The Impact of the Mobile Phone on Work/Life Balance

Final Survey Report

March 2008

RESEARCH TEAM

Professor Judy Wajcman, Australian National University

Professor Michael Bittman, University of New England

Dr Lynne Johnstone, Australian National University

Jude Brown, University of New England

Associate Professor Paul Jones, University of New South Wales

Australian Research Council

Linkage Project

- TABLE OF CONTENTS -

- LIST OF TABLES -

- LIST OF FIGURES –

1. EXECUTIVE SUMMARY

Background

The AMTA/ARC study is an exciting collaboration to provide an evidence-based understanding of the social impact of the mobile phone on work/life balance. It is the first study that is specifically designed to provide nationally representative data on how mobile phones have become integrated into the everyday lives of Australians. This innovative project employs a purpose-designed questionnaire, a phone log and a time-diary. Together, this unique combination produces direct information about how people use their mobiles to manage and coordinate their lives.

This report of our survey research presents data collected *March to September 2007* from our sample of 2185 individuals, comprising 1905 individuals from 1435 on-line households and 280 individuals in 280 off-line households.

Key Findings

- Mobile phone use varies with age but it is so universally diffused that use is unaffected by income levels and occupation. Only 12% of 14 to 17 year olds do not have a mobile. The lowest number of owners (74%) is found among those aged over 60 years.
- The majority of users are subscribers and pre-paid use is concentrated among those under 25 years.
- Convenience of the mobile phone is the reason most frequently given for choosing to talk on a mobile rather than a landline. Cost is a major reason for preferring to talk using a landline rather than a mobile.
- There is a very high awareness of 3G (86% of males and 73% of females). However, 61% of respondents indicate that they do not access internet services via their mobile phone. The lag in take-up is a topic for further research.
- Logs of actual calls made and SMS texts sent show that the predominant use of the mobile is for contacting family and friends, with work-related reasons far less important. Men make more calls for business purposes, while women use the mobile for social connectivity.
- Typically people spend between $10 and $30 per month using their mobiles. Occupationally, managers, trades people and production workers have the highest mobile costs, while 25-29 year olds are the highest spending age group.
- Three out of every four workers use a mobile phone in the course of his/her work; 80% of workers use e-mail, and 78% use the internet for their jobs.
- Males are almost twice more likely than females to use their mobiles during normal work hours for job-related calls, differences that can be largely accounted for by the gender distributions of high mobile use occupational groups in our sample.

- Males are more likely than not to have job-related mobile calls outside of normal work hours on workdays, while the reverse is true for females. However, the volume of calls is typically low, with less than 10% overall having four or more calls.
- Males and females have similar patterns of mobile usage for calls that maintain family and social connectivity, both during work hours and outside of work hours.
- Calls cluster by time of day, according to purpose. Most work-related calls are made in standard working hours. The rate of calls to family and friends is higher than work-related calls during working hours and peaks at the end of school hours and in the evening.
- Asynchronous communication practices, such as turning off your mobile to avoid being disturbed, are common techniques. Ninety per cent of the respondents 'normally' switch off their phone in the cinema, two-thirds switch off their phone at work meetings, and half turn off their phones in restaurants. Women are more reluctant than men to take their mobile phone on holiday 'to talk to work colleagues'.
- A third of workers say that it would be difficult to do their job properly without their mobile. This is particularly the case for men.
- Four in ten employed respondents think that mobiles increase their workload, for 55% the effect is neutral, and a few (5%) think mobiles reduce their workload. This is offset by productivity gains.
- Over two-thirds of the respondents report that the mobile phone is an important medium for maintaining kinship ties, especially for women. It is very well suited to maintaining intimate relationships at a geographical distance.
- Conveying information about 'timing of the arrival at home' and 'arranging to meet with other family members' are the major uses of the mobile phone for micro-coordination.
- More than half of the employed respondents believe that the mobile helps their work-life balance. Very few report that the mobile phone has a negative impact on it. More than half of mobile-owning workers who have high levels of satisfaction with their family interactions regard the mobile as having increased their ability to find work/life balance.
- The mobile phone is an indispensable part of the everyday life of Australians. About nine in ten people report that their lives could not 'proceed as normal' if they were suddenly without their mobile phone.
- Carrying a mobile phone makes most people (75%) feel more secure.

- Most people (61%) find that the mobile phone does not affect their level of stress. Of those who report that it has some impact, three out of four say that it reduces their stress level.
- Contrary to fears about the intrusive character of the mobile phone on leisure, few respondents (5%) report that the mobile reduces the quality of their leisure time.
- Telephones, both mobile (90%) and landline (87%), are owned by more people than any other information and communication technology.
- People aged 60+ years are most likely to have a landline phone at home (96%) and the least likely to have adopted wireless broadband (3%). The reverse is true for people less than 25 years among whom 12% do not have a landline phone at home, and 25-29 year olds who have the highest adoption of wireless internet (20%).
- One in four people send four or more text messages on workdays, but it increases to one in three on non-work days. Young people aged 14-17 years are the highest volume "texters" with 39% sending more than 12 messages per non-workday. This drops sharply to 14% among 18-24 year olds, and declines progressively in older age groups.
- Overall, both males and females say that they would be more willing to give up their mobile phone(s) than television or the internet. However, people aged less than 30 years will give up TV before their mobiles.
- E-mail is the most used non-work-related internet service accessed by computer.
- Two-thirds of people in internet-connected households engage in internet banking, while around 50% access weather information, engage in shopping, organizing travel, and access location services using an internet-connected computer. Despite the accessibility of internet services from locations other than home, and via wireless mobile, the number of people, overall, who access these services is substantially lower than that of people in internet-connected households.
- Among the 49% of workers who feel that the internet has changed their ability to balance their work and home lives, more than four out of five feel it has increased their ability to find work/life balance.
- Two-thirds of individuals, females more than males, believe that the internet has not changed the amount of time they spend with family and friends.

2. RESEARCH AIMS AND BACKGROUND

No other device has been diffused as rapidly as the mobile phone, but its social impact is unknown. This project aims to provide a sound empirical research base for assessing the impact of the mobile phone on work/life balance. In particular, it examines the ways in which the mobile phone affords perpetual social contact.

The project is based on collaboration between university-based researchers and the peak organization of mobile phone service providers, the Australian Mobile Telecommunication Association (AMTA), under the umbrella of the Australian Research Council Linkage grant scheme. AMTA's mission is 'to promote an environmentally, socially and economically responsible and successful mobile telecommunications industry in Australia'. The collaboration follows a workshop held in May 2004, jointly sponsored by AMTA and the Academy of the Social Sciences in Australia.

The invention and diffusion of information and communication technologies are said to be revolutionising work and family life. Wireless mobile devices increase the scope for work and family flexibility by enabling the micro-coordination of time, tasks, and schedules. This is particularly significant as people are now working at times and places outside of the traditional workday and place. It is widely believed that technologies like the mobile phone and e-mail are blurring boundaries between personal life and the workplace. While for some commentators these developments represent a threat to the quality of modern life, for others they represent new opportunities for integrating the spheres of work and family.

To date, social research on the mobile phone and other contemporary mobile communication technologies has been limited and has yet to be consolidated into a body of evidence about its social impact. Worldwide there are now over 1.7 billion mobile phones, even more than fixed line phones. The international research focus up to now, however, has largely been on the internet and little research of any kind into digital technologies has been done in Australia. This project will, for the first time in Australia, empirically examine the social impact of mobile technologies at work and at home. It will therefore fill a significant gap in the evidence base for the development of industry and social policy. A more informed understanding of the conditions that have been conducive to this highly successful industry depends upon

high quality research on how Australians benefit from owning mobile technologies. The research findings have the potential to influence the type and range of wireless services that will best serve Australians in the future.

The effects of technological innovation are often less than straightforward. If there was ever a clear illustration of the inherent unpredictability of technological change, it is the history of the fixed line telephone. The early fixed line phone, like the mobile, was designed for business and professional purposes. The major use of the landline by women as a tool for maintaining social ties was unanticipated, as was the heavy use of mobiles by adolescents exchanging SMS text as well audio messages. In both cases, it was consumers rather than designers who discovered what was to become the typical pattern of use. Like other technologies, the mobile phone is flexible and contains contradictory possibilities. The future impact of the mobile phone on how Australians balance their work and home lives is thus unknown and ripe for empirical investigation. The team of researchers brought together for this project combine leading-edge expertise in the social aspects of information and communication technologies, the study of time-use, and communications policy.

This report is based on data from our sample of 2185 individuals (made up of 1905 individuals from on-line households, and 280 individuals from households that are not internet connected), who completed the survey comprising a questionnaire, a mobile phone log, and a 'light time diary'.

After explaining the methods used in the survey and assessing its representativeness, the report proceeds with an analysis of a number of relevant topics. We believe that our project will provide, for the first time, hard data on mobile phone use in the Australian context that will be of interest both to the industry and to those studying the social impact of technological innovation. It begins with an examination of the pattern of, and influences on ownership and service use, the choice of modality of communication, awareness of 3G capabilities, and take-up of 3G services. The report continues by presenting an analysis of the unique data on actual phone use, retrieved from respondents' own handsets. We then present an analysis of respondents' perceptions of their patterns of mobile phone use and data on the importance of mobile phones in the workplace and for managing their personal lives (including work/family balance). This is followed by our exploration of how respondents feel

about the relative balance of the social costs and benefits of mobile phone technology. The report shifts focus to internet connectedness, internet services used, and time spent using the internet on workdays and non-workdays for work/study and other pastimes. In so doing, we explore the social impact of the internet on work/life balance.

3. RESEARCH METHODS

The research project has two phases:

Phase 1 – A sample survey of all Australian adults living in private dwellings.

Phase 2 – A study of the use of mobiles in work settings.

This report deals with the analysis of Phase 1 data.

3.1 Survey design and sample

Seventy-five per cent of the sample was recruited from the 'Your Voice' on-line panel maintained by ACNielsen. This panel is recruited using off-line methods (gathering respondents from other face-to-face and telephone surveys conducted by ACNielsen). The characteristics of the panel match those of the total Australian population. At the time of determining our sample size the most up-to-date ABS data indicated that in 2005-06, 60% of Australian households had home internet access. The advent of broadband was expected to increase the proportion of on-line households to closer to 75% but, after opting for a 75:25 on-line:off-line household sample, the release of the 2006 Australian census data revealed that only 63% of Australian dwellings have access to the internet.

The on-line sample was collected from March to May 2007, and the off-line sample was collected during June to September 2007. Both samples comprise all available individuals in households aged 15 years and older. On-line panellists (and additional household members) were invited via email to complete the survey on-line, while off-line panelists (and additional household members) were recruited using a telephone call to first establish that each panellist's household was not internet connected. Households were compensated for their time with financial incentives.

Households completing the survey on-line were given a period of one week to complete the survey. It is difficult to calculate conventional response rates for internet surveys. Of the 3,469 households contacted by email, 19% of households started the

survey but failed to complete it while 51% completed the survey. This gave a total sample of 1905 individuals from 1435 households.

Households completing the survey off-line were mailed hardcopies of the survey in sufficient numbers for all available adults, and were asked to return the completed survey to ACNielsen within 4 weeks. A total of 280 individuals from off-line households participated constituted 13% of our sample.

The survey consists of three components - a questionnaire, a phone log and a light time diary. The questionnaire asked respondents about the following areas: ownership and use of mobile phones; the impact of mobile phone use on work/life balance, work and work/family spillover; the mobile phone's role in coordination and control; and time spent on the internet.

The mobile phone log asked respondents to give details about their ten most recent phone calls and text messages, both those that they made and those they received. Information was collected on whom the call/text message was to or from (for example, spouse, work colleague, service provider), the gender of the caller, and the date and time of the call.

The third component of the survey was a 24 hour light time diary, consisting of a grid format with a list of 30 predetermined activities and a range of context indicators in the rows, and time, divided into 15 minute intervals, in the columns. Activities were grouped under the headings: personal care, eating, housework, work for paid job, education, voluntary work, care for others, leisure and travel. Context indicators were used to describe where the person was (home, main place of work, other indoors, outdoors), who they were with (alone, spouse, other adult, child) and whether they used a piece of technological equipment (landline, mobile phone, email, internet, Blackberry). For each 15 minute interval, respondents could choose up to three activities. The diary covered a 24 hour period beginning at 4am. Respondents chose the day that the diary was to be completed. Analysis of this data is not included in this report.

3.2 Profile of households

3.2.1 Representativeness of sample

In this section the character of the sample is described and compared to the best available population benchmarks. Table 1 shows that our sample is close to representative of the Australian population according to sex, age and employment status.

Table 1: Comparison of survey sample with ABS population benchmarks

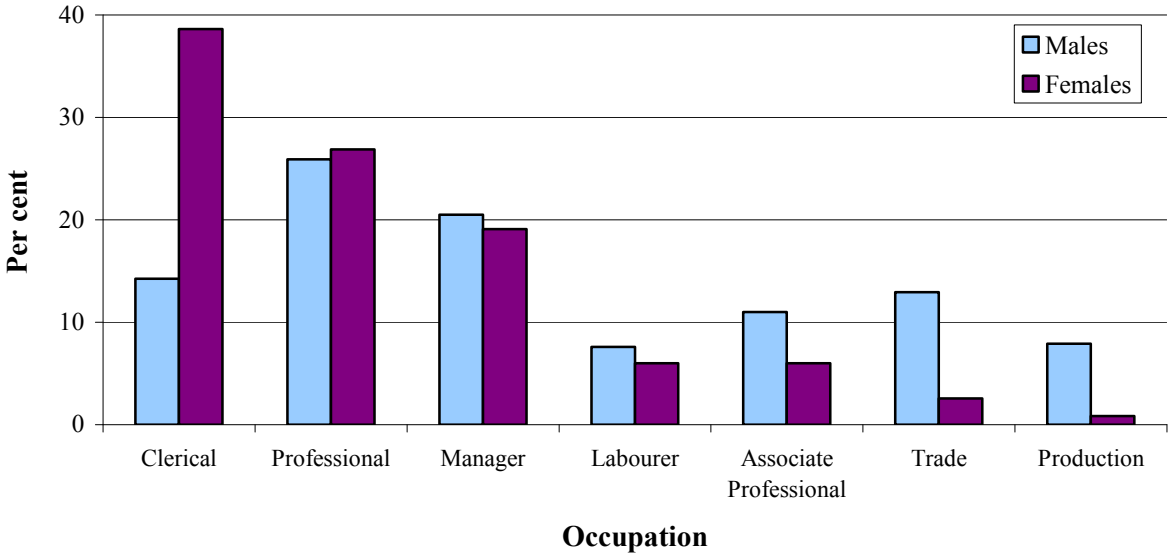
	Sample (%)	Sample (weighted)%	ABS LFS April 2007 (%)
Sex			
Males	50.3	48.4	49.3
Females	49.7	51.6	50.7
Age			
14-34 years	37.5	33.7	34.2
35-54 years	36.7	37.0	35.2
55 or more years	25.8	29.3	30.5
Employment status			
Employed	63.6	61.1	62.0
Unemployed	4.2	4.3	2.9
Not in the labour force	32.2	34.7	35.1

Since April is the month in the middle of the data collection period and census data is currently only available for 2001, the Australian Bureau of Statistics (ABS) Labour Force Survey (LFS) of April 2007 was chosen as the appropriate benchmark against which to judge the representativeness of the sample. The method of sampling reproduces the sex ratio of the Australian population in 2007 with a very slight bias (1%) towards female, as shown in Table 1.

3.2.2 Number of workers and proportions by occupation

The occupational breakdown of employed respondents is as follows: Professionals (n=394); Clerical (n=361); Managers (n=280); Associate Professionals (n= 123); Trade (n=96); Labourers (n=86) and Production Workers (n=54). There are however, significant differences in occupation by gender. As shown in Figure 1, the clerical occupations are heavily feminised, with more than twice as many women as men working in this category of employment. Men make up the majority of the workers in trade and production occupations.

Figure 1: Occupation by gender

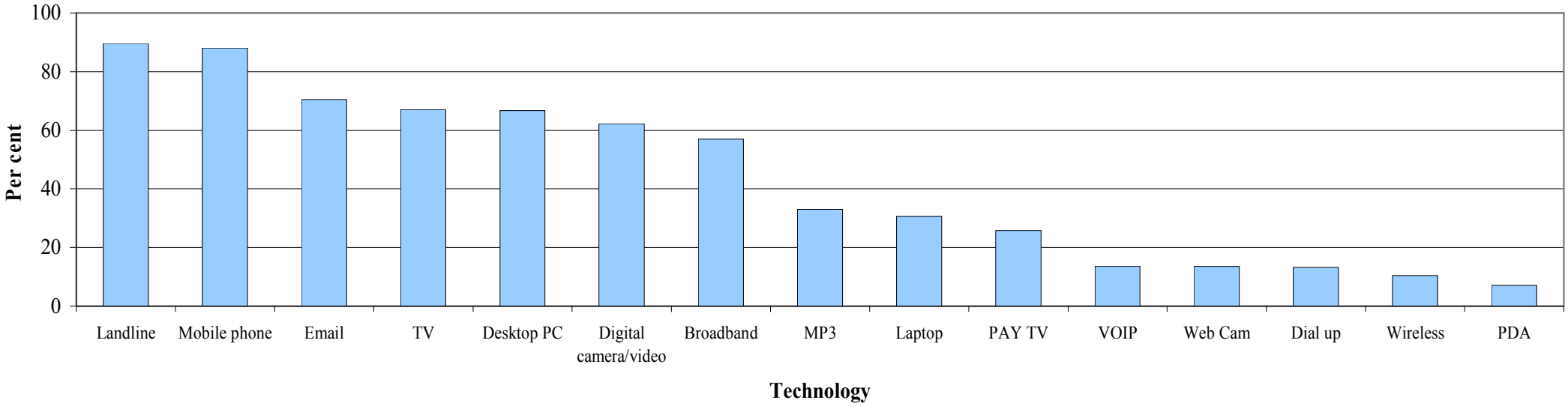


3.2.3 Technologies used

All respondents were asked 'Which of the following technologies do you personally use?' The list contained seventeen technologies, and Figure 2 portrays the relative market penetration of each in the sample of 2185 individuals. Telephones, both landline (90%) and mobile (87%) are owned by more people than any other technology. E-mail is used by 70% of people, while 67% of people own a desktop computer and 31% have a laptop. About 26% have Pay TV and 62% have a digital camera. We also found that two-thirds of individuals have free-to-air and/or pay TV, and a further 3% use only their computers to watch TV programs.

People in non-internet connected households appear to be slower adopters of diverse technologies, from computers to digital cameras and MP3 players to pay TV.

Figure 2: Technology use



Regarding communication and computer technologies, analysis by gender reveals that males appear to be earlier adopters than females, evidenced by a 5% to 9% percent differential on VOIP, desktop, laptop, WebCam, MP3, PDA ownership.

People aged 60 years or more are most likely to have a landline phone at home (96%) and the least likely to have a mobile phone (72%), pay TV (20%), computers (desktop 43%; laptop 10%), or broadband (31%) or wireless (3%) internet. On the other hand, 12% of people less than 25 years do not have a landline phone at home, and 20% of 25-29 year olds have adopted wireless internet. Moreover, the older the individual, the less likely he/she is to use e-mail, or have a Web Cam or MP3 player, and the more likely he/she is to use a landline phone.

Analysis by households reveals that about 83% of internet-connected households have broadband.

4. MOBILE PHONES, USE AND SERVICES

4.1 Individual mobile phone use within households

More than 85% of individuals have at least one mobile phone in regular use, 16% have two phones, while few (1%) have more than two. Two-thirds have used a mobile phone for more than five years.

Nokia is the brand of choice for 30% of mobile phone users. Among the top five brands, substantially more females use Nokia, LG and Ericsson, while more males use Sony Ericsson, Motorola and ‘other brands’.

The dominant brand, Nokia, becomes more popular with each increasing age group (ranging from 41% among under 25s to 56% in people aged 55 years or more), while the trend is reversed for Motorola, Samsung and Sony Ericsson.

4.2 Occupation and mobile phone use

Mobile phones were initially marketed as business tools for managers whose time is very costly. When mobile phone use is analysed by occupation (see Table 2), the highest level is found not among managers but among professionals, of whom 92%

have at least one mobile. Although more labourers and production workers than others do not have a mobile phone, mobile use is, nevertheless, widely diffused among all population groups, providing a first clue that the breathtaking diffusion of the mobile is not chiefly based on its business uses.

Table 2: Occupation and handset use

	None	One	Two	Three	Four +
Occupation					
Manager	18.0	65.2	14.6	0.8	1.3
Professional	8.2	78.5	12.0	0.4	0.9
Associate Professional	14.8	71.5	13.8	0.0	0.0
Trade	19.3	70.3	9.6	0.8	0.0
Clerical	12.3	74.8	12.0	0.5	0.4
Production	21.9	61.3	13.8	3.1	0.0
Labourer	25.3	59.1	15.7	0.0	0.0

4.3 Personal income and mobile phone use

Table 3 shows the association between income and numbers of handsets. Regardless of position in the income distribution, most Australians have at least one mobile phone in regular use. There are remarkable similarities across all incomes, the only exception being that people located in the second quintile are less likely than others to have only one mobile and more likely to have two.

Table 3: Income and numbers of handsets

	None	One	Two	Three	Four +	Total
Income quintiles						
1st	14.6	71.4	13.1	0.0	0.9	100
2nd	15.9	59.0	24.2	0.4	0.5	100
3rd	16.3	73.4	9.5	0.5	0.3	100
4th	15.0	70.8	12.8	0.7	0.7	100
5th	12.7	71.1	14.5	0.8	1.0	100

4.4 Mobile phone use by age

The lowest mobile phone use is found among those aged 60 years or more, followed by the youngest group in our sample (14-17 years), and then followed by middle-aged Australians (45-59 years). The highest levels of mobile phone use are found among those aged 18-39 years.

4.5 Money matters

4.5.1 Who pays?

Fifty-one per cent of our respondents paid their mobile costs via regular billing, 38% paid via a pre-paid plan, and the remainder had their mobile costs paid by their employers.

The majority of respondents under the age of 25 use 'a pre-paid plan paid by me or my parents' while the majority between 26 and 60 years meet the cost of using their phone through 'regular billing by my network paid by me or my parents'. People 60 years and older are equally likely to pay via a pre-paid plan or regular billing.

Around a third of managers and a quarter of associate professionals claim 'my employer pays my mobile phone bills', whereas for other occupations around 10% or less benefit from employer support.

Females are more likely to use a pre-paid plan (45%) than males (36%), while males are four times more likely than females to have their employers pay for their mobiles usage.

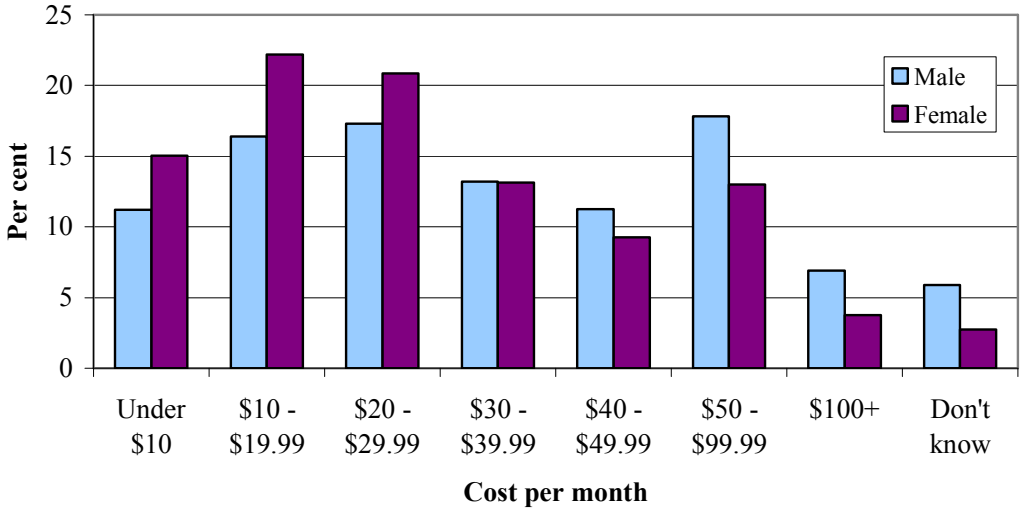
4.5.2 What does it cost?

Respondents were asked 'How much does your mobile phone cost to use in an average month?'. Response categories ranged from 'under $10' to 'over $100', with five categories in between. The eighth response option was 'Don't know'.

We found that the median cost of using a mobile phone was in the range $20<$30 per month, although the modal cost (i.e. the amount spent by the highest proportion of people) was $10<$20. People aged 25-29 years are the highest spending mobile users, with 38.6% spending $50 or more per month and the smallest proportion (2.7%) spending less than $10 per month.

Occupationally, managers, trades people and production workers have the highest mobile use costs, with around 35% - 40% with costs over $50 per month. Overall, females spend less than males on mobile use. More males (36%) than females (26%) spend $50 or more per month.

Figure 3: Mobile phone costs per month (by gender)

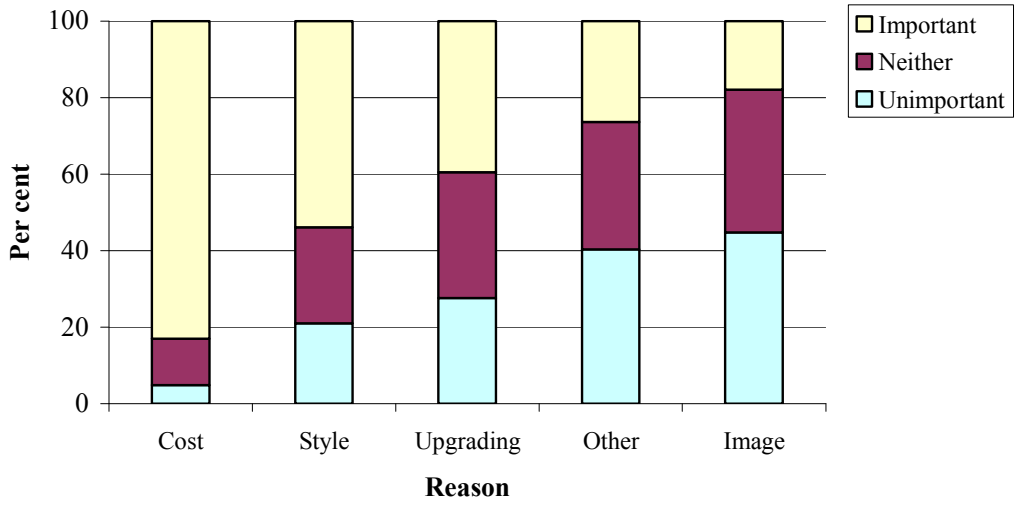


4.6 Purchasing decisions

4.6.1 Choice of mobile phone

Respondents were asked to rate the importance of five factors as influences on their choice of mobile phone handset. As shown in Figure 4, the cost of the handset was by far the most important factor influencing choice (83%), while the image of the phone (18%), for example, as portrayed in media advertising, was the least important.

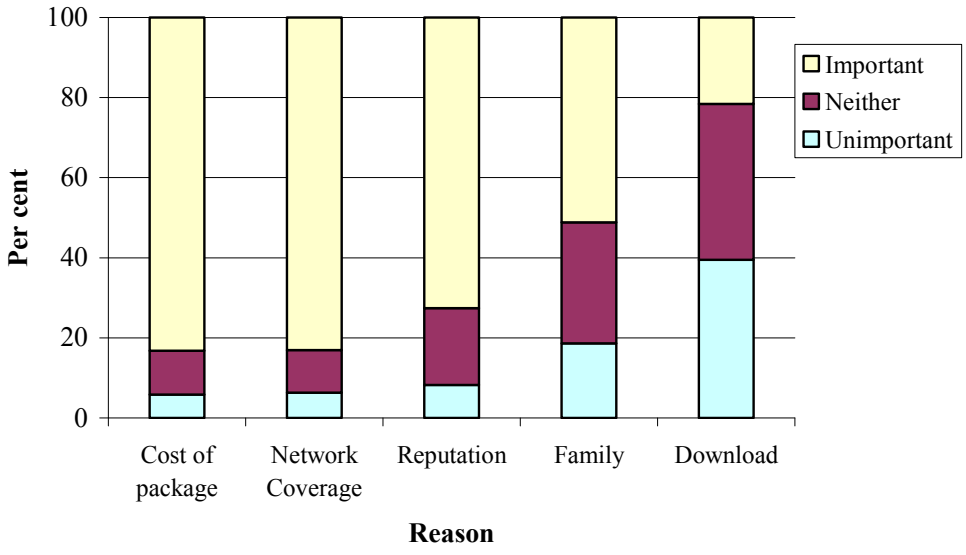
Figure 4: Factors influencing choice of handset



4.6.2 Choice of network service provider

Respondents were asked to rate the importance of five factors on their choice of network service provider. By comparison with factors influencing their choice of handset, there is no single dominant factor influencing their choice of service provider (see Figure 5). The cost of the package and the network coverage and to a lesser extent the reputation of the service provider influence the choice of service provider. On the other hand, perhaps surprisingly, download speed was unimportant for a high proportion of people (40%), more than all other unimportant factors combined.

Figure 5: Factors influencing choice of network service provider



4.7 Choice of communication technology

The reasons for choosing different communication modalities are detailed in Table 4. When considering the choice between landline and mobile communication, two findings stand out. Convenience of the mobile phone is the reason most frequently given for choosing to talk on a mobile rather than a landline. Cost is a major reason for preferring to talk using a landline rather than a mobile. The major reasons for sending text rather phoning someone were convenience, consideration for the other person's situation, and cost; while the major considerations when deciding to use the mobile to phone someone rather than sending a text are convenience and how important or time critical the topic is.

Table 4: Reasons for choosing a communication modality

	What most affects your decision to use your mobile to send a text message rather than talk to someone?	What most affects your decision to use your mobile phone to talk to someone rather than send a text message?	What most affects your decision to use your mobile rather than landline phone to talk to someone?	What most affects your decision to use your landline rather than a mobile phone to talk to someone?
Convenience	29.2	32.8	50.6	21.5
Consideration for the other person's situation	21.1	4.8	2.1	1.4
Cost	18.7	7.0	12.7	53.6
How important or time critical the topic is	5.3	31.0	8.0	2.4
Time of day	2.6	3.0	3.7	6.1
What else I'm doing at the time	4.4	3.1	9.2	4.8
Other	4.3	13.1	3.9	4.0
None of these	14.3	5.2	9.9	6.3
Total	100	100	100	100

4.8 Awareness of mobile broadband

There is a very high awareness of mobile broadband (3G), with 86% of males and 73% of females saying that they are aware of the technology (independent of whether or not people are internet connected at home). A topic for further investigation is why the take-up of the new functionalities of the mobile phone has lagged so far behind the availability of the technology. Obvious candidate factors for exploration are consumer tastes, the age of handsets in use and pricing regimes, relative to other modes of accessing similar services and the quality of the Australian broadband network.

4.9 Separate mobile phones for home and work

The question 'Do you have separate mobile phones for work and private use?' was answered as either 'yes' or 'no'. We found that about four out of ten have separate mobiles for work and private use. Males are 60% more likely than females to have separate mobiles for work and private use.

4.10 Time since adoption of mobile phone technology

Respondents were asked 'How long ago did you first own a mobile phone?'. The four response categories were: less than 1 year; between 1 and 5 years; between 6 and 10 years; and more than 10 years. The majority of respondents first owned a mobile at least six years ago, and 32% have owned a mobile phone for less than six years. A large part of the latter shorter duration ownership can be accounted for by younger people entering the mobile phone market.

The earliest adopters of the mobile were managers, (38% for 10 years or more, and 83% for six or more years) followed by trades people and professionals (29% for ten or more years). However, more professionals (76%) than trades people (69%) have used the mobile for at least six years.

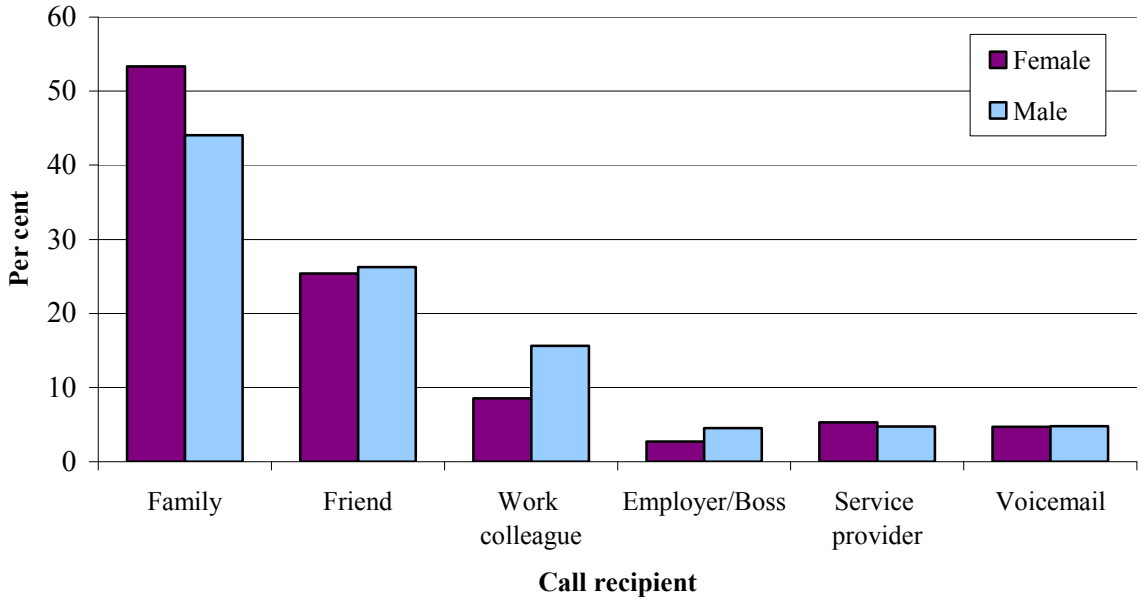
5. ACTUAL USE BASED ON MOBILE PHONE LOG DATA

Respondents produced an accurate log of their incoming and outgoing communications using the information already stored in their handsets. These phone logs permitted respondents to provide us with a precise and comprehensive record of their telephonic activity. While some other research has utilized billing information, this method fails to capture the substantial number of pre-paid customers for whom no billing records exist, estimated to be around half of the mobile market in Australia. In addition, our phone logs provide information about incoming and outgoing SMS messages.

5.1 Calls made - Who do they talk to?

Our analysis revealed that only 12% of the 13,978 calls made were work-related. Conversely, the mobile phone is used overwhelming for contacting family (49%) and friends (26%). The remainder of calls are to service providers or to pick up messages from voicemail (less than 15%). A gender analysis of calls made is shown in Figure 6.

Figure 6: Calls made by recipient



Among the 49% of calls to family members, for both men and women, the highest proportion is calls to one's spouse (18%). Women are disproportionately likely to phone their children (13%), parents (11%) and extended family (12%). On the other hand, in general, men are almost twice as likely to use the mobile for work-related

calls, and this holds true even when employment is taken into account. Employed men devote 25% of their calls to work-related purposes, while for employed women the percentage is 14%.

5.2 Text messages sent

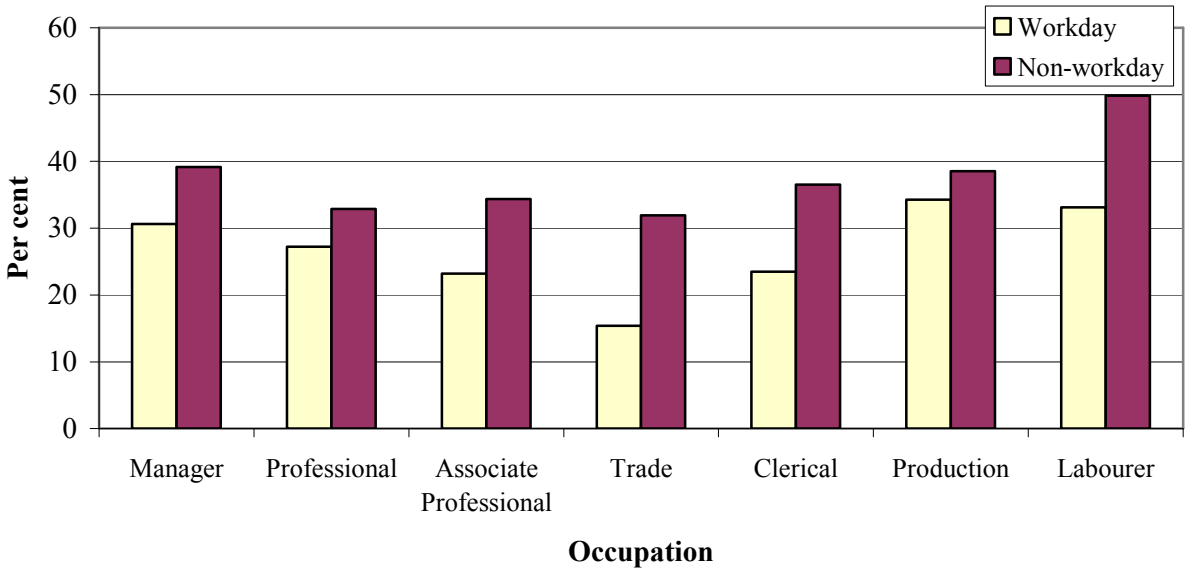
Drawing again on the phone log data, family (47%) and friends (43%) are by far the most common recipients of text messages. This finding is overwhelmingly true for both males and females. Within families, texting between spouses (19%) constitutes the highest volume of text messages, and those who are employed are more likely to "text" their spouses.

Using questionnaire data we were able to compare the volume of texting on work and non-work days by asking the following two questions:

- On a typical workday, how many text messages do you handle? [response categories: none; 1-3; 4-7; 8-12; 13-17; and 18 or more.]
- On a typical non-workday, how many text messages do you handle? [response categories: none; 1-3; 4-7; 8-12; 13-17; and 18 or more.]

About 26% of people send four or more text messages on workdays, but it increases to one in three people on non-work days.

Figure 7: Moderate to high volume "texting" by occupation on work and non-work days



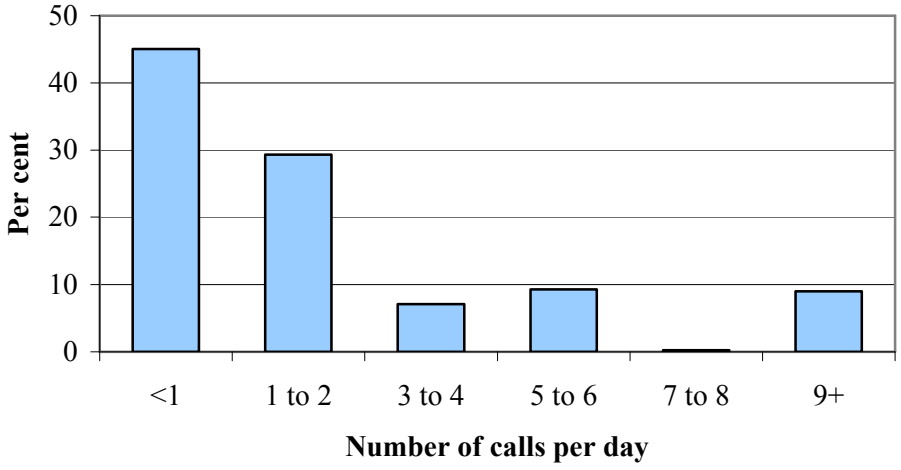
People in labouring occupations are most likely to send four or more text messages per day, while trades people are the least likely (see Figure 7). People in all occupations are more likely to be moderate to high volume "texters" (i.e. to send four or more "texts") on non-workdays than on workdays, with labourers, trades people and clerical workers demonstrating the greatest increase in volume of "texts" from workdays to non-workdays. It also reveals that across all occupational groups the volume of text messaging is around 8% higher, overall, on non-workdays (range: 50% for labourers to 32% for trades people) than on workdays (range: 33% for labourers to 15% for trades people).

Questionnaire data reveal that young people aged 14-17 years are the highest volume "texters" with 39% sending more than 12 messages per non-workday. This drops sharply to 14% among 18-24 year olds, then less than 6% and declining to 0% among the progressively older age groups. The volume of "texting" is slightly lower across all ages on workdays.

5.3 Frequency of calls

Somewhat unexpectedly, the typical user of the mobile phone makes relatively few calls (see Figure 8). The highest proportion of respondents (45%) makes less than 1 call per day.

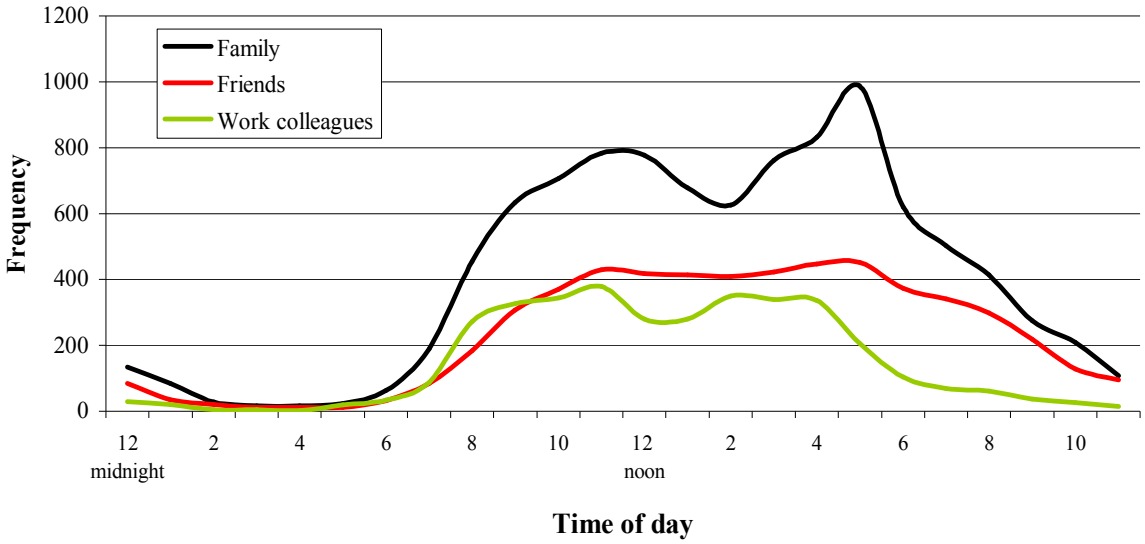
Figure 8: Frequency of calls made



5.4 Patterns in time of calls

The phone log (Figure 9) reveals that work-related calls are mostly confined to standard working hours, rising sharply after 7am with a small lunchtime dip. Work calls fall steeply after 5pm, trailing away towards zero as midnight approaches. The volume of calls to family exceeds work-related calls at any time of day. Family calls are less frequent in the morning than in the afternoon, rising at the time school ends, and having a pronounced peak before the evening meal. Throughout the evening, family calls are at a much higher level than work-related calls. This pattern is consistent with the use of the mobile phone for micro coordination of family affairs. Contacting friends reaches a peak at mid-morning and remains sustained throughout the afternoon and early evening. During the entire evening, communications with friends are at a higher rate than work-related calls. The heavy use of the mobile in the evening for contacting family and friends (and not job-related tasks) is consistent with our view that the main purpose of the mobile phone is for social contact.

Figure 9: Frequency of calls by time of day

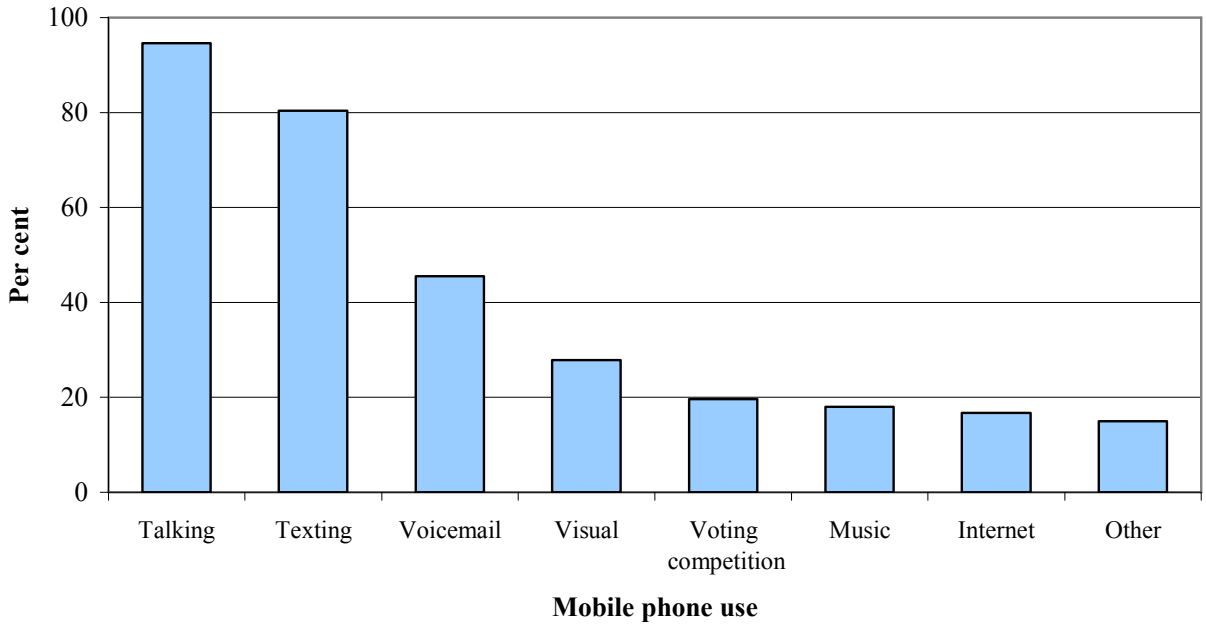


6. REPORTED REASONS FOR MOBILE PHONE USE

6.1 Perceived reasons for mobile phone use

Survey respondents who indicated they were regular users of the mobile phone were asked about how they used their mobile phones (see Figure 10). The overwhelming use was for talking (95%) and SMS texting (80%). Half of the respondents used the Voicemail facility to recover messages. Other uses point towards the convergence of media and telephony functions: around a third use the mobile to capture or send visual images; a further quarter to play games; a similar proportion use their phone to enter competitions or to vote on SMS polls; about the same number for accessing the internet; and just under a quarter use their phone as an MP3 player or a radio.

Figure 10: Respondents' use of phone functionality



6.2 Reasons for making calls and sending SMS messages on the mobile phone

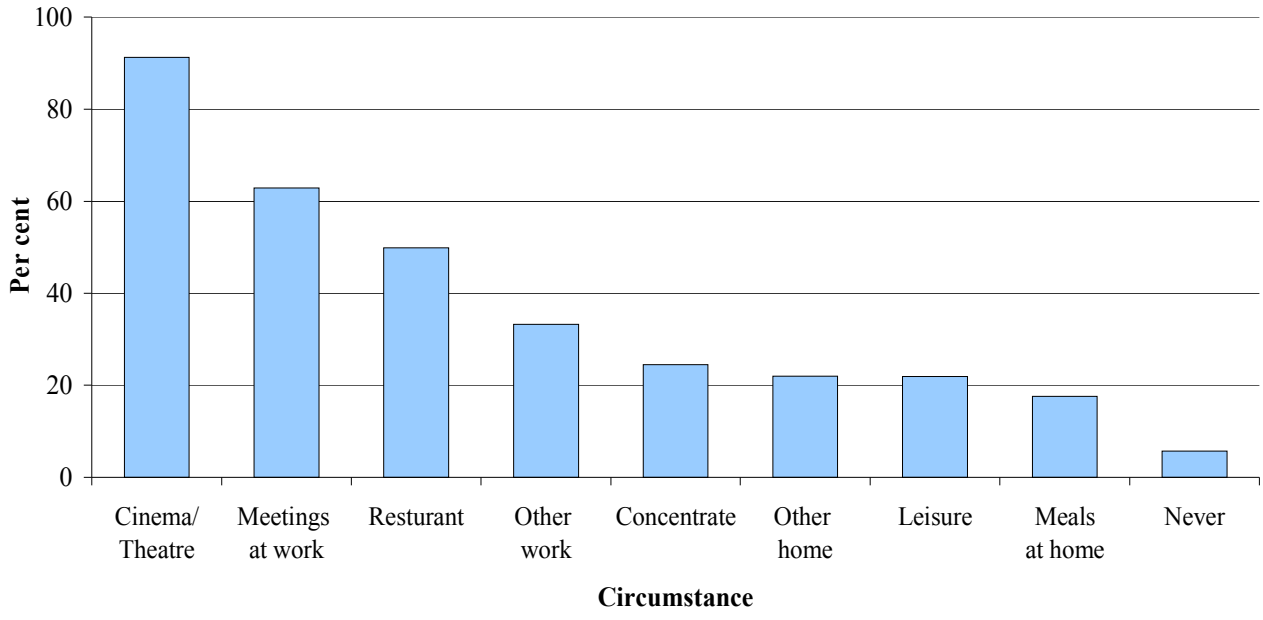
Calls on the mobile phone are predominantly for social or leisure purposes (34%) or for managing home and family (28%). Other interpersonal contacts account for 16% of the reasons for making calls and only 22% of calls are related to work or study. There are differences between men and women in the purposes for which calls are made. Over a third of men (36%) use their mobile phone to make calls for work or

study activities, whereas only 10% of women use it for this purpose. Social uses of the phone account for the remaining 90% of women's calls. If anything, text messages are even more socially oriented and a smaller proportion of both men's (14%) and women's (4%) texts are devoted to work or study.

6.3 Reasons for 'turning off' your phone

Respondents were asked about the circumstances in which they would normally turn their mobile phone off or switch it to silent. Results are presented in Figure 11. All but a small minority of the respondents (91%) 'normally' switch off their phone in the cinema, two-thirds switch off their phone at work meetings, and half turn off their phones in restaurants. Between a quarter and a third of respondents turn off their phones in other work situations, and in order to concentrate. As might be expected from the literature on mobile phone usage in leisure situations, a fifth of respondents turn off their phone during leisure activities. Here again the contradictory nature of the affordances of the mobile phone are apparent. On the one hand, mobile communications facilitate the organisation and coordination of social and leisure activities. On the other hand, unwanted or unexpected phone calls that demand attention represent undesirable disruptions to the quality of leisure time.

Figure 11: Proportion of people turning off their mobiles in each situation



6.4 Current and expected access to internet services using the mobile phone

6.4.1 Internet services currently accessed by mobile phone

As mentioned earlier, there is a very high awareness of 3G (86% of males and 73% of females). But 66% of respondents indicate that they do not access any internet services via their mobile phone. Those who use more of the functions of the newer handset and the 3G network, use it for email, information services, banking and music (see Figure 12). Use of the phone for visual images and games accounts for a lower proportion of use, but it is difficult to tell from this data how many users access multiple services.

6.4.2 Perceived future use of mobile phone to access internet services

When asked about their intentions if they had an internet capable phone, half of the respondents say that they would not use any of these services, about a third indicate an interest in using it for email, a fifth for weather information, an eighth for location services, and a similar proportion for banking and sport, news and current affairs and for downloading games, music or movies (see Figure 13). Less than one in ten indicate an interest in consuming video, less than one in twenty-five might watch live or on-demand television, and an even smaller proportion would visit chat rooms.

Figure 12: Currently accessed internet services

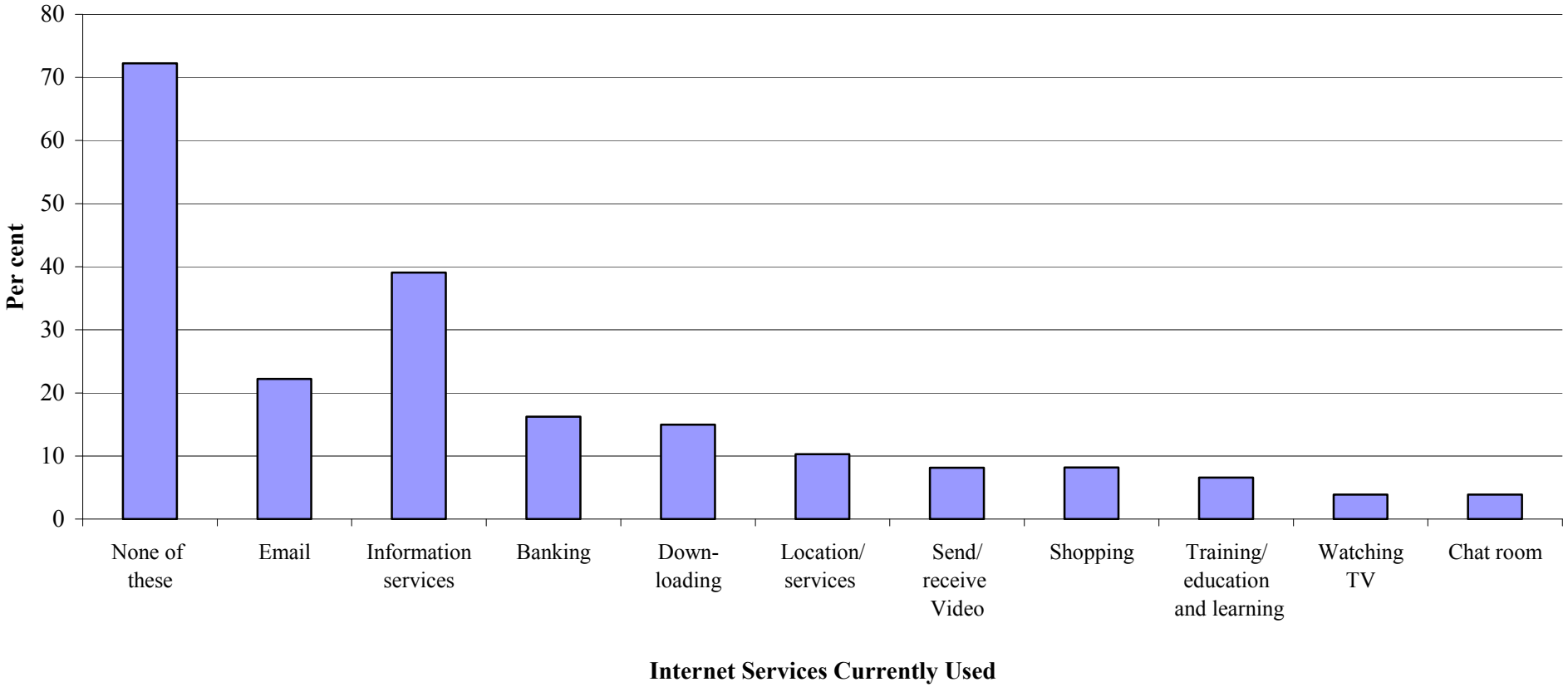
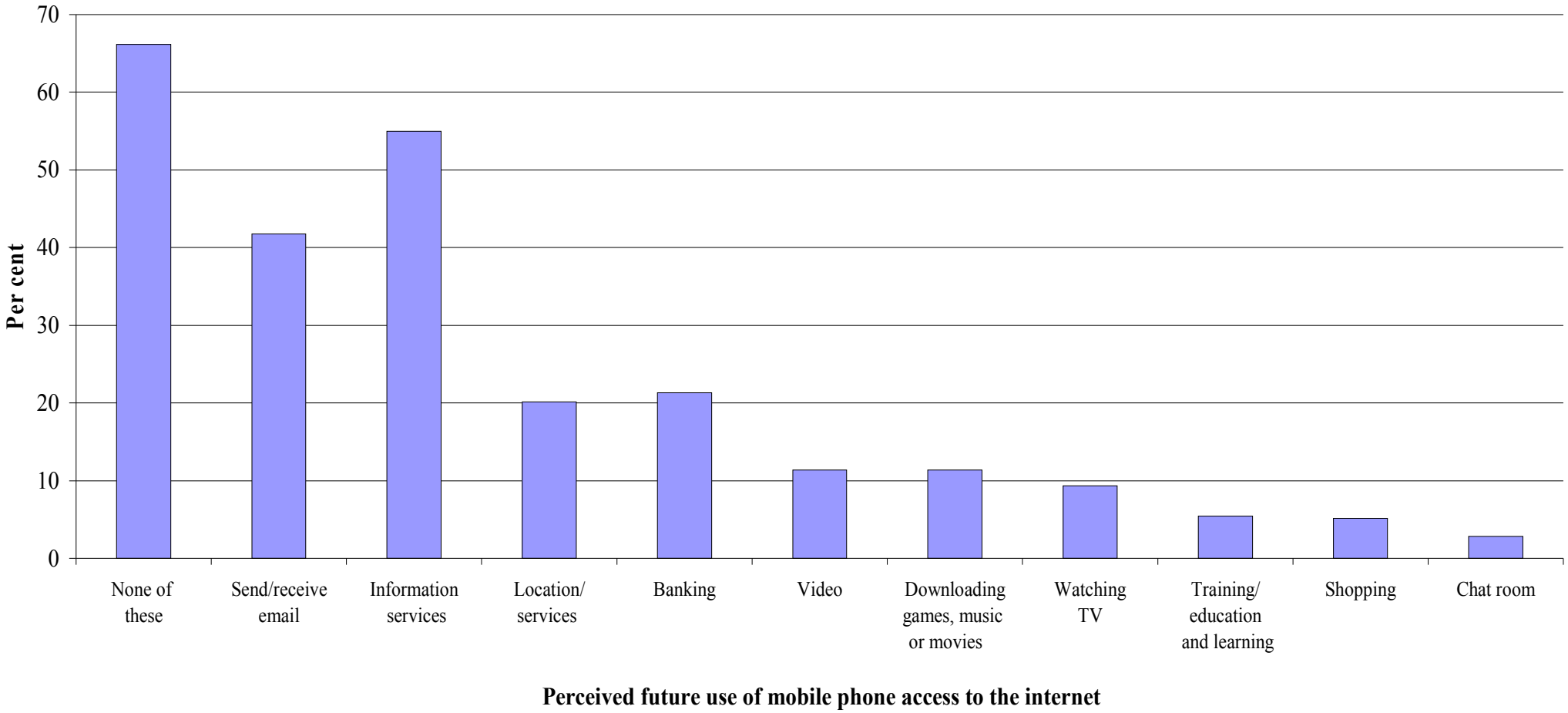


Figure 13: Perceived future use of mobile phone to access internet services



7. MOBILE PHONE USE FOR WORK

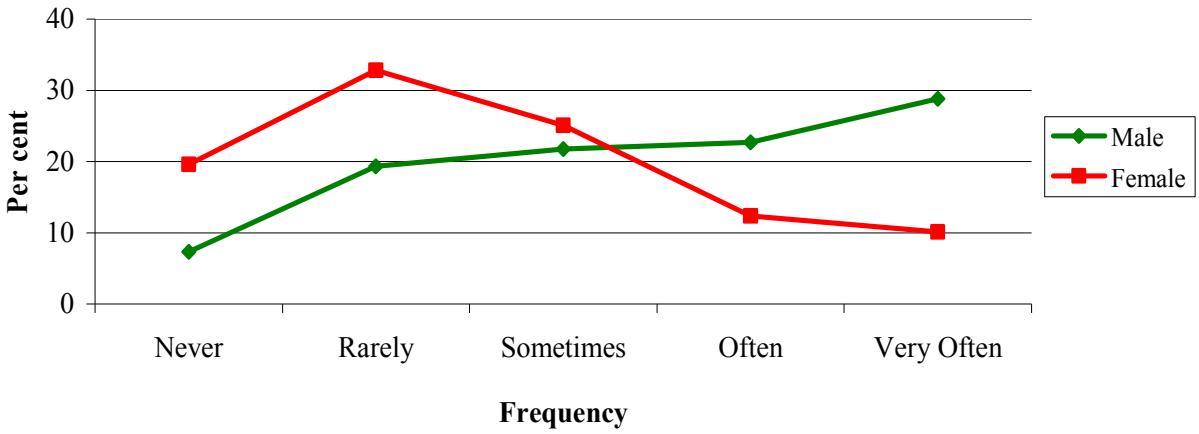
Up to this point, we have presented data based on our entire sample (n=2185). From this juncture, we turn our attention to the 1,390 employed participants (n=1,394) who responded to the questions about work-related mobile phone use.

7.1 Regularity of mobile phone use for job

Employed respondents were asked to rate 'How regularly do you use your mobile phone (or other mobile device) for your job?' on a five point scale from 'never' to 'very often'.

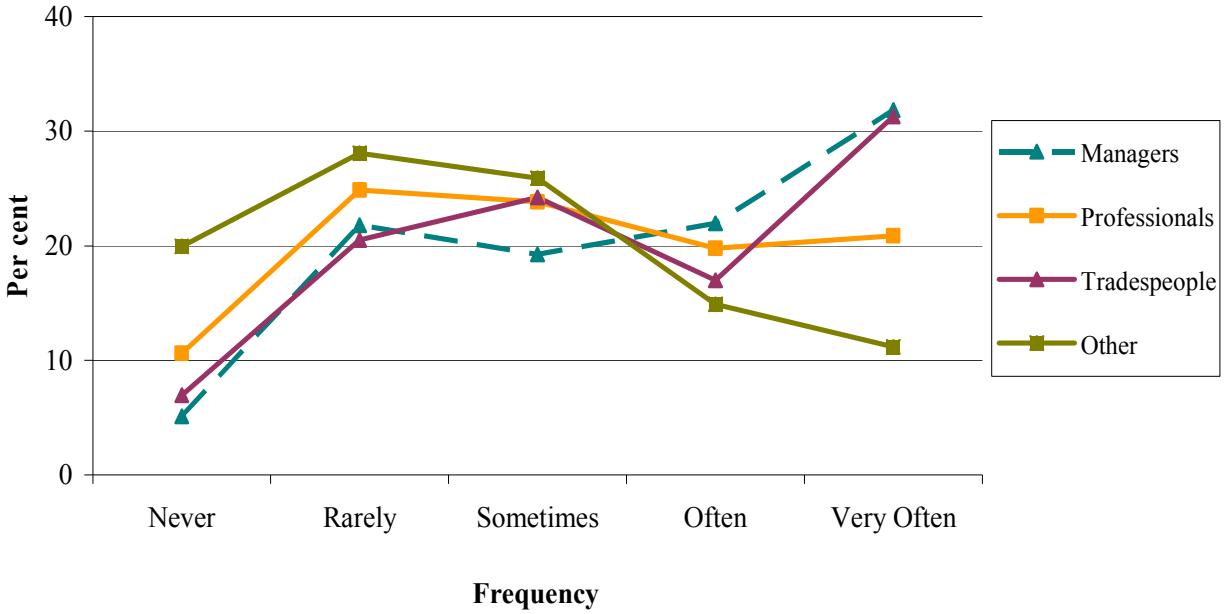
Fifty-two per cent of males compared to 23% of females reported that they use their mobiles 'often' or 'very often' for their jobs.

Figure 14: Frequency of mobile use for job (by gender)



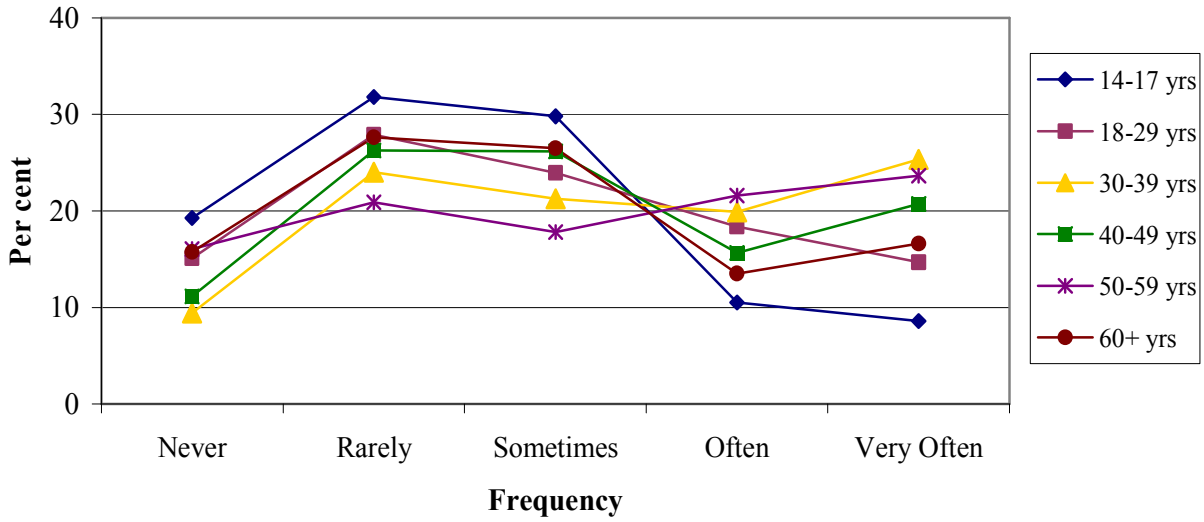
Managers (32%) and tradespeople (31%) most frequently reported that they use their mobiles 'very often' for their jobs. The least likely are people of other occupations (i.e. clerical, production and labouring) among whom 48% reported that they 'never' or 'rarely' used their mobile for their jobs. Mangers, however, are the most likely to use their mobiles either 'often' or 'very often' for their work (54%) (see Figure 15).

Figure 15: Frequency of mobile use for job (by occupation)



We found employed people aged less than 30 years are most likely 'never' to use their mobile for their jobs and the least likely to use them 'very often'. On the other hand, people aged 30-39 years and 50 -59 years years are the most likely to use their mobiles 'often' or 'very often' and people aged 60 years of more are the most likely to use them 'never' (43%) (see Figure 16).

Figure 16: Frequency of mobile use for job (by age in years)



7.2 Use of mobile phone on workdays and non-workdays

Employed respondents were asked six questions about their mobile phone calls in relation to work and non-work on workdays and non-workdays, with response categories: none; 1-3; 4-7; 8-12; 13-17; and 18 or more. Results are presented in the following three sections.

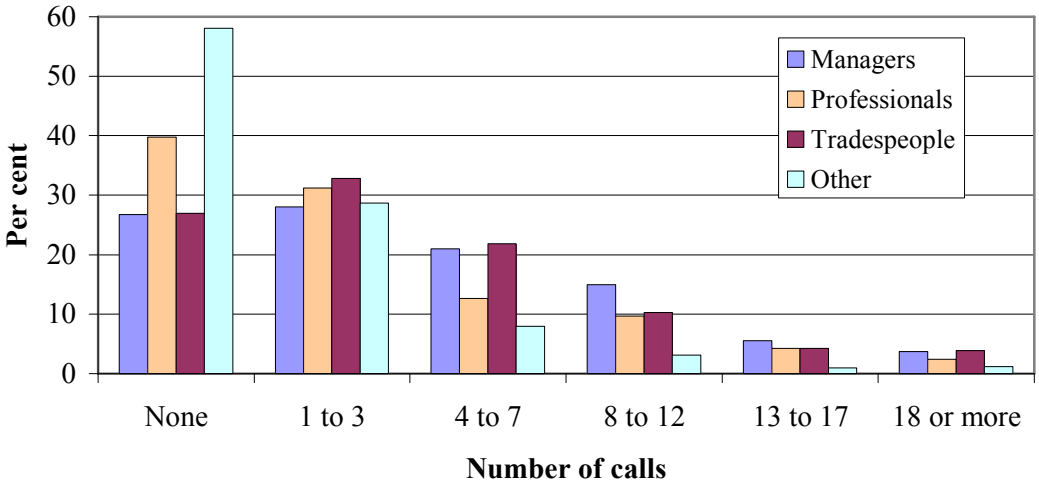
7.2.1 On a typical workday during normal work hours

The first of two questions about mobile phone usage during normal work hours asked: 'On a typical workday, approximately how many calls on your mobile phone(s) **during** your normal work hours are **job-related**?'

Males are almost twice more likely than females to use their mobiles during normal work hours for job-related calls (72% for males compared to 40% for females). Moreover, their call volume is higher, with 39% of males compared to 13% of females having four or more work-related calls during normal work hours.

Analysis by occupations (see Figure 17) reveals that trades people and managers are the most likely to use their mobiles for job-related calls during their normal work hours, 40%-45% of whom will have 4 or more calls (compared to 29% of professionals and 13% of other non-professionals).

Figure 17: Job-related mobile calls during normal work hours (by occupation)



Non-job-related mobile calls were explored in the second question: 'On a typical workday, approximately how many calls on your mobile phone(s) **during** your normal work hours are **not job-related**?'

Males and females appear to have similar patterns of mobile usage for non-job-related calls. For example, 86% of males and 80% of females have at least one non-job-related call during work hours, and 24% males compared to 18% females use their mobiles four or more times during work time for non-job-related calls.

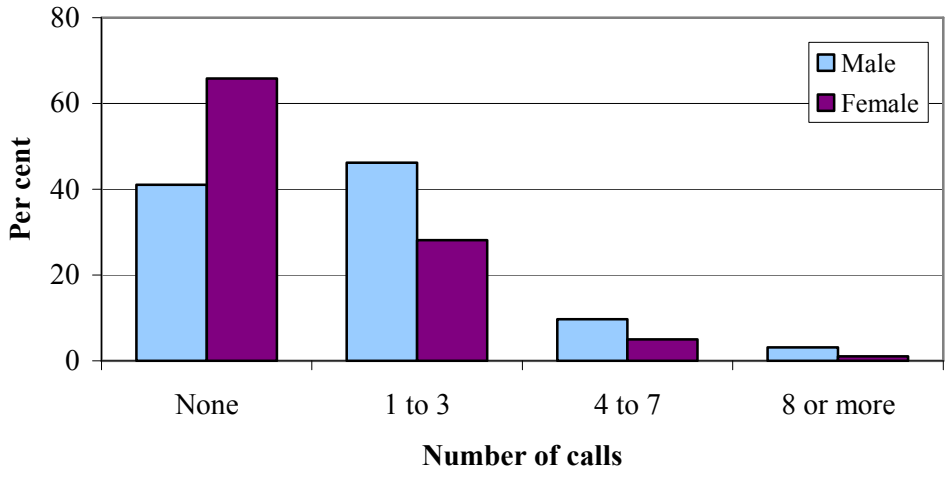
Males are much more likely than females to have some job-related calls during their work day. Even so, the likelihood of males having job-related calls is slightly less than for non-job-related calls, in contrast to females who are twice as likely to have calls that are unrelated to their jobs. We therefore conclude that, congruent with phone log data, both males and females use their mobiles for social connectivity, even during work time on workdays.

7.2.2 On a typical workday outside normal work hours

The first of two questions that explored the use of the mobile phone outside normal work hours was: 'On a typical workday, approximately how many calls on your mobile phone(s) **outside** your normal work hours are **job-related**?'

Figure 18 shows that males are more likely than not to have job-related mobile calls outside of normal work hours on workdays, while the reverse is true for females. However, we have observed that most people who use their mobiles for job-related calls during work hours (72% of males compared to 40% of females) also use them for work-related calls out-of hours (59% of males compared to 34% of females). The volume of calls is typically low, with only 9.7% overall having four or more calls.

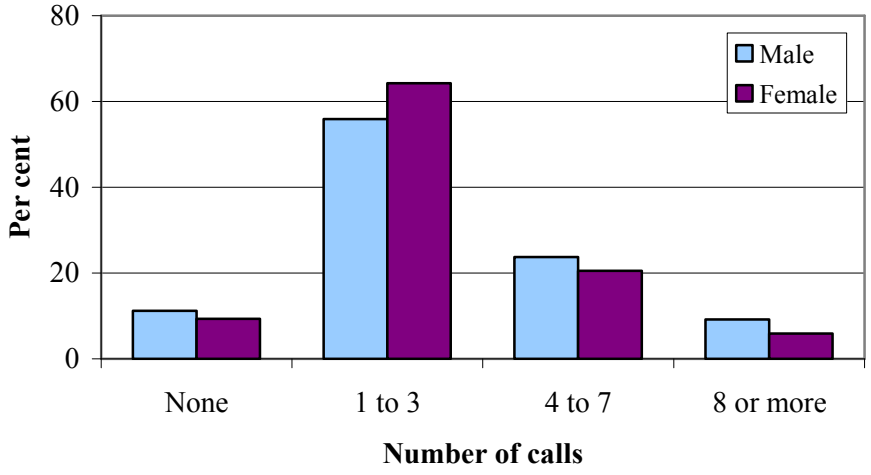
Figure 18: Job-related mobile calls outside normal work hours (by gender)



The second question asked: 'On a typical workday, approximately how many calls on your mobile phone(s) **outside** your normal work hours are **not job-related**?'

Overall, about 90% of males and females used their mobiles to some extent for non-work-related calls out of work hours on workdays. We found that the gender differences in mobile usage during work hours (portrayed in Figure 18) were much less evident for out-of-work-hours usage on workdays (see Figure 19), although males remained more likely than females to have four or more calls.

Figure 19: Non-job-related mobile calls outside work hours on workday (by gender)



7.2.3 On a typical non-workday

Lastly, we explored mobile phone use on non-workdays by asking: 'On a typical non-workday, approximately how many calls on your mobile phone(s) are **job-related** and **not job-related**?'.

Slightly less than half of males and about a quarter of females use their mobiles for work-related calls on their non-workdays although, overall, 7% reported four or more calls per day.

On the other hand, overall, more than 86% of individuals used their mobiles to some extent for family or social connectivity on non-workdays. Comparing Figure 20 (following) with Figure 19 we see that the patterns are similar for non-work hours on both workdays and on non-workday, except that, probably unsurprisingly, non-job-related call volume is higher on non-workdays. Most likely due to greater available hours on non-workdays, a higher proportion of people typically using their mobiles for four or more non-job-related calls on non-workdays (36%) than during non-work hours on workdays (30%).

Figure 20: Non-job-related mobile calls on non-workday (by gender)

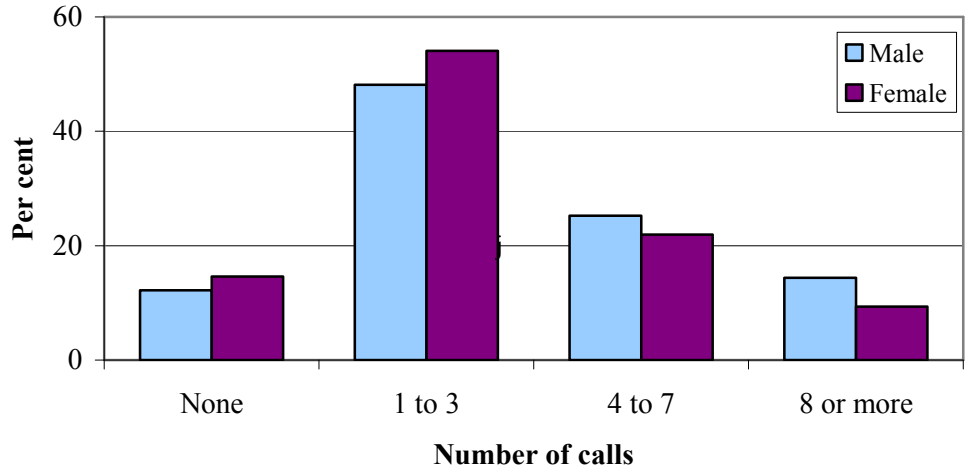
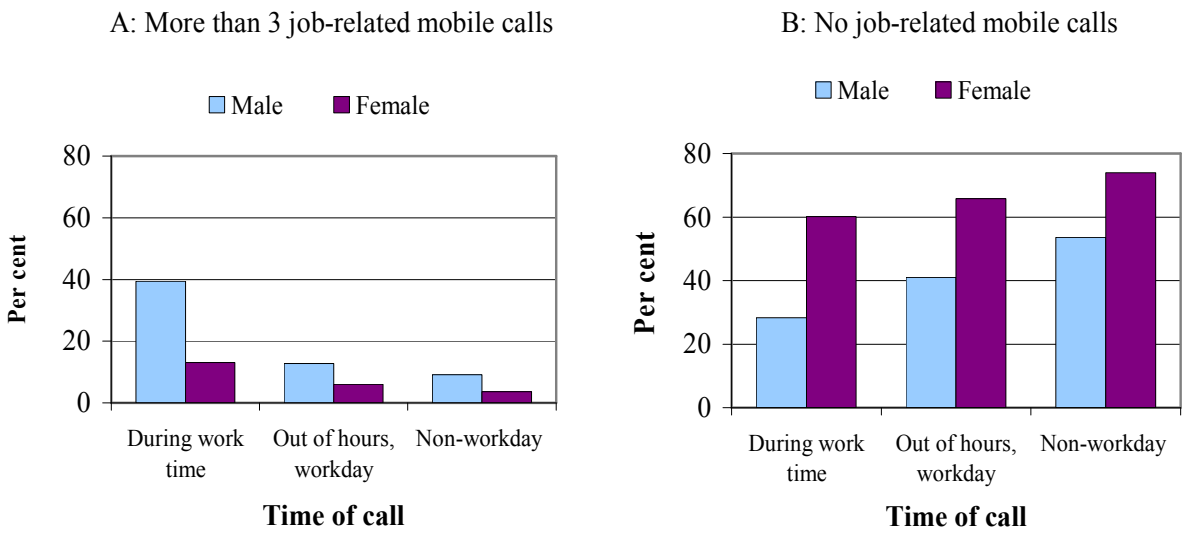


Figure 21A compares the declining moderate-to-high volume of job-related mobile calls (i.e. more than 3 calls per day) for males and females during work time, out-of-hours on workdays, and on non-workdays.

Figure 21: Comparing average daily job-related mobile call patterns (by gender)



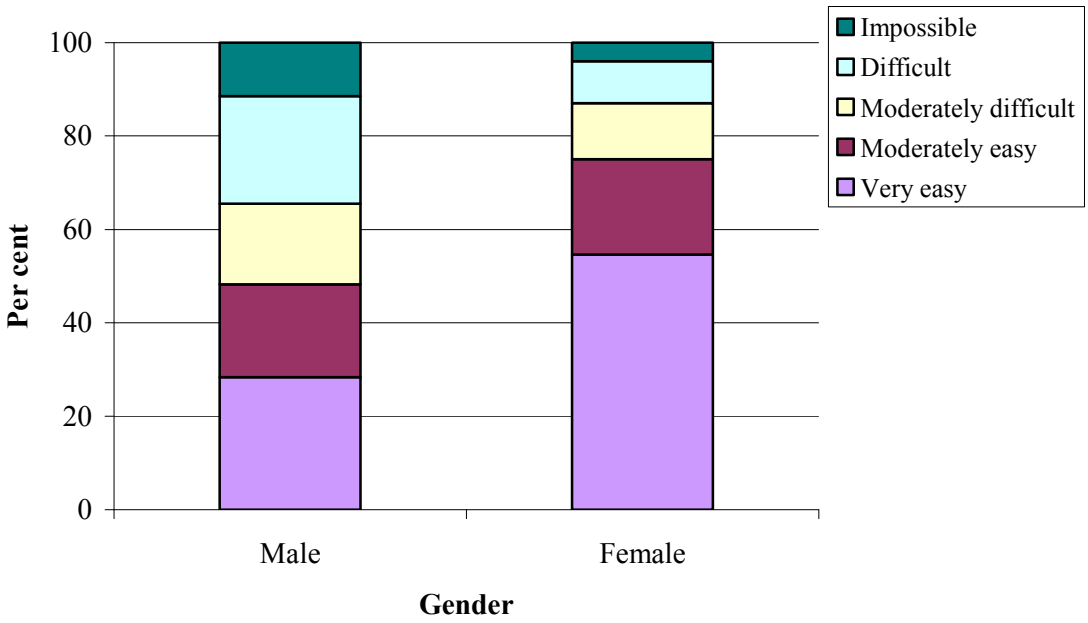
By way of contrast Figure 21B compares the increasing probability of both females and males having no job-related calls during work time, out-of-hours on workdays, and on non-workdays. The difference between males and females is smaller on non-workdays than workdays.

7.3 Perceived difficulty in doing job without a mobile phone

Employed respondents were asked 'How hard would it be for you to do your job without a mobile phone (or other mobile device)?' This question taps into the necessity of using mobile communication in the workplace and the degree of disruption that would be caused by the absence of this technology. Overall, over 60% of the workers thought that it would be 'very easy' or 'moderately easy' to do their job without a mobile phone (see Figure 22). Conversely, one third (31%) thought it would be 'difficult' or 'moderately difficult' to work successfully without their mobile. A mere 8% thought it would be 'impossible' to do their job properly without a mobile phone.

However, there is a dramatic difference in response by gender, with three-quarters of women workers saying that it would 'easy' to do their jobs without a mobile, while the majority (52%) of men thought it would be 'moderately difficult' to 'impossible'.

Figure 22: Difficulty of doing job without a mobile phone



The majority of clerical workers and labourers thought it would be 'very easy' to successfully complete their work without a mobile phone while, on balance, approximately half of managers, professional workers and tradespersons thought it would be difficult, or in extreme cases impossible, to do their job without a mobile phone.

7.4 'May be contacted' during holiday

A key feature of the work/life boundary is the practice of taking holidays, away from both the workplace and the drudgery of home. This spatial separation is the defining feature of holidays and indeed leisure activities. The mobile phone, as noted earlier, is uniquely designed to function independently of location. Consequently, the notion of being 'out of touch' while away on holiday no longer applies automatically. Mobile phone users can now choose whether to stay connected or enforce the customary break in communicative contact.

Employed respondents were asked: 'Do you normally take your mobile phone on holiday to talk to work colleagues?' Overall, the population of workers is evenly divided between those who do take their phone and those who don't. However, when this result is broken down by gender, it is apparent that men (42%) are much more

likely than women (25%) to use their mobile phone to talk to their work colleagues while on holiday. It appears that employed women are more concerned than men to prevent the encroachment of work into holiday time.

Managers are the most likely (50%) to take their phone on holiday to conduct business, whereas only 24% of clerical workers do the same.

7.5 Impact on workload and productivity

Forty per cent of employed respondents see mobiles as increasing their workload, for 55% the effect is neutral, and for a few (5%) the mobile reduces their workload. Men (47%) are substantially more likely as women (28%) to say that the mobile phone increases their workload. This is offset by productivity gains with 41% indicating that job-related mobile calls increase their productivity. The majority of women (68%) consider that the mobile phone has a neutral effect on their productivity, while men are more positively disposed, especially managers and professionals.

8. WORK-FAMILY ISSUES AND THE MOBILE PHONE

8.1 Maintaining contact with extended family

Respondents were asked 'How important are the following in maintaining contact with your extended family' and invited to rate various communication modalities on a five point scale, ranging from 'very important' to 'very unimportant'. The mode of communication respondents consider most salient for maintaining contact with extended family were, in order of importance, the landline (87%), face-to-face visits (77%), the mobile phone (68%), followed by emails (53%), texting (48%), and then a large gap to the traditional modality of letter writing (21%) and the newest technologies of Voice Over Internet Protocol (VOIP) (12%). Although the mobile phone is a much more recent innovation than the landline, it has already become a crucial tool for maintaining intimate ties, since nearly two-thirds of our respondents rate this function of mobiles as either 'important' or 'very important'. This finding about the different usage of the landline compared to mobile phones is consistent with the pioneering French research, based on billing records, which found a pattern of using the landline in the evening for longer conversations with relatives or friends and using the mobile for shorter calls.

Regardless of the communication medium, women are more likely than men to consider maintaining contact with family 'very important'. In our study we found that 90% of females consider that the landline is either 'important' or 'very important'. Interestingly, two-thirds of the women who regard the landline as a useful way of maintaining contact chose the most extreme positive response category of 'very important'. The same pattern holds for mobile phones and emails. This is consistent with the literature on the gendering of the telephone that has demonstrated that maintaining kinship relations is traditionally a task undertaken by women.

8.2 Using the mobile phone to facilitate family/household coordination

We asked respondents in multi-person households: 'How significant are the following reasons for using your mobile phone to facilitate family/household coordination?'. Specifically, respondents rated 'planning meals'; 'arranging to meet with family/household members'; 'arranging to deliver goods or children'; 'finding out

where children are' and 'informing when to expect me home' on a five point scale ranging from 'very important' to 'very unimportant'. The greatest importance is attached to information about the timing of the arrival at home (79%) and arranging to meet with other family members (80%). Among parents, 'arranging to deliver goods or children' and 'finding out where children are' is rated as important by 48% and 47% respectively. Mobile phones are rated as either 'very important' or 'important' for planning meals by just a third of the respondents.

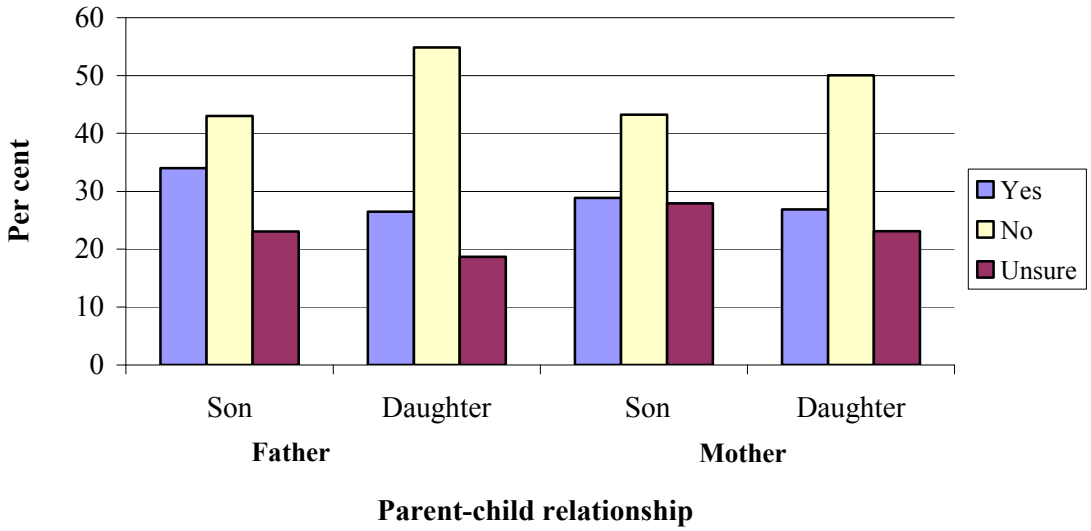
8.3 Effect of mobile phone on work and home/family/personal life balance

Employed respondents were asked to rate 'What impact has the use of your mobile phone had on your ability to balance your work and home/family/personal life?' on a five point scale, ranging from 'increased a lot' to 'decreased a lot'. Very few respondents report that the mobile phone has a negative impact on their work-life balance (4%). A high proportion of respondents (45%) say that it has had no effect. Notably, however, half of the respondents believe that the mobile helps them to balance their family and working lives.

8.4 Mobile phones, parents and the security of their children

Much has been made of the fact that parents are using the mobile phone to monitor their children's whereabouts. Increased security is proffered as a major reason for buying a mobile for children. So the question arises, does the presence of a mobile phone connection assuage parents' anxiety about their children staying out late? One might presume that the sex of the child might make a big difference, but this is not the case. Respondents were asked; 'If you had a teenage son, would you allow him to stay out later if he had a mobile phone?' and 'If you had a teenage daughter, would you allow her to stay out later if she had a mobile phone?'. Perhaps surprisingly there is little difference in responses according to whether the teenager is male or female. Overall, around 30% would permit their child to stay out late if they had a phone but about 10% more parents would say 'no' to a teenage daughter staying out late with a mobile than would say 'no' to a teenage son (see Figure 23). It could be that parents are more concerned with setting unambiguous boundaries for teenage behaviour and, despite being somewhat more protective of teenage daughters than sons, this produces limits to remote monitoring by mobile devices.

Figure 23: Teenagers staying out late with mobile (by gender)



8.5 Importance of mobile phone in routinely separated couple relationships

Instead of the transmission of specific information being the crucial element of making a mobile phone call, in many cases the call itself is what is important. Keeping in touch while physically apart is an expression of intimacy. Through the mobile phone, people can be apart and yet very close. In order to gain some insight into this possible use, we asked respondents: 'If you and your partner are routinely apart for more than a day at a time, how important is the mobile phone in maintaining the quality of your relationship?' and invited them to respond on a five point scale ranging from 'very important' to 'very unimportant'. Approximately three-quarters of both men and women consider the mobile phone to be either very important or important in maintaining the quality of their relationship while geographically separated.

9. PERCEIVED COSTS AND BENEFITS OF MOBILE PHONE OWNERSHIP

9.1 Can I live without my mobile phone?

Mobile phones have become so thoroughly indispensable that life may be unimaginable without them. As a result, being deprived of these devices might be perceived as so disruptive that everyday life cannot proceed as normal. In order to measure the extent of people's dependence on the mobile phone, we asked respondents: 'How much would you miss your mobile phone if it disappeared today?'. Respondents were asked to choose between: 'I wouldn't miss it at all because my daily life could proceed as normal'; 'I would miss it sometimes'; 'I would miss it often enough that my daily life could not proceed as normal'; 'I would miss it often'; 'I would miss it an extreme amount'.

Twelve per cent of the sample answered that they would be unaffected and their lives 'would proceed as normal' if they were suddenly without their mobile phone. By contrast, 45% of the respondents indicate that their daily lives could not 'proceed as normal' if they were without their mobile. Of these, the overwhelming majority would miss the mobile phone either 'often' or 'extreme amount'. A similar question, asked of 1061 American cell phone users, found that 65% said that they would find it 'very hard' or 'somewhat hard' to give up their cell phone, while 21% answered that it would be 'not at all hard' (Pew Internet and American Life Project 2002). Although this survey was conducted several years prior to ours, on this evidence, it would appear that the mobile phone is more thoroughly integrated into the everyday lives of Australians than it is for Americans.

9.2 Increased sense of personal security

Another indication of people's feelings about the mobile phone is the sense of security they derive from carrying a mobile. Three-quarters of respondents said that carrying a mobile phone makes them feel more secure. If security is a crucial element for happiness, then having a mobile may make people happier.

9.3 Effect on time pressure

Over thirty years of experience has shown that asking respondents how often they are 'rushed or pressed for time' produces a reliable estimate of how time pressured people

feel. In the most recent Australian Bureau of Statistics Time Use Survey (1997), 45.7% of workers reported that they 'always'/'often' felt rushed or pressed for time. Amongst our sample, the corresponding rate is 41%.

To explore the role of the mobile in relation to its effect on people's sense of time pressure, we also asked respondents: 'Does the mobile phone make you feel less time pressured?'. Nine per cent answered 'Yes, a lot less'; 25% answered 'Yes, a little less'; 15% answered 'No, not much less'; 25% 'No, not at all' and 26% were unsure.

9.4 Effect on stress

To investigate the impact of the mobile phone on stress, respondents were asked: 'Does the mobile phone make you feel more or less stressed?' For the majority (61%) the mobile phone had made no change, while 21% said 'somewhat less stressed'. Eight per cent responded that the mobile phone had made them 'significantly less stressed'; and about the same proportion said 'somewhat more stressed'; and a mere 1% answered that the mobile phone made them 'significantly more stressed'.

9.5 Effect on quality of leisure

Finally, one might wonder how the mobile phone affects the quality of people's leisure. The possibility of being interrupted is balanced against the uses of the mobile phone for social connectedness. We asked respondents to rate the extent to which the mobile phone has improved or reduced the quality of leisure time. Respondents could choose between the categories of 'greatly improved'; 'somewhat improved'; 'has had no effect'; 'somewhat reduced' and 'greatly reduced'. For more than half of our respondents (53%) the mobile 'has no effect' on the quality of their leisure, for one third (32%) the quality of leisure is 'somewhat improved'; 10% answer with a more emphatic 'greatly improved'; and roughly 5% view as reducing the quality of their leisure.

9.6 The technology I could most live without – TV, internet or mobile phone

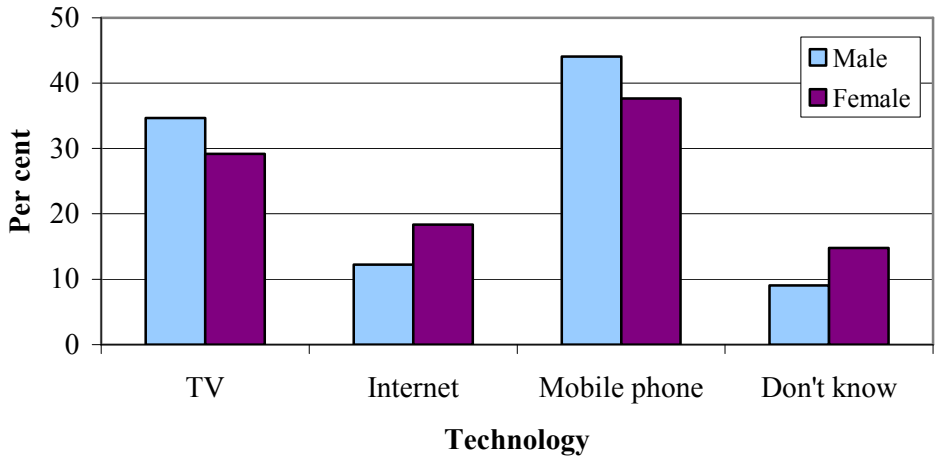
We asked all household members the question 'If you had to give up one of the following – television, the internet, or the mobile phone – which would you be most willing to give up?'. Respondents had the option to select one of the three

technologies or 'Don't know'. The non-internet connected household members also had the option to respond with 'I do not have all three'.

We found that people would be most willing to give up their mobile phone(s) before TV and the internet, with relatively little overall difference between females and males concerning each technology. About 15% of females and 9% of males couldn't decide which of the three they'd be most willing to give up.

Our findings reflect the results of a 2005 USA study although we found that Australians (in 2007) were much more loyal to the internet than people in the USA in 2005.

Figure 24: Technology most prepared to give up (by gender)



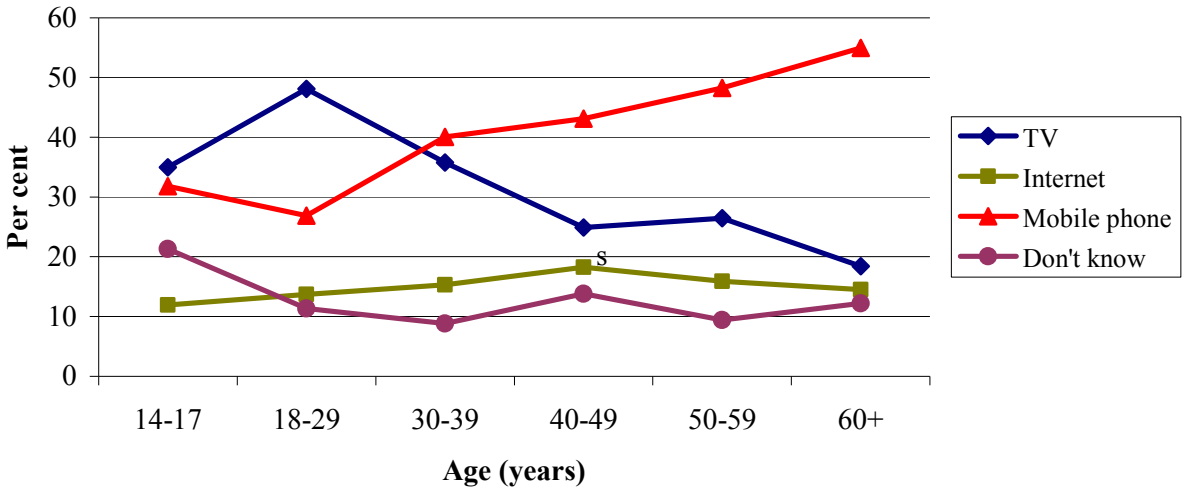
However, when we analysed the results for each technology across gender and age group, we found that:

- 18 to 34 year olds are more prepared to give up the TV than are people in other age groups;
- females in the 30-34, 40-44 and 50-54 years age groups are much less prepared to give up TV than are males in the same age groups;
- females aged 30 years and older are much more prepared to give up the internet than are males in the same age groups. This is most marked in the 45-

49 age group in which females (26%) are twice as prepared to give up the internet;

- with the exception of 14-17 year olds, the older the person, the less prepared he/she is to give up the TV;
- People aged 55 years and over are much more prepared than others to give up their mobile phones than to live without the internet;
- with the exception of 45-54 year olds, the older the person the more prepared he/she is to give up the mobile phone.

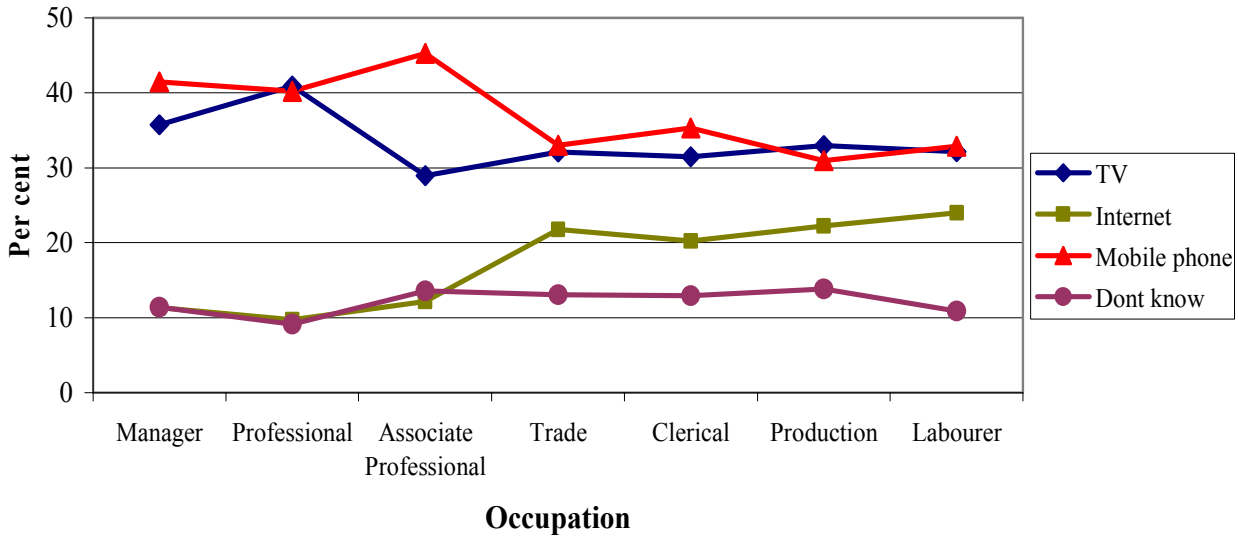
Figure 25: Most prepared to give up TV, Internet and Mobile Phone (by age)



Analysis by occupation reveals that professionals are the most likely to give up TV (41%) and the least willing to give up the internet (10%), followed closely by managers and associate professionals, while all three are the more willing than other occupational groups to give up their mobiles (40%-45%). Labourers, on the other hand are more willing to live without the internet (24%) than all other categories, followed closely by more than 20% of all other non-professional workers. Notably, it appears that managers/professionals are much more prepared to give up their mobiles, and much less prepared to give up the internet, than all other occupational groups. We

suggest that this high level of commitment to the internet will promote increased commitment to the mobile as mobile internet matures during the next few years.

Figure 26: Technology most prepared to give up (by occupation)



10. INTERNET, CONNECTEDNESS, USE AND SERVICES

10.1 Individual's use of internet services accessed via a computer

The question, 'Other than for your work, which of the following internet services do you currently use **a computer** for?' had a dozen computer-based activities as possible responses, along with 'None of these' and 'Not applicable'. These activities were: shopping; banking; send and receive e-mail; send and receive video; chat rooms including dating agencies; sports, news or current affairs; training, education and learning; travel information and bookings; weather information; location services information and bookings; download games, music or movies; and watch live or pre-recorded TV.

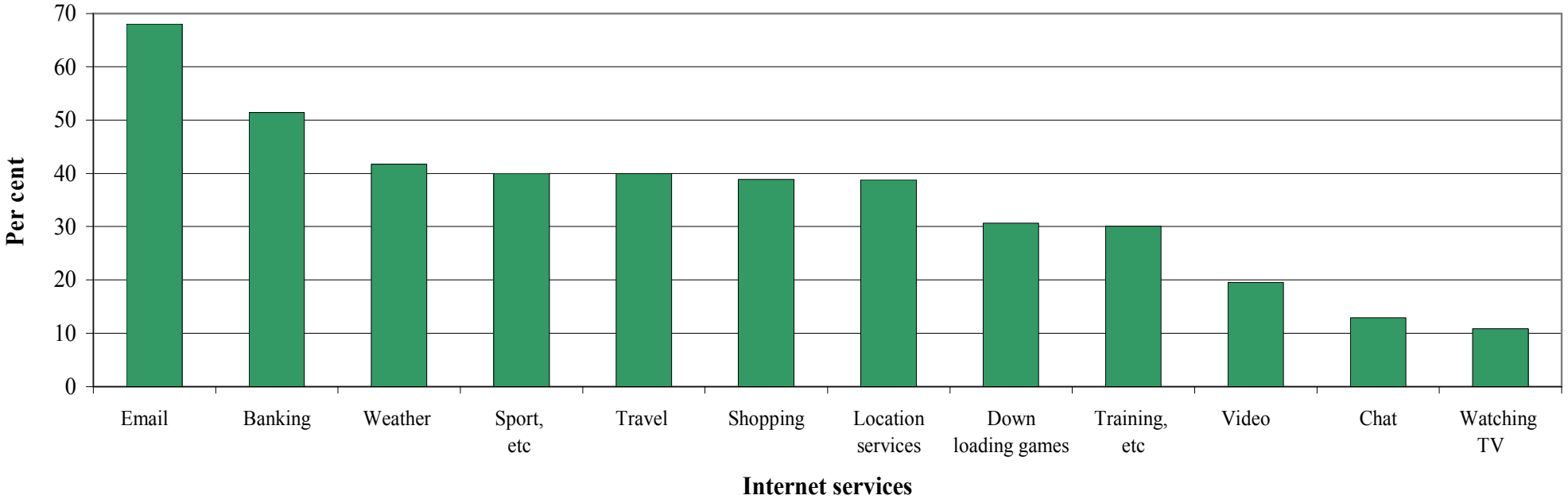
E-mail is the most used non-work-related internet service accessed by computer. It is used by 89% of people in internet-connected households and 68% of all respondents. Because our question explored what internet services are accessed via a computer, regardless of where the computer is located or who owns it, Figure 27 displays internet services accessed by all respondents.

Internet banking (51%) is the second most frequently computer-accessed internet service, closely followed by weather information, sport, travel information, shopping and location services (all around 40%). The least accessed internet services are watching TV (11%), chat rooms (13%), and video (20%).

The patterns are similar for males and females, although males are marginally more likely than females to use all types of internet services. The greatest margin of difference between males and females are sport (males 12% more likely), watching videos (males 10% more likely), watching TV (males 7% more likely), and banking (females 7% more likely).

Managers and professionals are more likely than people in other occupations to use their computers for e-mail, banking, shopping, sport, travel, location services, and training whereas trade and production workers are more likely than others to use their computers to use chat rooms, download games etc, and send/receive video.

Figure 27: Internet services accessed via computer



Some predictors of computer-based non-work-related internet usage by age are evident:

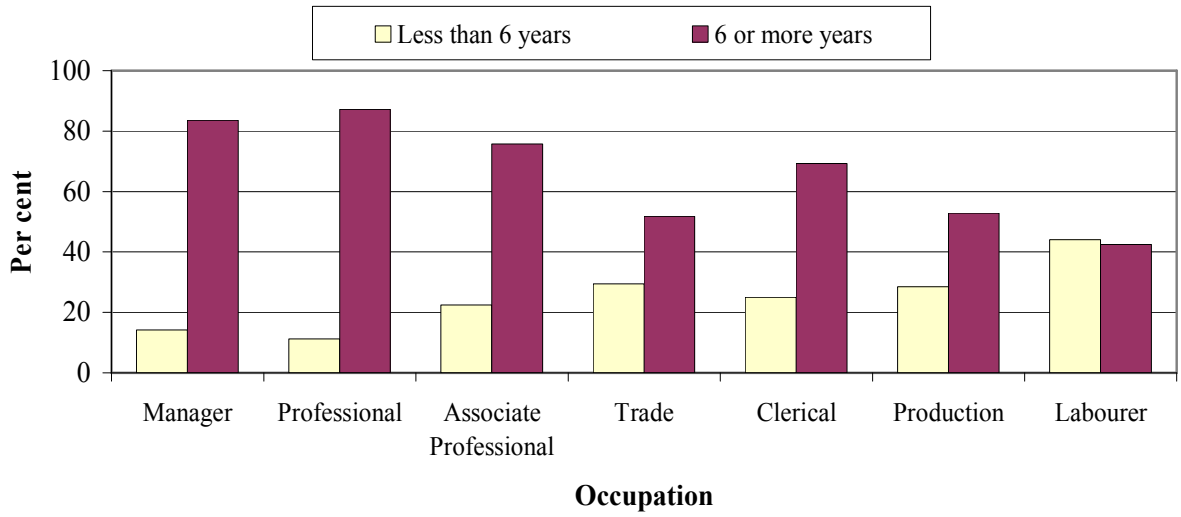
- Younger people (aged less than 35 years) are most likely to use chat rooms, watch TV, send or receive video and download games etc;
- Internet banking peaks with people aged 25-39 years (66%) then tapers off gradually to people aged 65 years or more (22%);
- E-mail use varies according to age, with 14-17 year olds the highest users (80%), and about 75% of 18-59 year olds and 43% of 60+ year olds accessing e-mail via computer.
- 40% of individuals access sports-related services via computer, slightly less among the youngest and oldest age groups, and more by males (46%) than females (34%);
- People aged 18-34 years are the most likely to access training services, peaking with 25-29 year olds (45%);
- People aged 25-59 years are most likely to access internet-based travel services via a computer (about 46%). However, in internet-connected households, people aged 60 years or more are the most likely, particularly 60-64 year olds (70%). This suggests that an important reason for older people having an internet-connected computer is to access travel services;
- Under 18s and people aged 60 years or more are the least likely to access weather information and use location services;
- About 50% of people aged 25-49 years engage in online shopping via a computer;
- About 6% of people access none of these internet services using a computer.

10.2 Time since adoption of internet technology

The phenomenon of early and later adopters of the internet was explored with the question 'How long ago did you first use the internet?'. Response options were: less than 1 year; between 1 and 5 years; between 6 and 10 years; more than 10 years; and 'Never'.

The majority of people (65%) first used the internet 6 or more years ago. It is readily apparent that managers and professionals were earlier adopters of the internet than non-professionals, with 76%-87% of the former and 43%-69% of the latter first using the internet six or more years ago.

Figure 28: Years since first internet use (by occupation)



Employed people (74%) are the most likely to have used the internet for six years or more, with students (68%) second to the employed. Around 57% of other categories – people on 'home duties', retirees, and the currently unemployed – reported that they first used the internet at least six years ago.

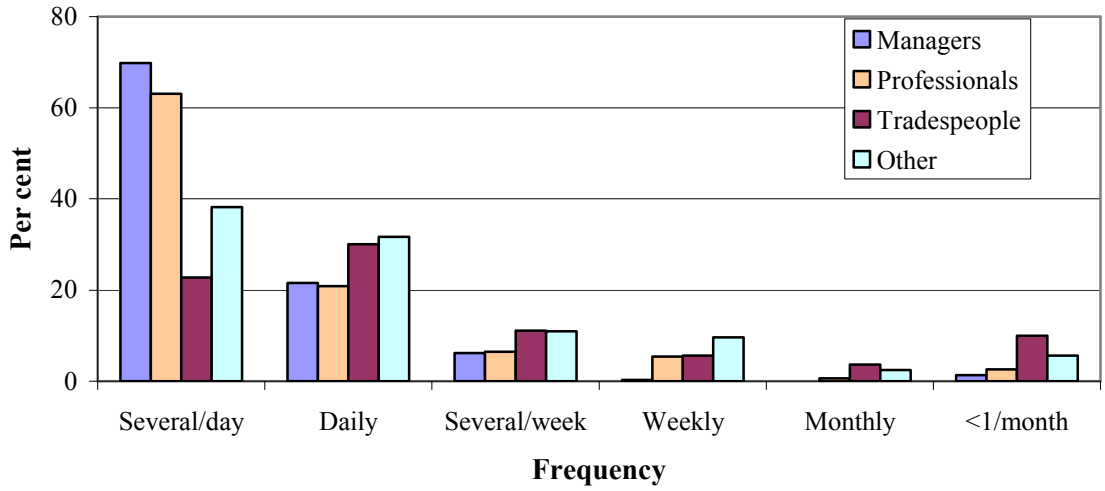
Overall, 26% of people have used the internet for more then ten years. A higher proportion of males (32%) than females (20%), and a higher proportion of people currently aged 30-34 years (37%) than other ages (ranging from 10% for 14-17 year olds to 33% for 45-49 year olds) have used the internet for more then ten years.

10.3 Frequency of internet use

Frequency of use of the internet was explored in the question 'How often do you use the internet?'. The seven response categories in diminishing frequency of use were: several times a day; daily; several times a week; weekly; monthly; less than once a month; and never.

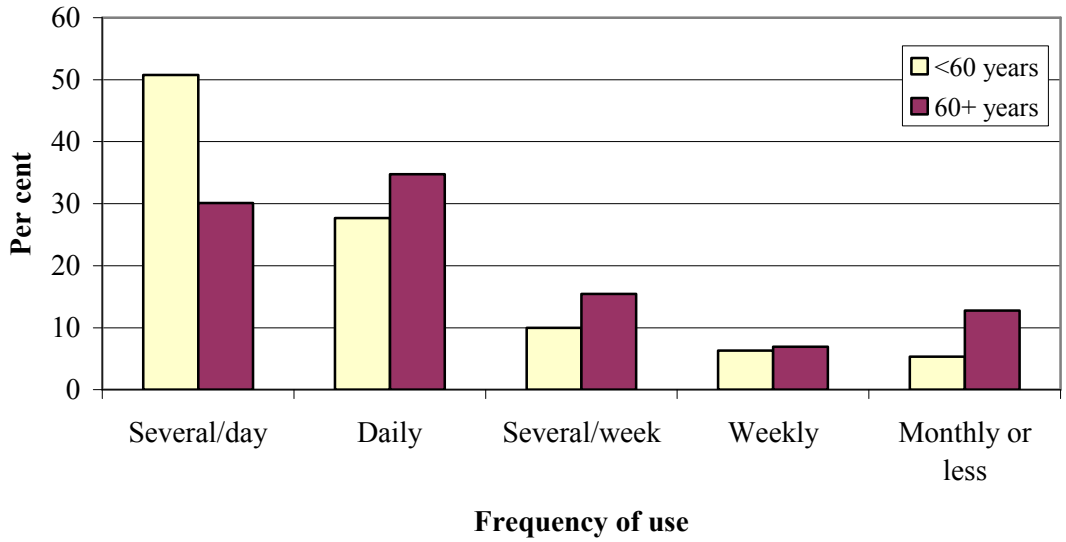
Forty-six per cent of people reported that they used the internet several times a day, while 12% use it weekly or less. Managers (70%) and professionals (63%) are much more likely to be very frequent internet users (i.e. several times a day) than other occupations (around 30%), and also much more likely to use the internet at least daily (see Figure 29).

Figure 29: Frequency of internet use (by occupation)



About half of individuals aged 18-59 years use the internet several times a day, with 30-39 year olds the most likely frequent daily users (56%). On the other hand, those aged under 18 years and 60 years or more are most likely to use the internet daily or several times a week. Even so, 65% of people aged 60 years or more use the internet at least daily (compared to about 78% of people aged less than 60 years) (see Figure 30).

Figure 30: Frequency of internet use (by age)



10.4 Amount of time spent using the internet for work or study

10.4.1 Typical workday

Employed respondents were asked 'How much time do you spend on a typical workday using the internet (including email) for **work and/or study**?'. Response options were: none of the time; less than 30 minutes; 30-59 minutes; 1 – 1 hour 59 minutes; 2-3 hours; and more than 3 hours.

Males spend slightly more time on the internet for work and/or study than females, a difference that increases with each increment of time spent on the internet.

Three times as many managers/professionals than others (i.e. trade, clerical, production workers and labourers) spend more than 3 hours per day on the internet for work and/or study. Age analysis reveals that people aged 18-39 years are more likely than others to spend more than 3 hours per day on the internet for work/study (21%) while 30-34 year olds are the most likely to use the internet for these purposes (90%).

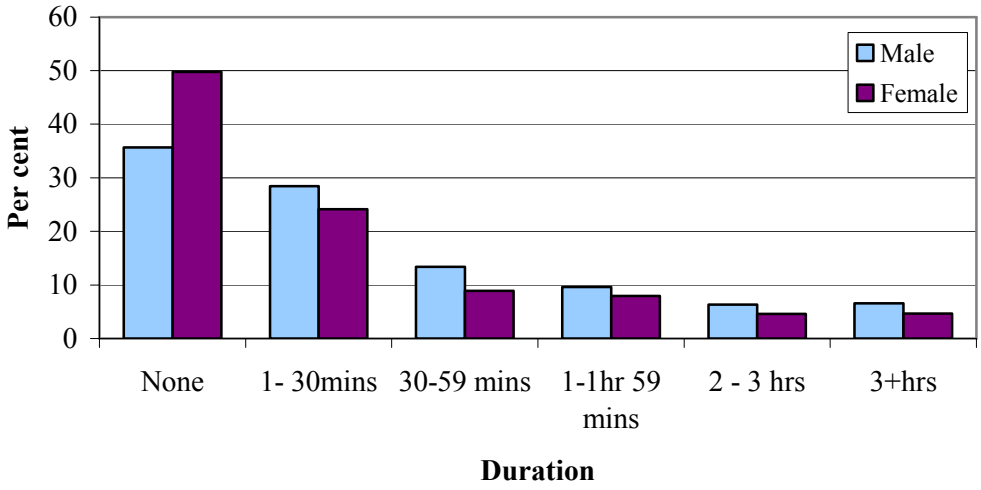
10.4.2 Typical non-workday

Employed respondents were also asked 'How much time do you spend on a typical **non-workday** using the internet (including email) for **work and/or study**?'. Response options were identical to those used in the preceding question: none of the

time; less than 30 minutes; 30-59 minutes; 1 – 1 hour 59 minutes; 2-3 hours; and more than 3 hours.

Managers/professionals are about twice as likely as others to spend non-workday time on the internet for work/study. Similarly, males (68%) are more likely than females (50%) to use the internet on non-workdays for work/study, and for longer periods, than females (see Figure 31).

Figure 31: Average non-workday internet use for work and/or study (by gender)



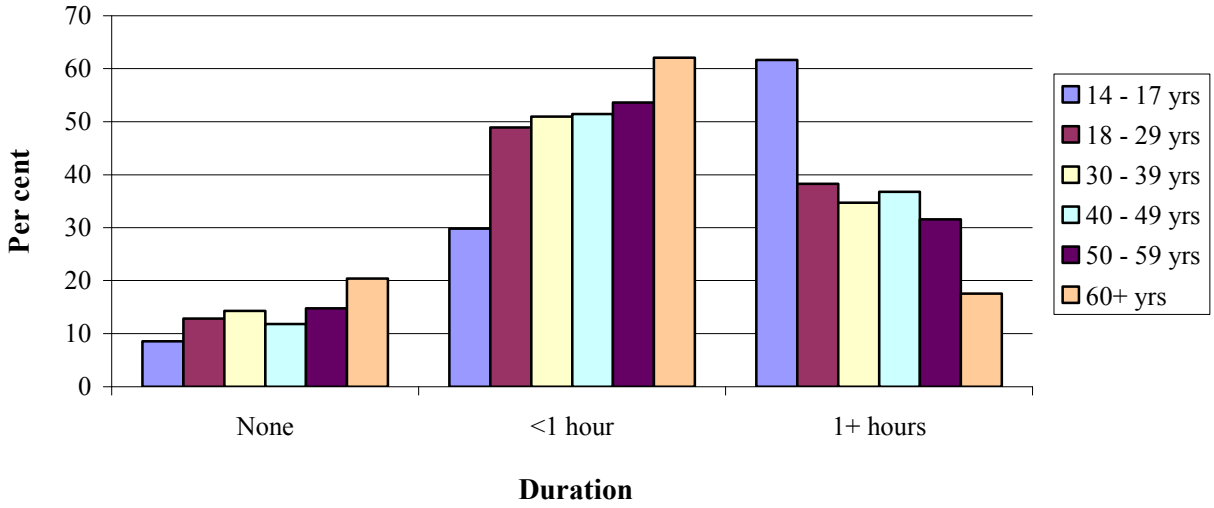
10.5 Amount of time spent using the internet for personal interests

10.5.1 Typical workday

Employed respondents were asked 'How much time do you spend on a typical workday using the internet (including email) for **personal interests**?'. Response options were: none of the time; less than 30 minutes; 30-59 minutes; 1 – 1 hour 59 minutes; 2-3 hours; and more than 3 hours.

The likelihood of using the internet for personal interests for more than an hour on workdays declines with age, with 62% of 14-17 year olds using it for an hour or more compared to 18% of people aged 60 years or more (see Figure 32). About one-third of the balance of individuals uses the internet for an hour or more for personal interests on work days.

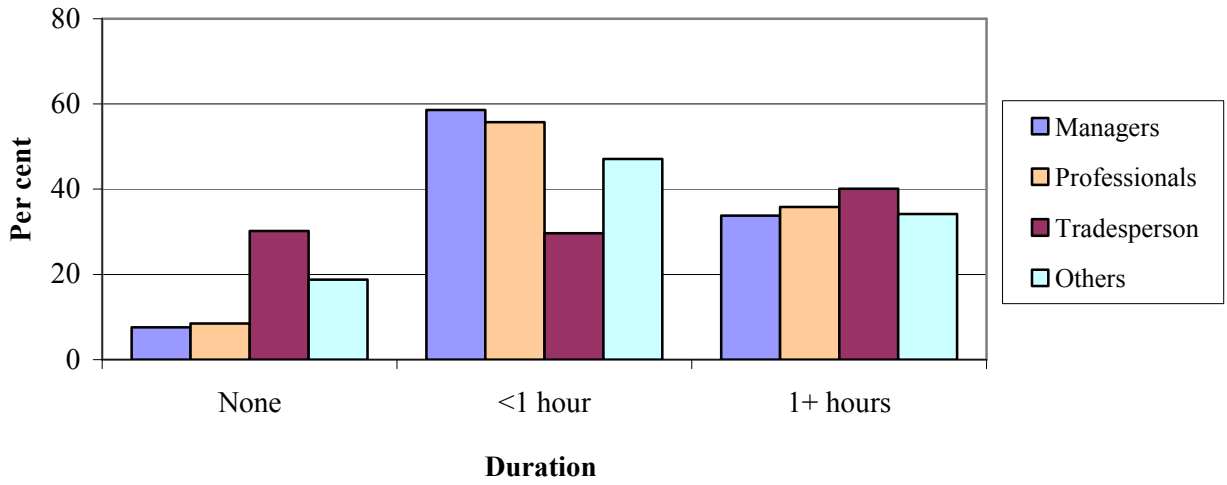
Figure 32: Average workday internet use for personal interests (by age)



Male and female workers have similar internet use for personal interests on workdays, the only slight difference being that males are more likely than females to spend more than 3 hours per day on the internet for these purposes.

While managers/professionals are heavier work/study internet users on workdays, they are lighter users of the internet for personal interests than other occupations on those days (see Figure 33).It is evident that using the internet for purposes other than work has become normal behaviour for the majority of people, with a surprisingly high proportion – over 35% - reporting that they typically use the internet for more than an hour each workday for personal interests.

Figure 33: Average workday internet use for personal interests (by occupation)



10.5.2 Typical non-workday

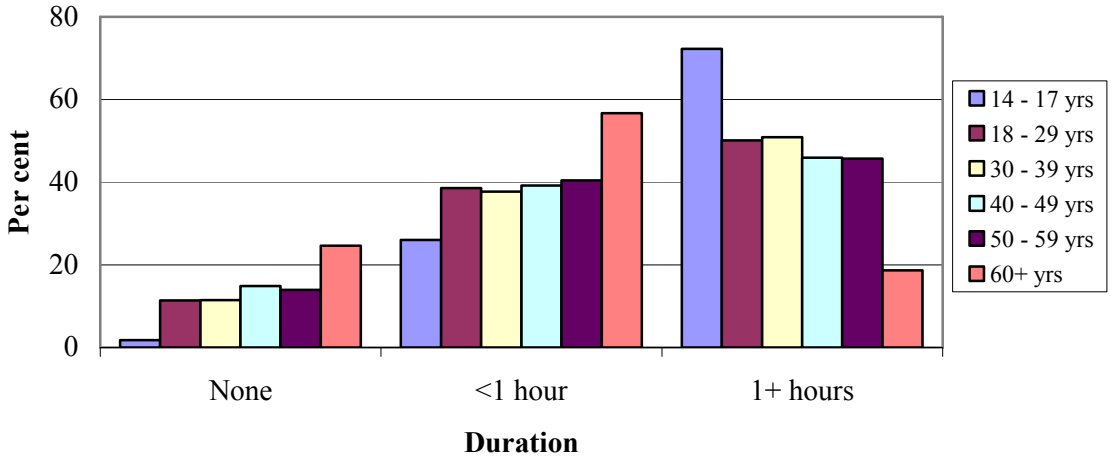
Employed respondents were also asked 'How much time do you spend on a typical **non-workday** using the internet (including email) for **personal interests**?'. Response options were identical to those used in the preceding question: none of the time; less than 30 minutes; 30-59 minutes; 1 – 1 hour 59 minutes; 2-3 hours; and more than 3 hours.

Employed people spend more time on the internet for personal interests on non-workdays (median duration = 1<2 hours) than workdays (median duration = 30<60 minutes).

Thirty-one per cent of males and 24% of females typically spend at least 2 hours per non-workday on the internet to pursue personal interests (compared to 20% for males and 16% for females on workdays).

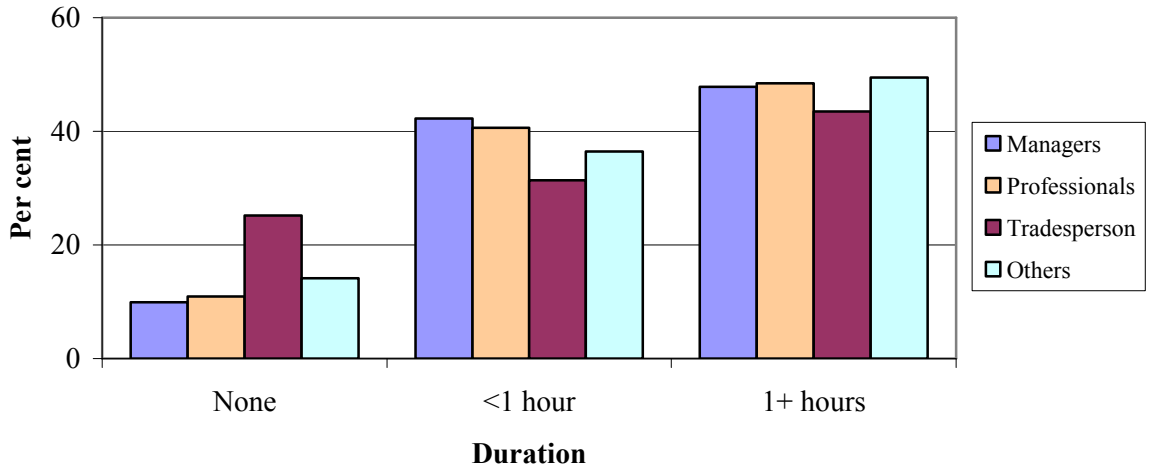
There is a clear age-related pattern of internet use for personal interests on non-workdays (see Figure 34): the older the person, the less likely he/she is to spend more than one hour on the internet and the more likely to spend up to one hour pursuing personal interests on the internet, or no time at all.

Figure 34: Average non-workday internet use for personal interests (by age)



Occupationally, trades people are more likely than others not to use the internet and less likely than others to spend more than one hour on it on non-workdays to pursue personal interests (see Figure 35).

Figure 35: Average non-workday internet use for personal interests (by occupation)



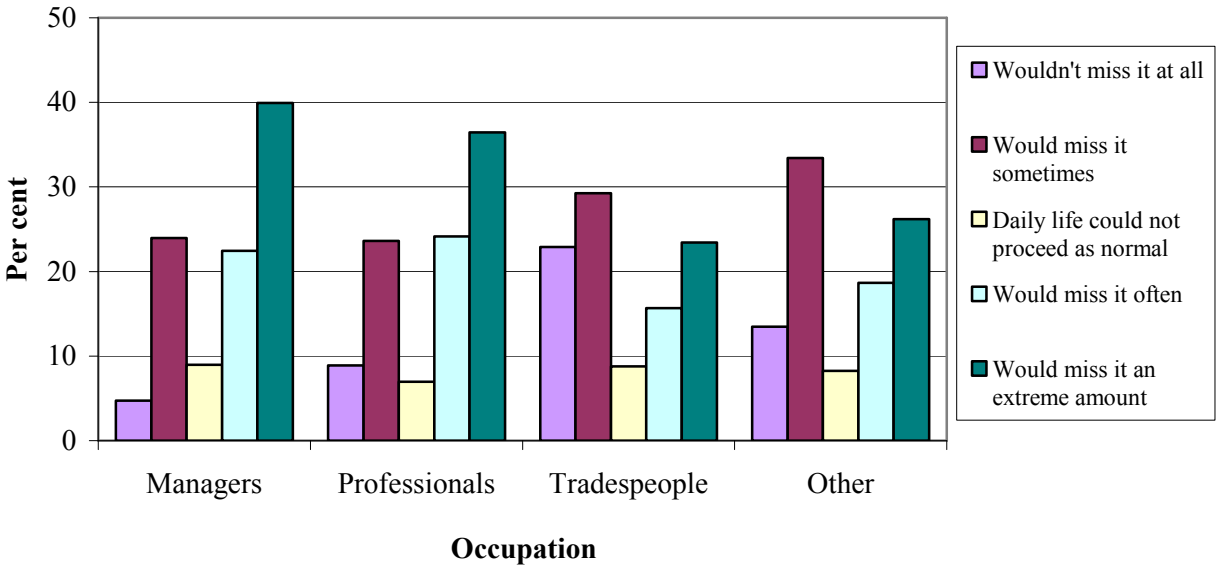
10.6 Can I live without the internet?

All participants were asked 'How much would you miss the internet if it disappeared today?' The five response categories and response rates were:

- I wouldn't miss it at all because my daily life could proceed as normal (12%)
- I would miss it sometimes (28%)
- I would miss it often enough that my daily life could not proceed as normal (7%)
- I would miss it often (21%)
- I would miss it an extreme amount (33%).

We found that 60% of people, males and females alike, would miss the internet such that their lives could not proceed as normal. More than half of these people reported that they would miss it 'an extreme amount' if it disappeared today. Constituting those who would miss the internet an extreme amount are 40% of managers, 36% of professionals, 23% of trades people, and 26% of other non-professional occupations (see Figure 36).

Figure 36: How much I'd miss the internet (by occupation)



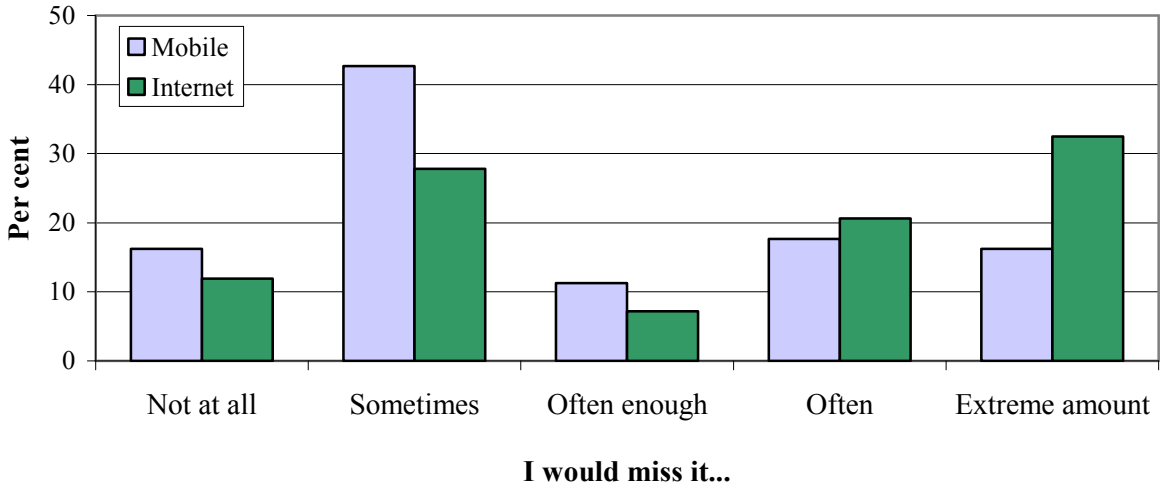
We found that students (69%) would miss the internet a moderate to extreme amount, more than retirees (56%) and employed people (62%). With 94% of students in our

sample being aged less than 30 years, these results are mirrored in the following age-based results, particularly in the lower and higher age groups.

Forty-six per cent of 14-17 year olds and a progressive decline to 27% of people aged over 60 years reported that they would miss the internet 'an extreme amount' if it disappeared today, so we have concluded that the older the person is the less he/she is likely to miss the internet. This is further borne out by evidence that more older people responded with 'I wouldn't miss it at all…' than all other ages (20% among 60+ years, 13% among 50-59 year olds declining to 6% among 14-17 year olds).

How much people would miss their mobiles compared to the internet is portrayed in Figure 37. Similar proportions wouldn't miss either (12%). However, twice as many people would miss the internet (33%) 'an extreme amount' compared to missing their mobiles, while about 16% more people would miss their mobiles 'sometimes' compared to missing the internet.

Figure 37: How much I'd miss my mobile compared to the internet



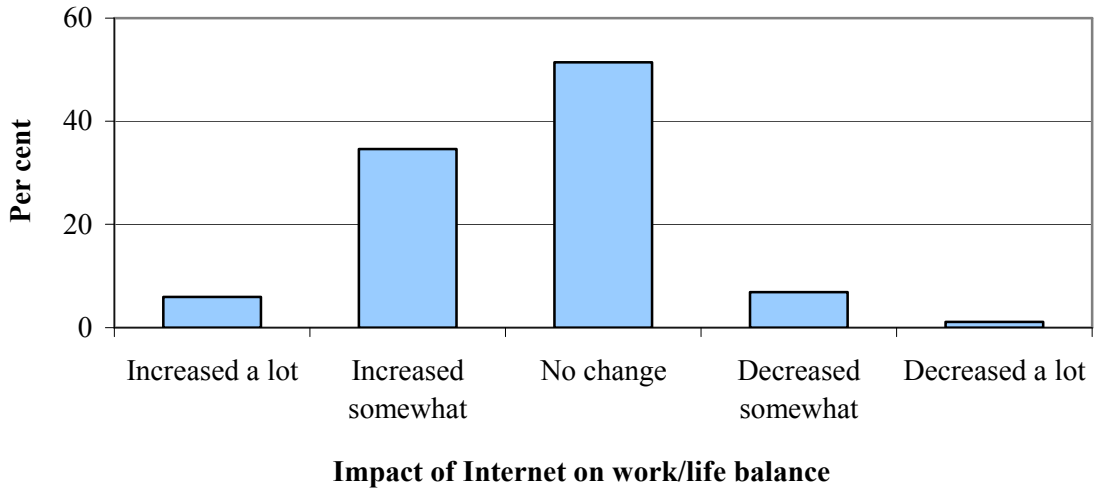
11. WORK-FAMILY ISSUES AND THE INTERNET

11.1 Perceived effect of internet on work/life balance

Employed respondents were asked to rate 'What impact has the use of the internet (including email) had on your ability to balance your work and home/family life?' on a five point scale, ranging from 'increased a lot' to 'decreased a lot'.

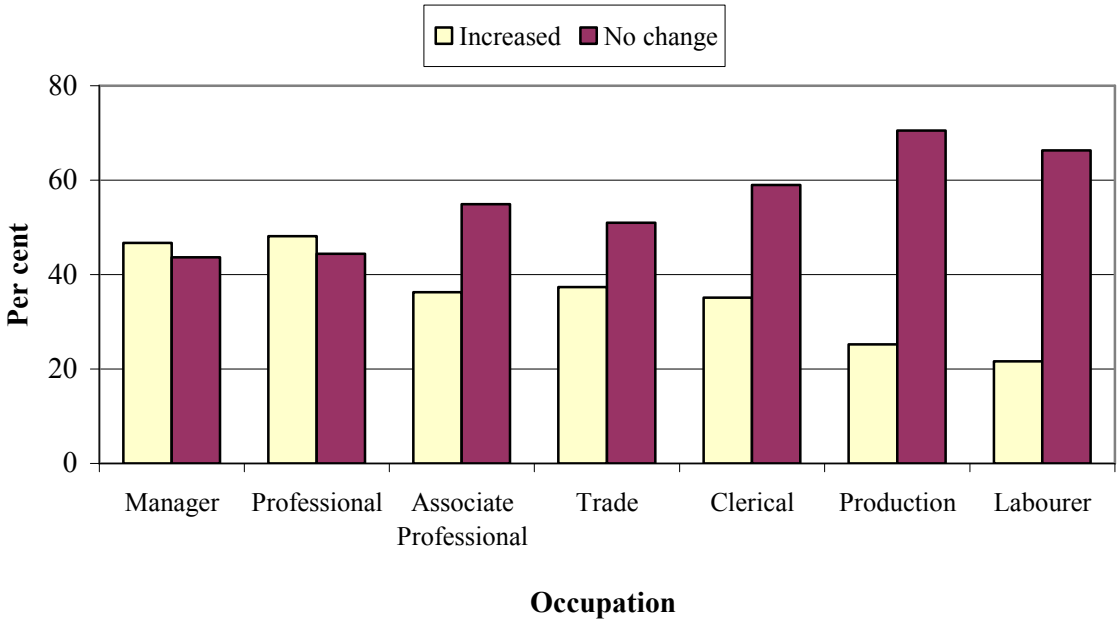
The internet has had a positive, rather than negative, impact on workers' ability to balance their work and home lives. Although 51% reported no change, the positive effect is evident in the 41% reporting that the internet has increased their ability to find work/life balance as opposed to 8% who felt that it had had the opposite effect (see Figure 38). The mobile phone, however, is felt to have had a greater impact on facilitating work/life balance than has the internet, with about 51% believing that the mobile helps them to balance their family and working lives (as described in section 8.3).

Figure 38: How much the internet has affected work/life balance



Analysis by occupation (Figure 39) reveals that professionals (45%) and managers (47%) have felt the greatest positive impact of the internet on their work/life balance, and are less likely than other occupational groups to perceive 'no change'. People in production (70%) and labouring (66%) occupations are much more likely than others to regard the internet as having made 'no change' to their ability to balance their work and home lives.

Figure 39: Internet has increased or not changed work/life balance (by occupation)



About 45% of workers aged 18-39 years report that the internet has increased their ability to balance their work and home lives, compared to between 34% and 38% for other ages.

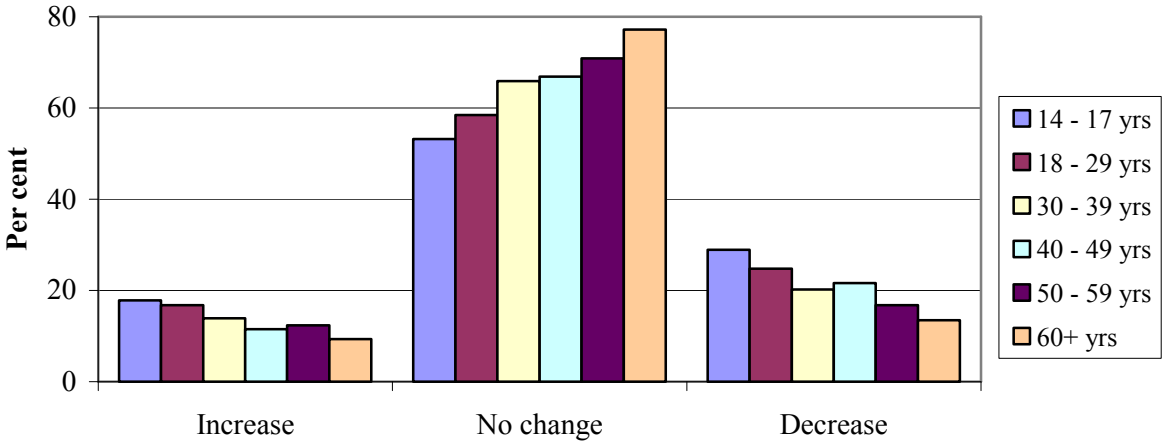
11.2 Perceived effect of internet on time spent with family and friends

All respondents were asked to rate 'To what extent has your use of the internet altered the amount of time you spend face-to-face with family and friends?' on a five point scale ranging from 'significant increase' to 'significant decrease'.

Sixty-six per cent of people, females (70%) more than males (62%), believe that the internet has not changed the amount of time they spend with family and friends. However, more people (21%) felt that the internet had decreased their time with family/friends than felt it had increased it (13%). Males (23%) are more likely than females (18%) to feel that the internet has decreased the quality of time spent with family and friends.

Analysis by age (see Figure 40) revealed that the older the person the more likely they were to feel that the internet had not altered the time they spent with family and friends. Younger people are more likely than others to feel that the internet has decreased their time spent with family/friends.

Figure 40: How much the internet has affected time spent with family/friends (by age)



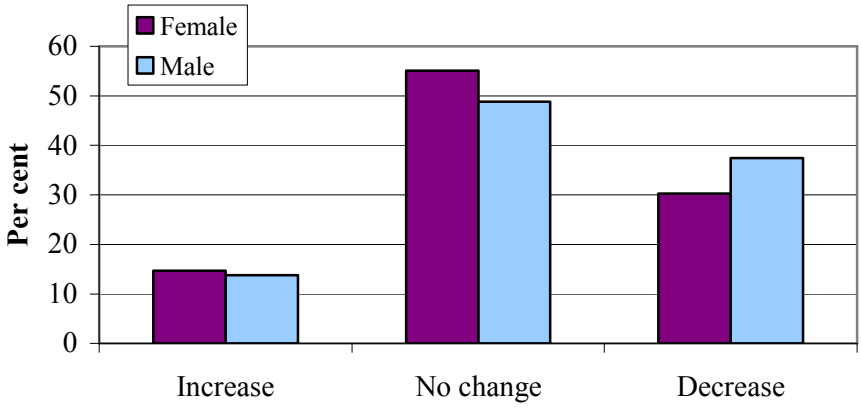
Effect on time spent with family/friends

11.3 Perceived effect of internet on time spent on "other pastimes"

All respondents were asked to rate 'To what extent has your use of the internet altered the amount of time you spend in other pastimes (such as TV viewing, reading, sport, social outings)?' on a five point scale ranging from 'significant increase' to 'significant decrease'.

Fifty-two per cent of individuals, females (55%) more than males (49%) (see Figure 41), feel that the Internet has not changed their time spent in other pastimes, while 34% feel that the internet has decreased their time for other pastimes.

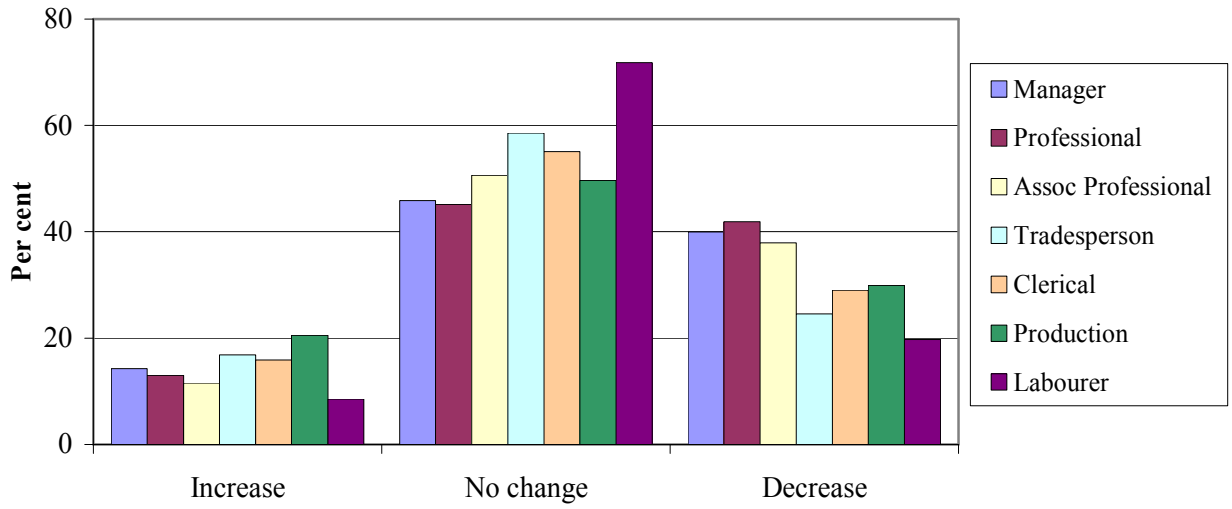
Figure 41: How much the internet has affected time spent in other pastimes (by gender)



Change in time on other pastimes

Figure 42 reveals that non-professionals (58%) are much more likely than other occupations (46%) to feel that the internet has made no change to the time they spend in other pastimes, whilst people in other occupations, dominantly managers and professionals (about 40%), are more likely to feel that the internet has decreased their time for other pastimes.

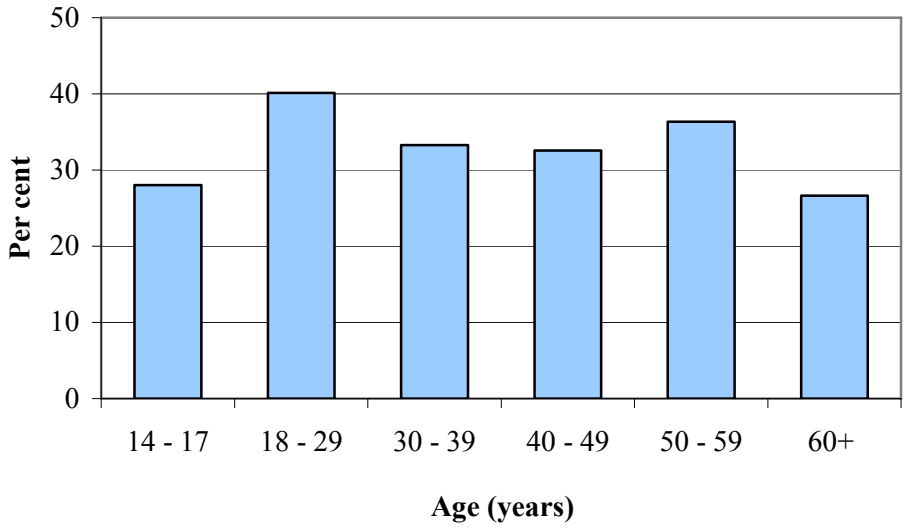
Figure 42: How much internet has affected time spent in other pastimes (by occupation)



Effect on time spent in other pastimes

People aged 18-29 years are the most likely (40%), followed by 50-59 year olds (36%), to feel that the internet has decreased their time spent in other pastimes; the least likely to feel this way are people aged 60 years or more (27%) (see Figure 43).

Figure 43: How much internet has affected time spent in other pastimes (by age)



Similar proportions (14%) of people felt that the internet had increased their time for both 'other pastimes' and family and friends, but more felt that it has decreased their time spent in other pastimes (34%) than felt it had eroded time spent with family and friends (21%). This leads us to the tentative conclusion that, in time-stretched lives in which using the internet has quickly become 'the norm', more people are willing to forego other pastimes than time with family/friends.

Enquiries to:
Professor Judy Wajcman
Research School of Social Sciences
Ph: +61 2 61258060
Fax: +61 2 61253051
E-mail: judy.wajcman@anu.edu.au
Copies available: www.amta.org.au