have they changed?**
3. **How have your time management strategies changed?**
4. **What were the influences that made you change your time management strategies? (checklist – from the survey)**
    - I have attended at least one formal training session
    - I have attended at least one motivational speaker
    - I have read about time management
    - I was coached or mentored to develop time management skills
    - I was employed in a job where I had to log billable time
    - I learned over time by experience
    - I developed skills in response to a particular event in my life
        - Undertaking study while working
        - Appointment to a new job
        - Employment in a new sector or industry
        - Birth of a child or other family circumstance
        - A crisis or failure due to poor time management
5. **Do you think that different time management strategies are required in different library sectors?**
6. **Do you think that different time management strategies are required at different levels of management in your sector?**
7. **Any other discussion**

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