West Metro Fire Protection District
Nine-Month Trial Study of the 48/96 Schedule
11-1-2006

Background:

The West Metro Fire Protection District is located in the west and southwest suburbs of the Denver metropolitan area. With 15 fire stations and more than 310 uniformed personnel, West Metro provides fire and emergency medical services to an excess of 240,000 people over a 100-square mile area. In 2005, West Metro responded to 22,151 calls. West Metro maintains seven on duty ambulances and all apparatus are Advanced Cardiac Life Support (ACLS) as approximately 70% of responses are emergency medical calls. Engine 1 is West Metro's busiest engine running about 3,485 calls per year. Engine 15 has the lowest call volume with approximately 311 calls each year. West Metro is heavily involved in a variety of special operations including: Dive and Swift Water and Ice Rescue, Wildfire Operations, Technical Rescue (including the sponsorship of the Colorado Urban Search and Rescue Task Force 1), Hazardous Materials, Fire Investigations, Tactical Emergency Medical Services, and Special Events Medical Care.

Prior to 2006, West Metro line personnel worked a "Berkley" Schedule (day on, day off, day on, day off, day on and then four days off). In February of 2005 the Union Membership began formal discussions specific to the 48/96 work schedule. A committee was established to research the new schedule of 48 hours on duty followed by 96 hours off. The committee recommended a one year trial. The union membership then voted to conduct a trial of the new schedule with approval of 64% of the members voting. The Union Officials and the Administration requested the trial to the West Metro Board of Directors who denied the proposal by a 4-3 vote. The Union then brought the request to the 2006 contract negotiations and was successful in getting the trial implemented. Prior to the Trial, the Physician Advisor for West Metro, Dr. Peter Vellman of St. Anthony's Hospitals was contacted. Dr. Vellman recommended Dr. Allison Hawks conduct a study of the new schedule beyond what West Metro was able to track. Dr. Hawks completed her own research and gathered information from Dr. Neale Lange specific to sleep research. Please see the "Evaluation of the 48/96 Shift for West Metro Fire" by Dr. Allison Hawks and the "West Metro Fire Focus Group Report". In September of 2006 the Union voted to retain the schedule with an 86% approval.

The Data:

The District tracked injuries, vehicle accidents, exposures, complaints, damage reports, response times, corrective actions, and sick leave. Physical fitness scores and citizen feedback were both examined and showed no significant change between the two schedules. All data is relative to a nine-month period. Some historical data is provided as a percentage of the year and not broken down by month.

Injuries

Injuries were broken down into work comp. (directly related to work) and non work comp. (not directly related to work).

	2004	2005	2006
Work Comp. Injury	35	19	20
Non-Comp Injury	22	11	14

2006	1st Shift	2nd Shift	No Shift
Work Comp. Injury	8	7	5
Non-Comp. Injury	7	6	1

2006 showed an increase in the number of injuries relative to that of 2005 but a significant decrease relative to 2004. It should be noted that 2005 was an exceptional year for West Metro specific to low numbers of injuries and vehicle accidents. No significant relationship between the 1st and 2nd shift of the 48 hours was noted. No injury was found to be directly or indirectly related to fatigue. It is important to note that West Metro has seen dramatic improvement in injury prevention and injury recovery through the programs designed and implemented by the Safety Division and Wellness / Workers Compensation Manager. This has also resulted in insurance premium savings of over 1.1 Million Dollars over the last three years.

Vehicle Accidents

Vehicle accidents are specific to accidents involving West Metro vehicles and broken down into avoidable and un-avoidable. The Safety Captain at West Metro looks at each accident and makes an objective determination based on the investigation of each incident.

	2004	2005	2006
Total Accidents	25	17	19
Avoidable	21	13	12
Unavoidable	4	4	7

2006	1st Shift	2nd Shift	Administrative
Avoidable	3	8	1
Unavoidable	3	3	1

Avoidable vehicle accidents in 2006 were actually less than that of 2005 and 2004, however; the second shift of the 48 hours shows a significant increase relative to the first shift. It should be noted that all of the accidents in 2006 were minor in nature, non resulted in injury, nor were any found to be directly or indirectly related to sleep deprivation.

Exposures

Exposures include both medical exposures to communicable diseases as well as other exposures that can cause long term health issues such as asbestos or PCBs.

	2004	2005	2006
Exposures	14	11	12

2006	1st Shift	2nd Shift	Administrative
Exposures	5	5	2

Citizen Complaints

Citizen Complaints were divided as EMS related and all others. Historical data on complaints was limited at best until 2006 at which time they were aggressively tracked. The vast majority of citizen complaints were unfounded after being investigated.

	2005	2006
Complaints	31	42

2006	1st Shift	2nd Shift
EMS Related Complaints	16	26
Non-EMS Related Comp.	4	2

West Metro uses an internet based survey in order to get citizen feedback which is advertised through the billing for ambulance transports. In the first nine months of 2005 there were 70 responses and in the same time frame of 2006 there were 93 responses. Over 90 percent of all the surveys were overwhelmingly positive and no significant differences were noticed between the two years.

Damage Reports

Damage Reports are broken down into EMS and Non-EMS Related. Prior to 2006 the majority of damaged EMS equipment was not tracked.

	2005	2006
Total Damage Reports	11	28
Non-EMS Damage Reports	6	8

2006	1st Shift	2nd Shift	Administrative
Total Damage Rep.	10	14	4

The damage to EMS equipment relative to 2005 and 2006 is not a fair comparison as the records for 2005 are not accurate. The damage to Non-EMS equipment is a more reasonable comparison and 2006 did show a slight increase compared to 2005.

Response Times

Three different areas of average response times are noted. Turnout times are the time from alert to en-route, response time is from en-route to arrival, and on-scene time is from arrival until they clear the call.

	2005	2006
Ave. Turn-out Time	:57	:54
Ave. Response Time	3:56	4:05
Average On-scene Time	23:44	23:54

The turn-out times show improvement from 2005 to 2006, however; it should be noted that one of the organizations annual objectives specifically addressed the improvement of turn-out times. Response times were slightly slower which could be attributed to less aggressive driving. Initial concerns of personnel trying to clear scenes early due to fatigue proved not to be an issue according to the average on-scene times which went up slightly.

Corrective Actions

Corrective Actions include disciplinary reports specific to the performance or lack of performance by any employee. These only include formal disciplinary action.

	2005	2006
Corrective Actions	12	11

2006	1st Shift	2nd Shift	No Shift
Corrective Act.	2	3	6

The majority of corrective actions could not be identified to a Shift; these include actions off duty or long term performance issues. 2006 saw a slight decrease in disciplinary reports which was likely insignificant.

Sick Leave

In mid 2005 West Metro changed its procedure to allow employees to use sick leave for the care of sick family members. Had the schedule not changed, it was expected that sick leave use would have increased. In 2006 the procedure was changed to require that any employee using over 100 hours of sick leave in one year is now required to contact their Officer and District Chief anytime the leave is used. This procedure may have been a contributing factor to the decreased the use of sick leave but the possibility is unlikely.

	2004	2005	2006
Hours of Sick Leave	13,277	11,637	8,246

2006 saw a decrease in sick leave use by 29% when compared to the use in 2005 and a 38% decrease when compared to 2004. This improvement was directly related to a significant savings in overtime for the year as well as an increase in staffing levels.

Management:

All Chief Officers and Captains were required to provide written documentation specific to how the new schedule affects their responsibilities. With few exceptions the officers noted challenges in communications. Administrative Personnel found it very difficult to contact Line Personnel when their shifts fell on a Saturday/Sunday. The problem was even worse if the previous week included a holiday on that Monday putting their shift on a Sunday/Monday and then a Saturday/Sunday rotation. Scheduling Training and other activities became more of a challenge as well. Many Administrative personnel find themselves calling Line personnel at home during the week and also working more on weekends in order to complete timely communications. Most personnel have adjusted to this requirement and no significant issues have been noted.

Line Personnel change shifts ½ as often and they always relieve the same shift. Captains have started using other means of communicating with the opposing Lieutenants as they meet less frequently. Pass-Down Books, E-mail, and memo's are much more prevalent. The majority of Captains like the new schedule and all have found ways to communicate effectively.

West Metro has 12 Chief Officers not including the Fire Chief. Of these Chiefs, six are assigned to the Line and six are assigned to the Administration. An informal poll showed that six approved of the new schedule and six did not. Of the six that approved of the schedule, four were assigned to the Line. The Chief Officers all recognized the challenges in communication and shared a concern of personnel becoming fatigued during the 48 hour shift. The fatigue is presently managed by rotating personnel from busier units to slower units when their 1st Shift is overwhelming. In the first nine months of 2006 this was reported on only three occasions. Fatigue was considered significant when a member did not receive five hours of inactivity during the last 12 hours of the first shift. Officers are required to evaluate their crew members and identify those who might be fatigued and in turn notify the appropriate District Chief of the situation.

Membership:

The increase in the percentage of personnel wanting to change to the 48/96 schedule is impressive going from 64% before the trial to 86% after the trial. Many personnel were concerned about the effects on families and especially those families including children with special needs. It appears that those concerns were relieved during the trial period. Please see the report: "Evaluation of the 48/96 Shift for West Metro Fire" by Dr. Allison Hawks and the "West Metro Fire Focus Group Report". It should also by noted that some divorced employees had to take legal action in order to adjust their child visitation rights and felt significant hardship from having to do so.

Conclusion:

West Metro can only provide limited data in a nine-month period in regards to the schedule change to 48/96. The work of Dr. Allison Hawks and Dr. Neale Lange should be considered by

any agency researching this schedule change. Recognition of management rights and a good working relationship between labor and management are important in addressing concerns should this schedule change be considered.

Challenges to management including communications can be anticipated and reasonably overcome. Benefits to the fire department and citizens can be reasonably expected in the form of a significant decrease use in sick leave and a slight decrease in long term employee fatigue. As with any schedule change, some personnel may face hardship if they are dependent on their current schedule for activities such as child visitation or part time employment outside the fire service. The benefit to the employee with the 48/96 schedule is realized through less travel to and from work and more continuous days off. It can be argued that a benefit to the employee is also a benefit to the organization. At this time the administration recommends that the West Metro Line Personnel remain on the 48/96 Schedule.

St. Anthony Hospitals

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EVALUATION OF THE 48-96 SHIFT
FOR WEST METRO FIRE RESCUE

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Executive Summary

The following study was undertaken to assist West Metro Fire Rescue with evaluating its shift change to 48-96 (48 hours on, 96 hours off), which was instituted January 1, 2006. The purpose of the information gathered was two-fold: 1) to assist West Metro Fire Rescue with the decision whether to continue the shift; and 2) to conduct research and provide information to the general EMS community on the effects of the 48-96.

Surveys, sleep diaries, and focus groups were used in the assessment.

Key findings pertaining to on-line personnel are as follows:

- The members slept more on average post change.
- The increased sleep was distributed throughout both ON and OFF shifts.
- Members slept fewer hours the night before a shift began in anticipation of getting up to go on shift and the new rotation minimizes this.
- At baseline, the majority of respondents were satisfied with their job, and this did not change appreciably with the 48-96; instead views regarding job satisfaction (and in some cases dissatisfaction) became stronger.
- On average, the respondents reported a low degree of dissatisfaction with patient care; this dissatisfaction did not increase on the 48-96, and in fact, showed a trend toward being less.
- Members felt that when compared to the old shift, the 48-96 shift interfered significantly less with leisure activities, household activities, and non-household activities like going to the bank.
- Over half (52%) of the members thought that the overall advantages of the old schedule outweighed its disadvantages, however, a significantly greater proportion of members (68%) felt that the overall advantages of the 48-96 outweighed its disadvantages.
- Use of caffeinated beverages and alcohol remained the same after the change.
- The majority of families liked the 48-96. They noted that the shift made it much easier to do special projects around the home, participate in leisure time activities, take personal time for themselves, and spend time together as a family.

- The majority of families felt that the 48-96 shift did not adversely affect their time together as a family or as a couple, nor did it put a strain on their relationship or their children.
- Very few families reported being adversely affected by the shift change with regard to changing to less satisfactory child care arrangements, elder care arrangements or visitation rights.
- Not all the members like the 48-96 shift and it has made accomplishing household tasks and taking care of children more difficult for some families.

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Background

The following study was undertaken to assist West Metro Fire Rescue with evaluating its shift change to 48-96 (48 hours on, 96 hours off), which was instituted January 1, 2006. The purpose of the information gathered was two-fold: 1) to assist West Metro Fire Rescue with the decision whether to continue the shift; and 2) to conduct research and provide information to the general EMS community on the effects of the 48-96. Only the professional aspects of the members' lives were included in the formal research and members were required to provide consent. The St. Anthony Hospitals Institutional Review Board reviewed and approved the research proposal.

Methods

The methods are briefly outlined in Table 1 below; more of the technical details can be found in Appendix A. Surveys (Appendices B and C), sleep diaries, and focus groups (separate report) were used in the assessment. All of the on-line personnel employed as of December 1, 2005 were given three opportunities between April 1 and August 31, 2006 to comment on the shift change. The baseline survey and sleep diary were mailed to 314 uniform employees in December 2005. These uniform employees were identified by West Metro Fire Rescue and included on-line personnel as well as employees in administrative positions. Subsequent surveys and diaries were only mailed to on-line personnel and any other employee in an administrative position who desired to be in the study.

Since the response to the first work-related questionnaire was less than optimal, the decision was made to allow members to respond anonymously.

Table 1. Evaluation methods

Aspect of member's life assessed	**Work-related questionnaire administered to on-line personnel (Dec '05, April '06, July '06).**	**Sleep diary for one week (Dec '05, April '06, July '06)**	**Family Survey (July 2006)**	**Focus Groups (August 2006)**
Job Satisfaction	✓			
Burn-out	✓			
Number of hours of sleep		✓		
Daytime sleepiness	✓			
Ability to accomplish activities outside of work	✓		✓	
Quality of family life			✓	✓

Results

RESPONSE RATES

A detailed description of the response rates can be found in Table 2 located in Appendix D**.** The total response rate for the work-related questionnaires submitted anonymously plus those who consented from on-line personnel was as follows: 59.5% in December 2005, 40.9% in April 2006, and 57.9% in July 2006. A total of 79 members submitted completed questionnaires for all three time periods (29.3%)

The sleep diaries were returned at a rate of 40.5% in December 2005, 36.4% in April 2006, and 48.0% in July 2006. Approximately 25% of on-line members submitted sleep diaries for all three time periods.

The family survey had the best response with 65.1% of the families replying.

FINDINGS ABOUT SLEEP

Number of hours of sleep pre and post shift change for on-line personnel

Data were analyzed for 69 on-line members who submitted a completed sleep diary in December 2005 and July 2006[1] (see Appendix A for more of the methodological details). The average total hours slept per week during July 2006 was greater (49.7) than in December (46.1), and this difference was statistically significant (Figure 1).[2,3] The increase in July was not due solely to members getting more sleep on their "off" times; the members also reported longer hours of sleep during the times they were "on" shift (Figure 2). On average, members reported getting 5.9 hours of sleep/night during a shift in December compared to 6.4 hours/night during July 2006 ($p<0.01$). During off times, members reported an average of 7.1 hours/night in December and 7.4 hours in July ($p<0.01$).

The reason for the increased number of sleep hours on shift is not clear. When the number of times awakened during the night was examined, members reported statistically significantly less awakenings during July (Figure 3). Unfortunately we did not include the reason(s) for the awakenings on the sleep diary, e.g., was the member awakened because of a call or awakened because he needed to void, nor did we ask which station the member was located in so it was not possible to correlate the number of awakenings with call volume, and this is a source of potential bias. In speaking with Gary Armstrong, Chief of Operations, the call volumes in December (2175) and July (2173) were almost identical. Figure 4 shows the average number of hours slept per night for all members who submitted a diary in July 2006. For the group, there is very little fluctuation in the number of hours slept per night during the off times with the exception of the night preceding the onset of a shift. The members reported an average of 6.9 hours of sleep compared to 7.4 to 7.6 hours on other off nights. According to Dr.Lange (the sleep medicine specialist), this pattern represents

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the anticipatory effect of having to get up for the shift the next day and is an expected reaction.

Number of hours of sleep pre and post shift change for administrative personnel

Very few administrative personnel elected to take part in the study. Ten administrators submitted a sleep diary in December 2005, and the average (mean[4]) total hours slept during this time period was 44.4 hours (median[4] 44.25). Four administrators submitted a sleep diary for July 2006, and the average (mean) total hours slept was 46.7 (median 46.25).

It is not possible to compare the average total hours slept between the on-line personnel and the administrators because so few administrators took part in the study, and because of the difference in the methods of comparison (one group was matched, the other was not).

Daytime sleepiness in on-line personnel

Excessive daytime sleepiness was assessed by the Epworth sleepiness[5] scale that was included in the work-related questionnaires. A score greater than or equal to 10 is considered excessive daytime sleepiness from any cause. To assess this condition, we used paired data from 107 individuals who completed the questions in December and July. In this group, 43 individuals (40.2%) had excessive daytime sleepiness as measured by the Epworth sleepiness scale in December and this decreased to 39 (36.4%) in July (Figure 5). Although this difference is not statistically significant,[6] it is in the right direction of fewer individuals reporting a score of 10 or higher.

Daytime sleepiness in administrative personnel

The proportion of administrative personnel who scored 10 or higher on the Epworth sleepiness scale in December was 50% (5/10), and this value did not change in July: the individuals who scored 10 or higher in December also scored 10 or higher in July.

GENERAL JOB SATISFACTION, SATISFACTION WORKING WITH PATIENTS, AND SATISFACTION WITH SHIFT

The work-related questionnaire asked the on-line personnel for their opinions and feelings on the following items:

- Their satisfaction with the job in general, and their observations about their co-worker's job satisfaction;[7,8]
- The satisfaction they get from working with patients;[9]

- How much the shift they're currently working interferes with leisure time, household and non-household activities;[7,8]
- Whether the advantages of the current shift system outweigh the disadvantages;[7,8]
- How their spouse/partner feels about the current shift.[7,8]

The demographics of the respondents who answered the work-related questionnaire were similar across the three time periods with the exception of the proportion of paramedic technicians in each group. In general, the consenters had a greater representation of paramedic technicians than the anonymous group. This difference in distribution of paramedic technicians was controlled for in the analysis of dissatisfaction with patient care ("burn-out") by examining the responses of paramedic technicians separately from those of non-paramedic technicians.

Table 3. Demographics of on-line members who responded to questionnaires, by time period, and by consent status

	December 2005		April 2006		July 2006	
	Consented (n=122)	Anonymous (n=29)*	Consented (n=70)*	Anonymous (n=26)*	Consented (n=113)	Anonymous (n=42)
Age, median	38.0	36.0	39	41	38.0	38.0
Gender, % male	98%	100%	97%	100%	98%	100%
Paramedic Technician (%)	45.1%	37.9%	50.0 %	20.0 %	45.1%	32.6%
Roundtrip commute, median (in minutes)	The data from this survey was not used because the question was unclear as to whether it referred to roundtrip or one-way.		50 min	40 min	45 min	45 min
Years working current shift, mean	11.6 years	11.9 years	This question was not asked on follow-up surveys because of the shift change.			

* These values do not match the values in Table 2 because surveys that were received after the cut-off date were excluded from these analyses so that the time periods would be clearly delineated. For example, December questionnaires returned in February or March 2006 were not used in the December analysis because the responses may have been influenced by the 48-96 schedule.

Overall Job Satisfaction

Overall job satisfaction was determined by a series of five statements that members were asked to respond to using a 7 point scale ranging from Disagree Strongly to Agree Strongly.

At baseline in December 2005, the majority of respondents indicated that they were satisfied with the job (Figure 6, Table 4), the kind of the work they do in this job (Figure 7, Table 4) , and did not frequently think of quitting (Figure 8, Table 4).

Members also indicated that they thought others were also satisfied with the job (Figure 9, Table 4), who did not often think of quitting (Figure 10, Table 4).

When assessed six months later in July, the results were not substantially different or statistically significant, however, there was movement towards stronger views. The proportion of people who strongly agreed or agreed with a statement increased, and the proportion who strongly disagreed or disagreed also increased, but remained less than 3%. Overall, however, the majority of individuals still said they were satisfied with their job and the work they do and were not thinking of quitting (Table 4).

Table 4. Job satisfaction, December 2005 vs. July 2006

	December 2005 (n=152) **Percent who indicated:**		**July 2006 (n=156)** **Percent who indicated:**	
Statement	Strong **agreement** or agreement with statement	Strong **disagreement** or disagreement with statement	Strong **agreement** or agreement with statement	Strong **disagreement** or disagreement with statement
Generally speaking, I am very satisfied with this job	86.9%	0.7%	91.0%	1.9%
I frequently think of quitting this job	2.0%	83.4%	2.6%	86.4%
I am generally satisfied with the kind of work I do in this job	88.2%	0.7%	92.4%	1.2%
Most people on this job are very satisfied with the job	78.3%	0.8%	80.7%	2.6%
People on this job often think of quitting	0.7%	78.3%	0%	81.4%

Satisfaction of working with patients

Similar to assessing job satisfaction, satisfaction of working with patients was assessed by presenting members with a series of questions that they were asked to react to on

a 5 point scale. Since patient contact differs between paramedic technicians and non paramedic technicians, the responses were calculated separately for these two groups.

In general, the trend showed that for both groups the difficulty of working with patients (Figure 11), the amount of energy required to work with patients (Figure 12), and just being tired of working with patients (Figures 13 – 15) decreased over time indicating a tendency towards less burn-out, however, none of the changes were statistically significant.[10] The Copenhagen Burnout Inventory[9] defines client burnout as "a state of prolonged physical and psychological exhaustion, which is perceived as related to the person's work with clients;" in this case, the clients are patients. The average score measuring dissatisfaction with caring for patients also decreased from December to July (Figure 16), thus supporting a tendency to less "burn-out". The one score that did not change for paramedic technicians was the degree of frustration of working with patients (Figure 17).

Overall satisfaction with shift

Members were asked how much the current shift system they were experiencing at the time interfered with leisure, household (going to grocery, etc.) and non-household activities (going to physician, bank, etc.). On a scale of 1 (not at all) to 5 (very much), members reported an average score of 2.3 for leisure time and household activities and 1.9 for non-household activities at baseline in December. All of these scores showed a statistically significant decrease[9] from December to July thus indicating less interference of these activities by the 48-96 shift system (Figure 18).

Figure 19 shows the results for members' feelings about whether the advantages of the shift system they were experiencing at the time outweighed the disadvantages. In December, 52% of the respondents indicated that the advantages of the old shift system definitely outweighed the disadvantages. In April and then in July, at least 68% of the respondents said the advantages of the 48-96 definitely outweighed the disadvantages. The proportion of respondents who said that the advantages of the old shift system definitely outweighed its advantages was small (0.7%), but this proportion increased to 5.8% when considering the advantages and disadvantages of the 48-96. This pattern of change was statistically significant with $p=0.01$.

Spouse/partner support

Members were asked how their spouse/partner felt about them working the current shift they were experiencing. In contrast to the results suggested by the family survey (presented in next section), the members reported decreased spousal support with the 48-96.

In December, 88.9% of the respondents indicated that their spouse/partner was extremely or fairly supportive of the shift they working; in July, this proportion was 83.1% (Figure 21). In contrast, the proportion of respondents citing that their spouse was fairly or extremely unsupportive increased from 3.7% to 11.9%. The pattern of change over time approached statistical significance with $p=0.06$.

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USE OF CAFFEINATED BEVERAGES, CIGARETTES, ALCOHOL

Consumption of caffeinated beverages by respondents did not increase during the time under study (Table 5). Median reported alcohol use did increase from 2 drinks to 3 drinks per week, but this was not statistically significant.[10] It was not possible to compare cigarette smoking between time periods because so few respondents reported smoking.

The reason caffeinated beverage intake was assessed was to evaluate if members were "medicating" themselves with caffeine to decrease the effects of possible sleep deprivation on the 48-96 and this does not appear to be the case (the effect of the 48-96 schedule on sleep was not known prior to this study). Alcohol use was assessed for a similar reason. The effect(s) of the 48-96 schedule were not known, and it was unknown whether members might increase their alcohol intake to relax off shift (either to deal with increased stress, decreased sleep, etc.).

Table 5. Use of caffeinated beverages, cigarettes and alcohol, December 2005, vs. July 2006

	December 2006	July 2006
Cups of caffeinated drinks/day, median	2	2
Number of cigarettes/week, median	Very few respondents reported smoking cigarettes so this value is not statistically valid	
Number of alcoholic drinks/week, median	2	3

MEMBER COMMENTS ABOUT 48-96

Members were presented with opportunities to submit comments on the April and July work-related questionnaires. These comments can be found at the end of report, in Figures 51a and 51b. In general, the comments were positive during both time periods. The two most common comments during both time periods were more time with family, and more sleep/rest.

IMPACT ON FAMILY

Focus Groups

The focus groups were facilitated by JVA Consulting at the request of St. Anthony Central Hospital, and the findings are being submitted in a separate report. St. Anthony Central staff did not attend the focus groups.

Family Survey

Demographics of respondents

The family survey was completed by 175 families, 70% (123) of which reported having at least one child under the age of 19, the median number of children being 2. Slightly more than half of the families had young children less than eleven years of age. Approximately 25% of the families did not have any children and the other 5% had grown children.

The majority of the families that responded (86%) had two or more adults in the household; 6.9% indicated one adult.

The average (median) commuting time for West Metro members who responded to the family survey was 40 minutes.

Ability to accomplish activities at home and with children since institution of shift change

Families were asked to rate how much easier or difficult it was for them to accomplish a variety of household activities since the shift change. These activities included the following:

- Getting daily household tasks done.
- West Metro Member: Working at paid job(s)
- Spouse/Partner - Working at paid job(s)
- Shopping for necessities.
- Handling financial matters.
- Maintaining safety/security of your home.
- Taking personal time for yourselves (getting a hair cut etc.)
- Maintaining automobile
- Taking care of member's health.
- Taking care of spouse/partner's health.
- Taking care of elder's health.
- Taking care of pets.
- "Having a social life." Visiting with friends, etc.
- Doing volunteer work.
- Doing special projects around the home.
- Participating in leisure time activities.
- Spending time together as a family.
- Taking care of elder at home.
- Arranging for child care.
- Taking care of children at home.
- Taking care of child(ren)'s health.
- Ensuring children do schoolwork.
- Supervising children's behavior and activities at home.
- Having children take part in after-school activities.
- Participating in activities at your child (ren)'s school (school events, PTA, parent-teacher conferences).
- Participating in child(ren)'s extra-curricular activities like Boy Scouts or Girl Scouts.

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The results are shown in Figures 21-50. For all the tasks, there were a greater number of families who indicated that it was "about the same," "somewhat easier," or "much easier" to accomplish the activity with the 48-96 shift than it had been during the previous six months. On average, there were 20 or fewer families per task that found it "somewhat more difficult" or "much more difficult" to accomplish the task with the 48-96 shift.

There were some activities that the majority of families indicated were either somewhat or much easier to accomplish with the 48-96 and these included: doing special projects around the home (Figure 34), participating in leisure time activities (Figure 35), taking personal time for themselves (Figure 36), and spending time together as a family (Figure 37).

Child care arrangements

Families were asked if they had to change who provided child care for their children with the onset of the 48-96. Five (5) families responded "Yes." Two of the five families said that the new arrangements were as satisfactory to them as the previous ones. Three families said they were not; the arrangements were less satisfactory because they resulted in less time for the child and member to be together, child care had to be added when none was needed previously or another day(s) of child care had to be added.

Elder care arrangements

Only 1 family indicated that they had to change who provided care for their parent or older adult with the onset of the 48-96, and the arrangement was as satisfactory to them as the prior arrangement had been.

Visitation rights

Thirty-seven families answered the question about amending visitation rights since the onset of the 48-96. Six of the 37 families (16.2%) said that they did have to amend their visitation rights, and all but one of these families said that the arrangements were as satisfactory, or in the case of one family, better than the ones they had previously. The arrangement that was not as satisfactory resulted in the member being able to spend less time with the child.

Combining work and family

The final aspect of family life that members and their families were asked to comment on was whether the 48-96 schedule affected their time together as a family. Families were presented with the following five statements and asked to indicate whether the statement was "Completely Untrue," "Mostly Untrue," "Equally True and Untrue," "Mostly True," or "Completely True ":

- The 48/96 schedule creates a strain for our (my) children;
- Because of the 48/96 schedule, our (my) family time is less enjoyable;
- The 48/96 schedule leaves us (me) with too little time to be the kind of parent we (I) want to be;
- The 48/96 schedule leaves us (me) with too little energy to be the kind of parent we (I) want to be;
- The 48/96 schedule creates a strain on our marital (partner) relationship.

The most common response to all of these statements was, "Completely Untrue," (Figures 46-50).

FAMILY COMMENTS

The majority of the comments submitted on the family survey were positive in regard to how the 48-96 shift has affected members' families. See Figures 52a and 52b.

Discussion including Limitations

Although the response to the work-related surveys was not as high as hoped, the results from these surveys, sleep diaries, the family survey, and the comments are relatively consistent, thus contributing to the overall validity of the findings. There are two major statistically significant findings that emerged from the evaluation: 1) The on-line members slept more on average post change; 2) the majority of on-line members who responded reported significantly less interference of the 48-96 schedule with their personal lives and were able to spend more time with their families/friends, etc. In addition, the findings do not suggest that the 48-96 schedule lead to increased job dissatisfaction or "burn-out" from working with patients. It was not possible to evaluate how the 48-96 schedule affected administrative personnel because of the low participation rate and the difficulty of interpreting their answers on the questionnaires because most of the respondents did not change shifts.

It is important to note that there may have been other changes at West Metro Fire Rescue that could account for the results, e.g., the bond issue. However, study data were collected in April before the bond issue was resolved, and differences (from December) were noted at that time, and these differences persisted into July.

One of the concerns voiced by some members was that some on-line personnel might try to skew or exaggerate the results to meet their personal agendas. It is unlikely that the observed findings are due to a group of members exaggerating their answers to make the results appear stronger or larger than they actually are. When the distribution of change was analyzed, the vast majority of respondents (90%), only changed their answers one or two categories, which would be expected. For example, if someone selected a "2" in December regarding how much

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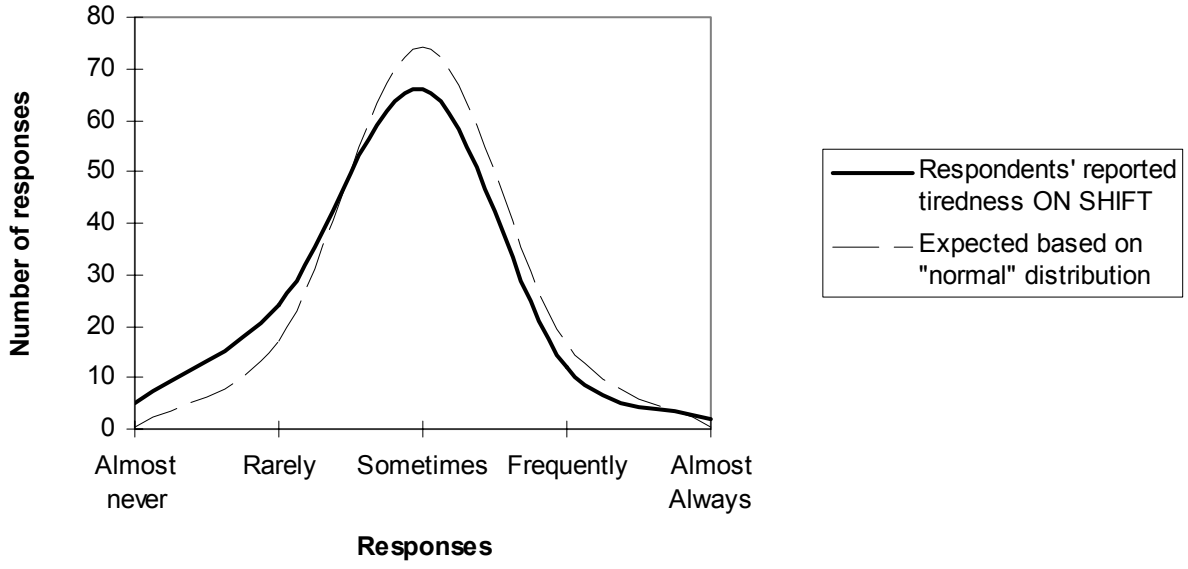
≤ = less than or equal to

the then current shift system interfered with their leisure time, they were more likely to select a "1," "2," or "3" on repeat surveys, not a 5.

In addition, two survey questions were included to assess how honestly respondents were approaching the questions. These questions included "Do you ever feel tired ON SHIFT?", and "Do you feel tired on YOUR TIME OFF?" Realistically, everyone feels tired sometimes, and very few individuals chose the extreme answers of "almost never" or "almost always." This is consistent with a normal distribution or "bell curve." Shown below are the respondents' answers compared with what would be expected with a normal distribution. As can be seen, the two curves are very similar. This general pattern was seen in the pre assessment of both questions, and the April assessment of both questions. These two questions were not asked in the July survey.

Frequency of Answers to APRIL question: "Do you ever feel tired ON SHIFT?" compared with the expected frequency of responses in a "normal" distribution.



Finally, the statistical methods used (nonparametric tests) depend less on extreme answers and make it more difficult to find statistically significant differences so that if a statistically significant difference is found (like in this study), one can be fairly certain that it is a true difference and not just due to chance.

There are limitations to the study. As mentioned above, the study did not specifically assess the effects of the 48-96 on the administrative personnel, nor was the effect on crew interaction specifically examined, and several members made comments about this. Presumably, however, members took this aspect into account when they answered the question about the relative advantages vs. disadvantages of the 48-96, and when they voted. It is also possible that the effects of the 48-96 may change over time as may people's opinions. We did not formally

collect information in September, but the members voted to retain the 48-96, thus adding to the total experience (9 months).

Another limitation is that the results regarding the number of awakenings on the sleep data may be biased because we did not ascertain the source of the awakening (i.e., was it call related) and therefore we can not control for the number of awakenings in comparing data from two time periods.

Approximately 40% of the on-line membership did not respond to a questionnaire, and 50% to 60% did not turn in a sleep diary. With this kind of a response, one always wonders if the experience of the non-responders is similar to the responders, however, given the membership's 86% vote to retain the schedule, this is less of a concern with this group.

Finally, the purpose of this study was to evaluate the effect of the 48-96 on a population of firefighter/paramedics, and the results are presented for the group as a whole. It is clear that for some members the schedule change was difficult both personally and professionally, and the results as presented are not intended to minimize or dismiss these difficulties.

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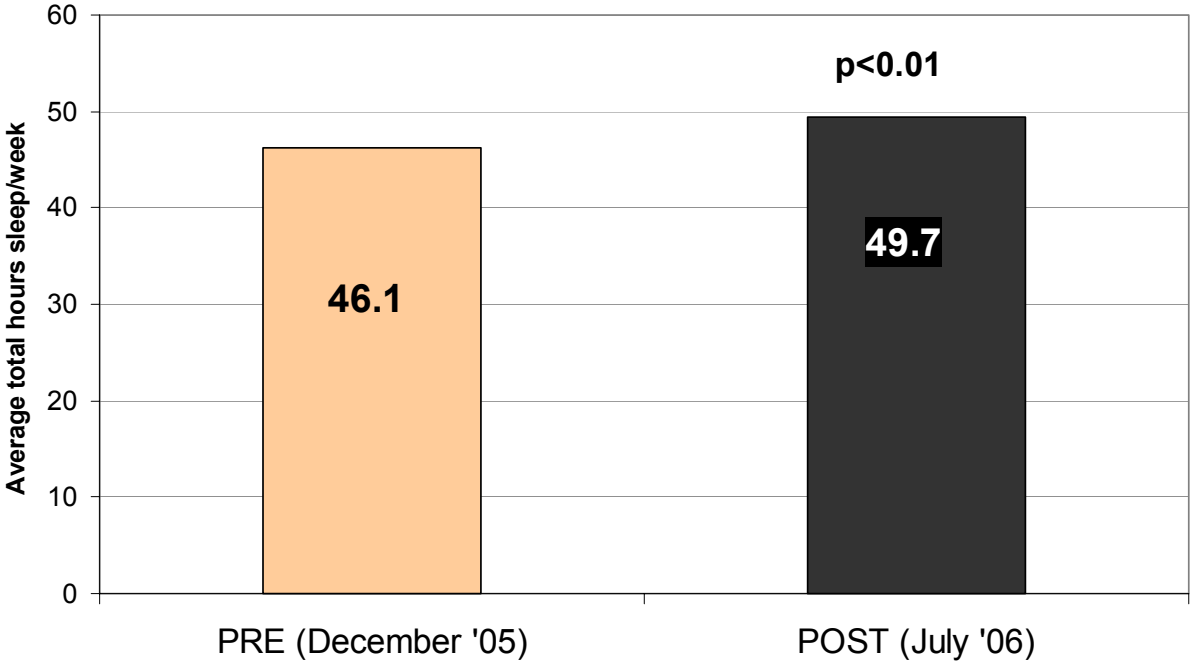
CONCLUSIONS

- The members slept more on average post change.
- The increased sleep was distributed throughout both ON and OFF shifts.
- Members slept fewer hours the night before a shift began in anticipation of getting up to go on shift and the new rotation minimizes this.
- At baseline, the majority of respondents were satisfied with their job, and this did not change appreciably with the 48-96; instead views regarding job satisfaction (and in some cases dissatisfaction) became stronger.
- On average, the respondents reported a low degree of dissatisfaction with patient care; this dissatisfaction did not increase on the 48-96, and in fact, showed a trend toward being less.
- Members felt that when compared to the old shift, the 48-96 shift interfered significantly less with leisure activities, household activities, and non-household activities like going to the bank.
- Over half (52%) of the members thought that the overall advantages of the old schedule outweighed its disadvantages, however, a significantly greater proportion of members (68%) felt that the overall advantages of the 48-96 outweighed its disadvantages.
- Use of caffeinated beverages and alcohol remained the same after the change.
- The majority of families liked the 48-96. They noted that the shift made it much easier to do special projects around the home, participate in leisure time activities, take personal time for themselves, and spend time together as a family.
- The majority of families felt that the 48-96 shift did not adversely affect their time together as a family or as a couple, nor did it put a strain on their relationship or their children.
- Very few families reported being adversely affected by the shift change with regard to changing to less satisfactory child care arrangements, elder care arrangements or visitation rights.
- Not all the members like the 48-96 shift and it has made accomplishing household tasks and taking care of children more difficult for some families.

Figures

Figure 1. Total hours sleep per week, on-line personnel, December '05 vs. July '06 (n=69)



KEY to symbols: < = less than
≤ = less than or equal to

Figure 2. Average number of hours sleep per night, on-line personnel, on and off shift, December '05 vs. July '06 (n=69*)

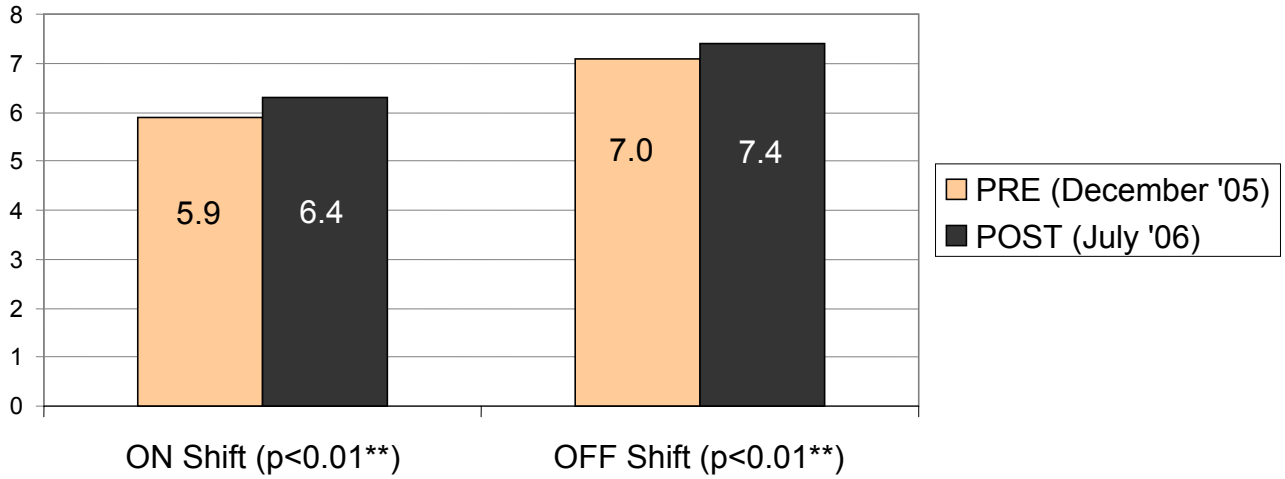
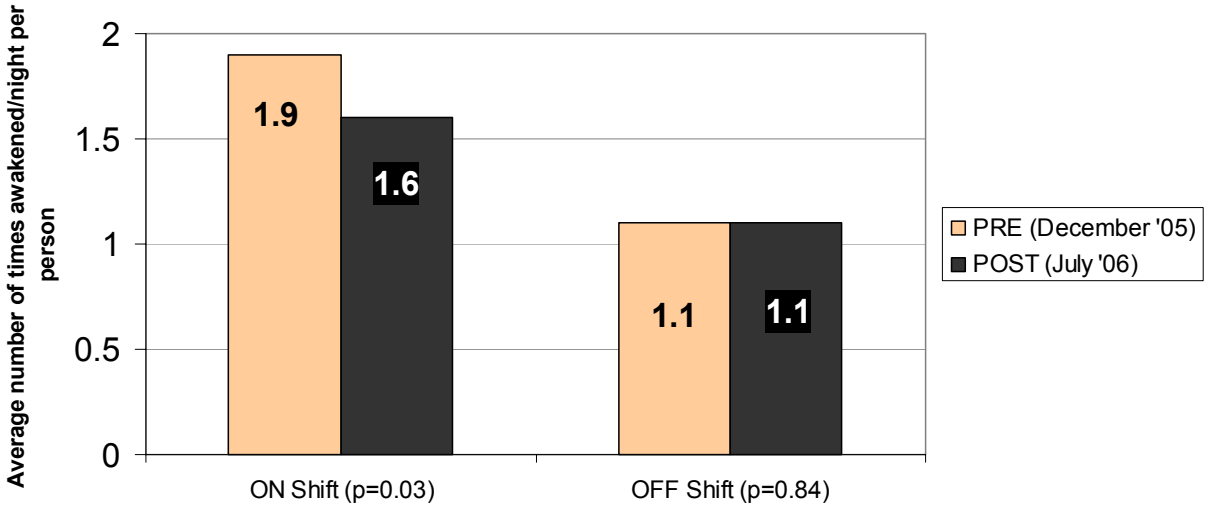


Figure 3. Average (mean) number of times awakened during night, on-line personnel, December '05 vs July '06



KEY to symbols: < = less than
≤ = less than or equal to

Figure 4. PATTERN of sleep: Average (mean) number of hours slept, on-line personnel, by shift status, July 2006 (n=129)

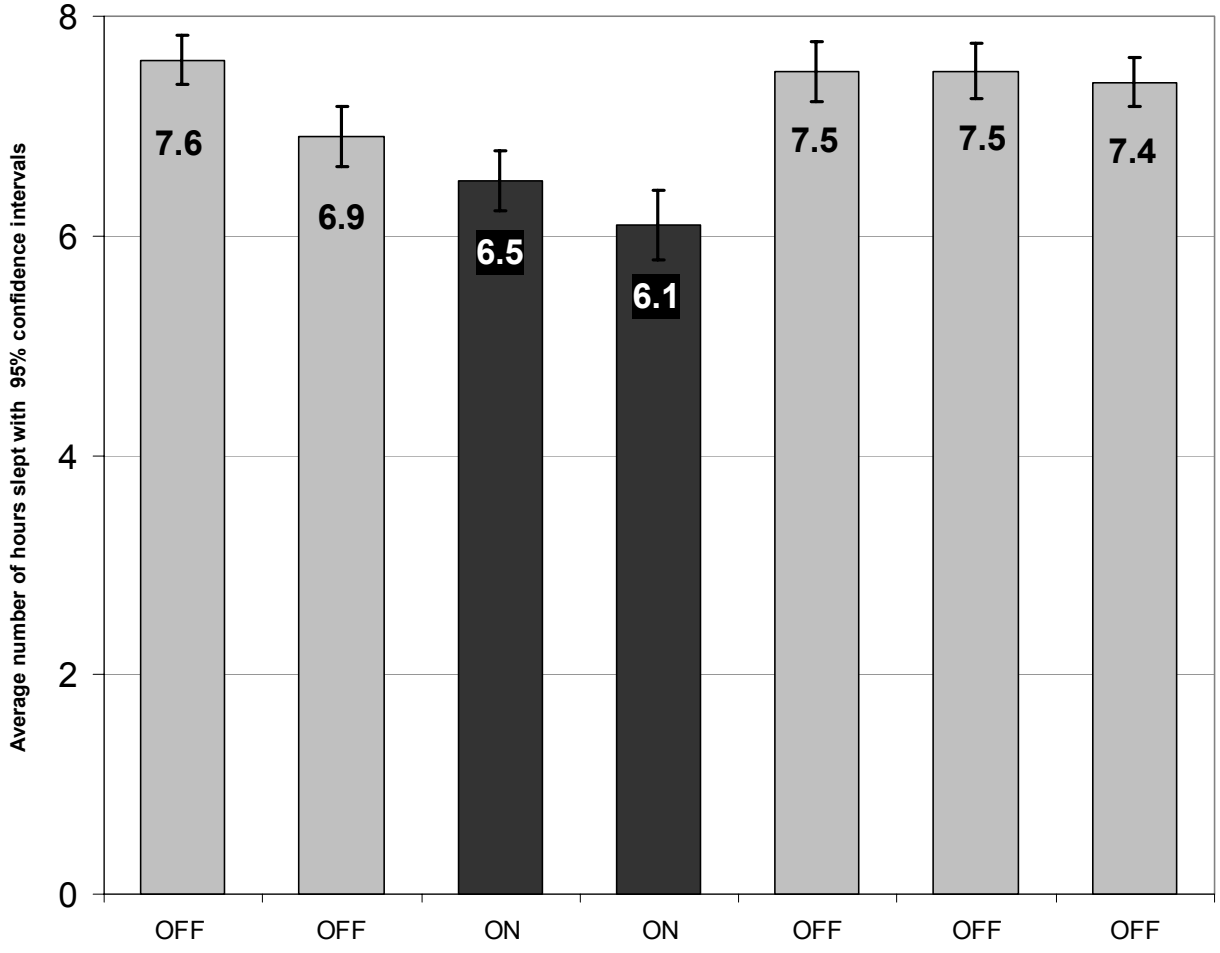
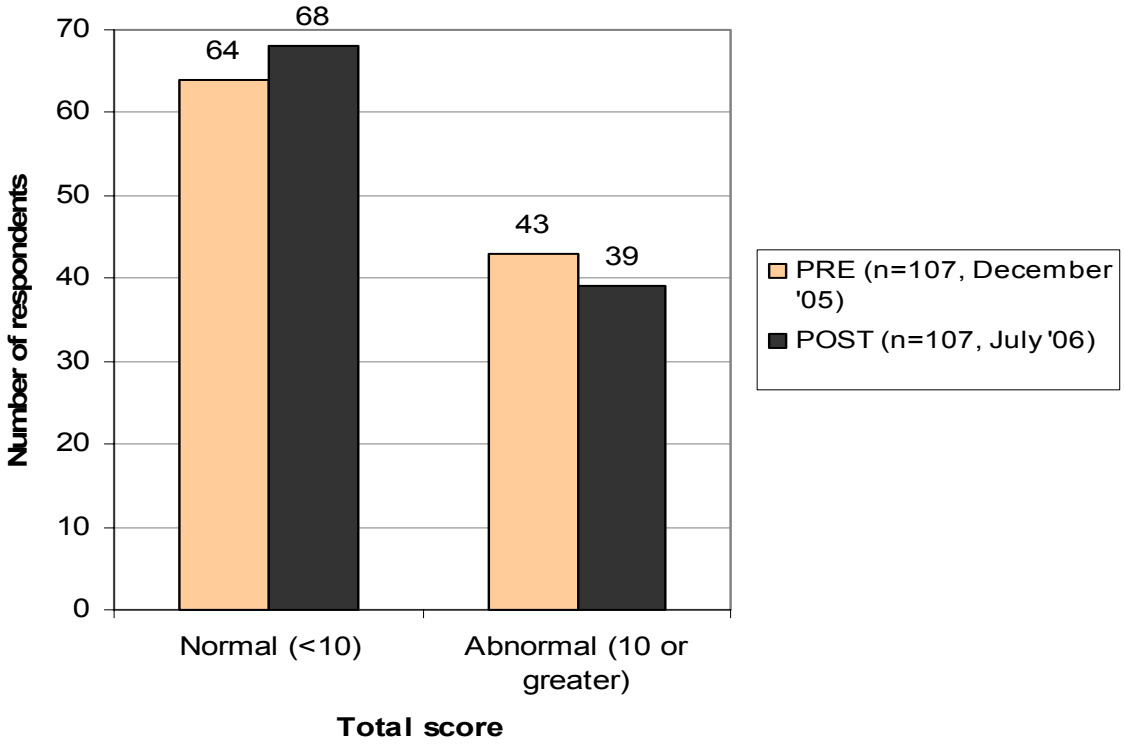
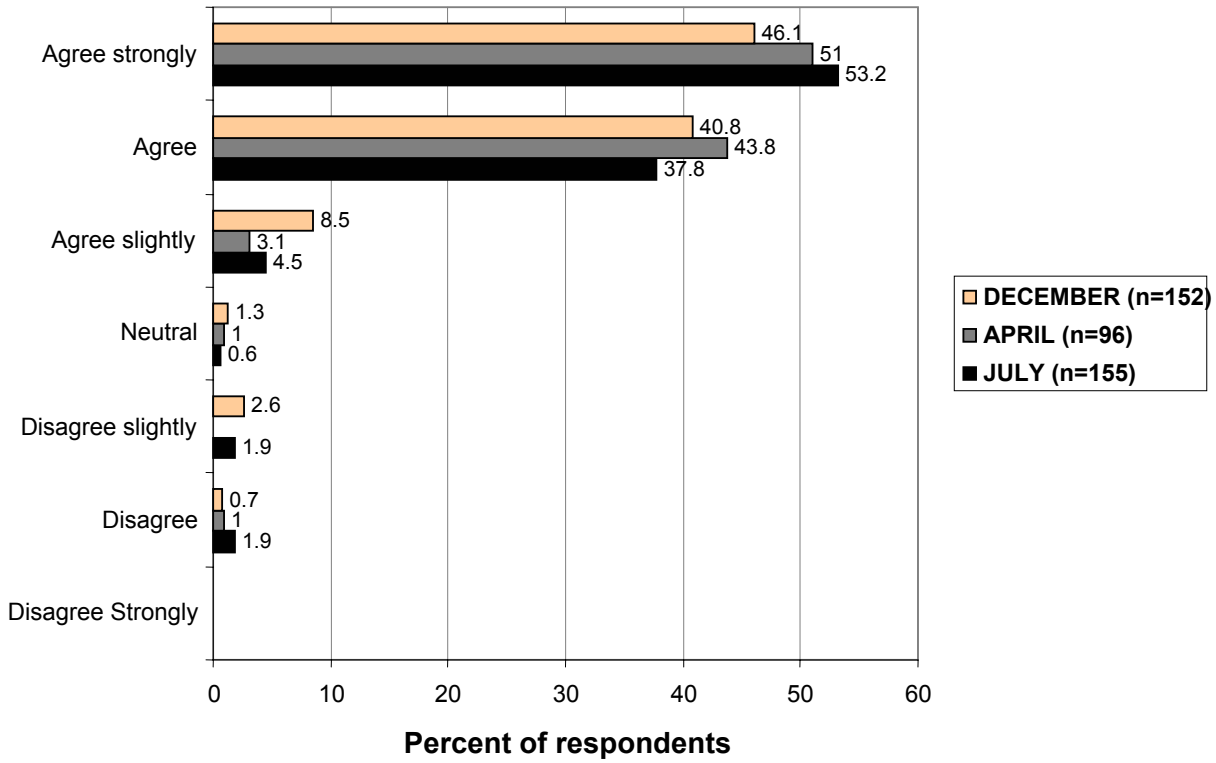


Figure 5. Epworth sleepiness scores, on-line personnel who submitted data in December '05 and July '06



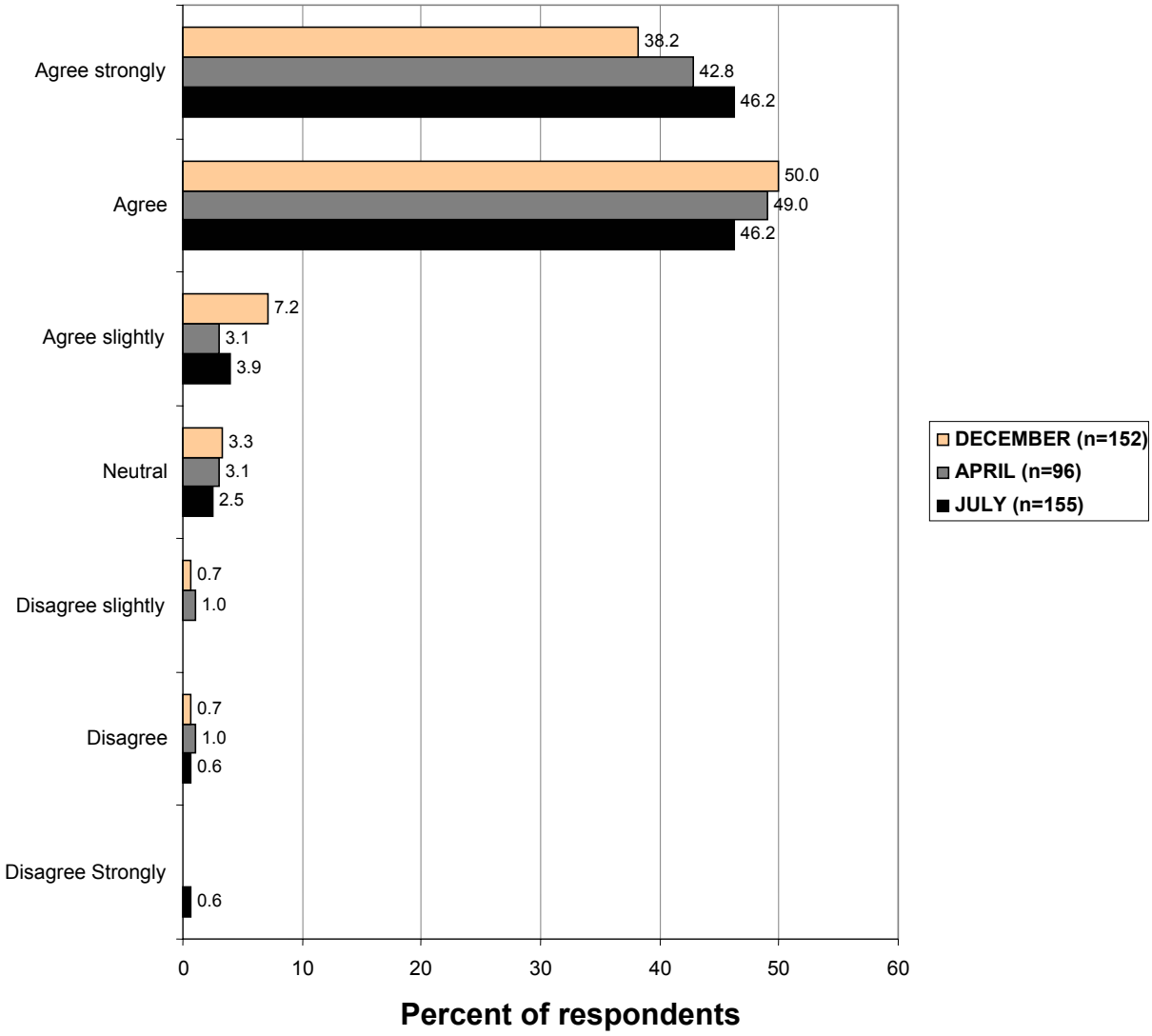
KEY to symbols: < = less than
≤ = less than or equal to

Figure 6. JOB SATISFACTION: "I am very satisfied with this job."



Statistical significance of differences between time periods: p=0.29

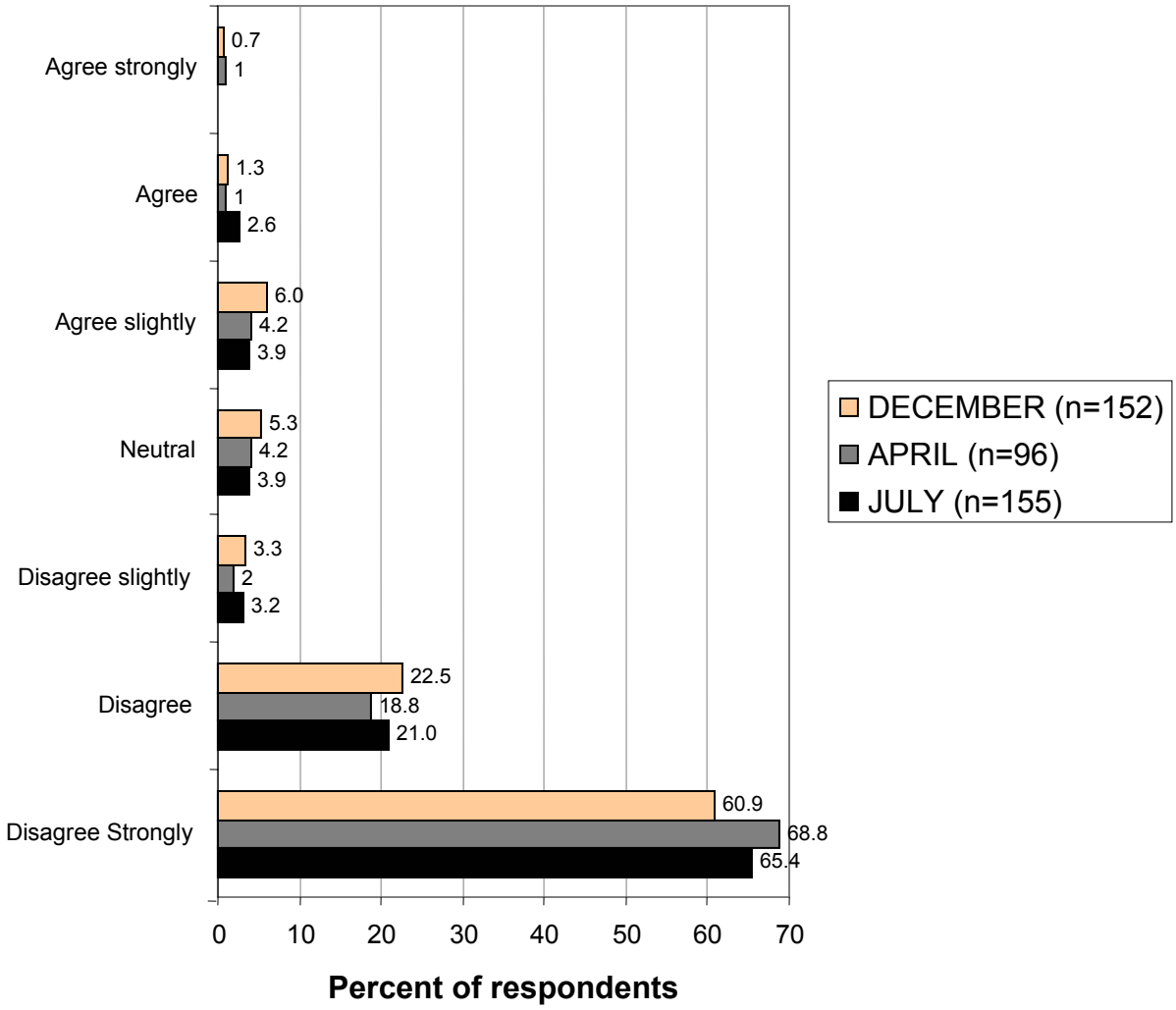
Figure 7. JOB SATISFACTION: "I am generally satisfied with the kind of work I do in this job."



Statistical significance of differences between time periods: p=0.27

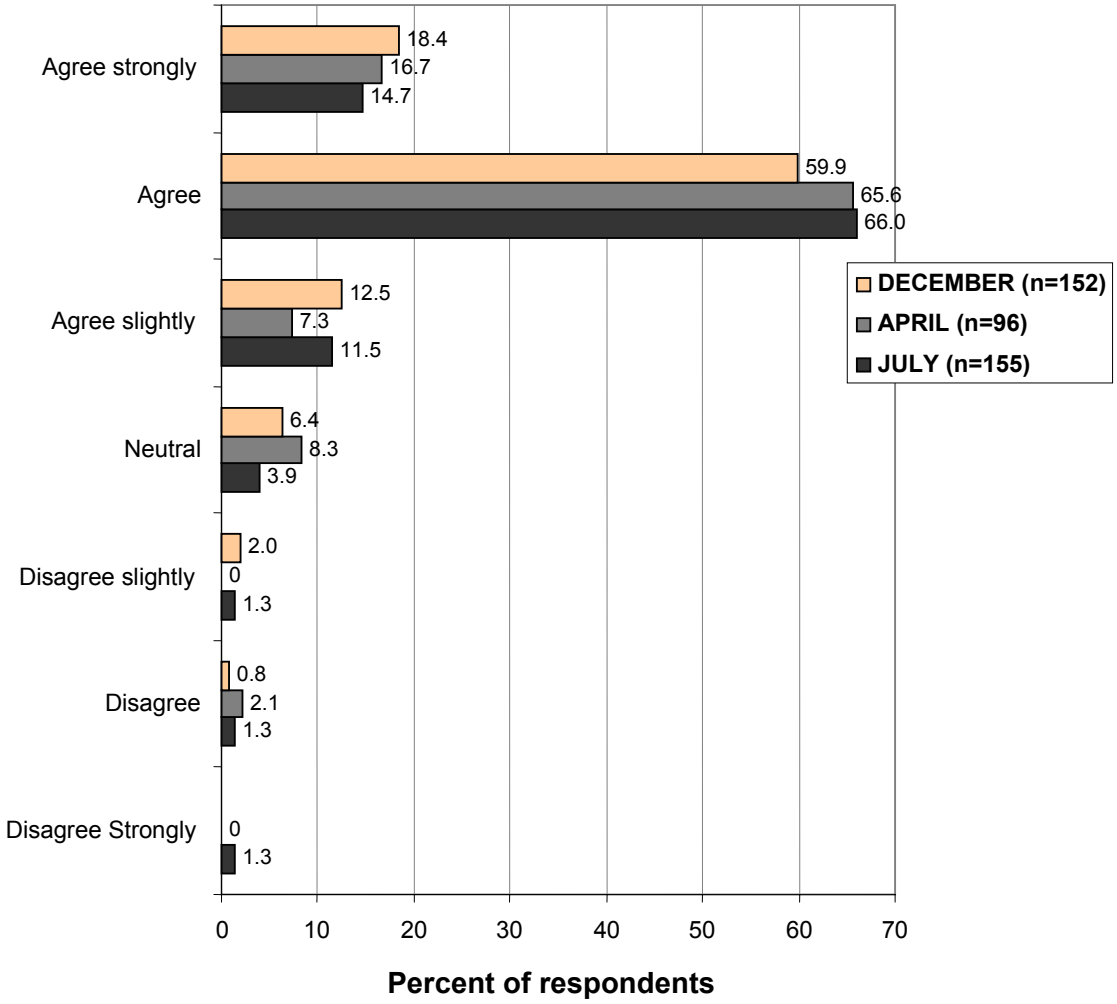
KEY to symbols: < = less than
≤ = less than or equal to

Figure 8. JOB SATISFACTION: "I frequently think of quitting this job."



Statistical significance of differences between time periods: p=0.43

Figure 9. JOB SATISFACTION: "Most people on this job are very satisfied with the job."



Statistical significance of differences between time periods: p=0.27

KEY to symbols: < = less than
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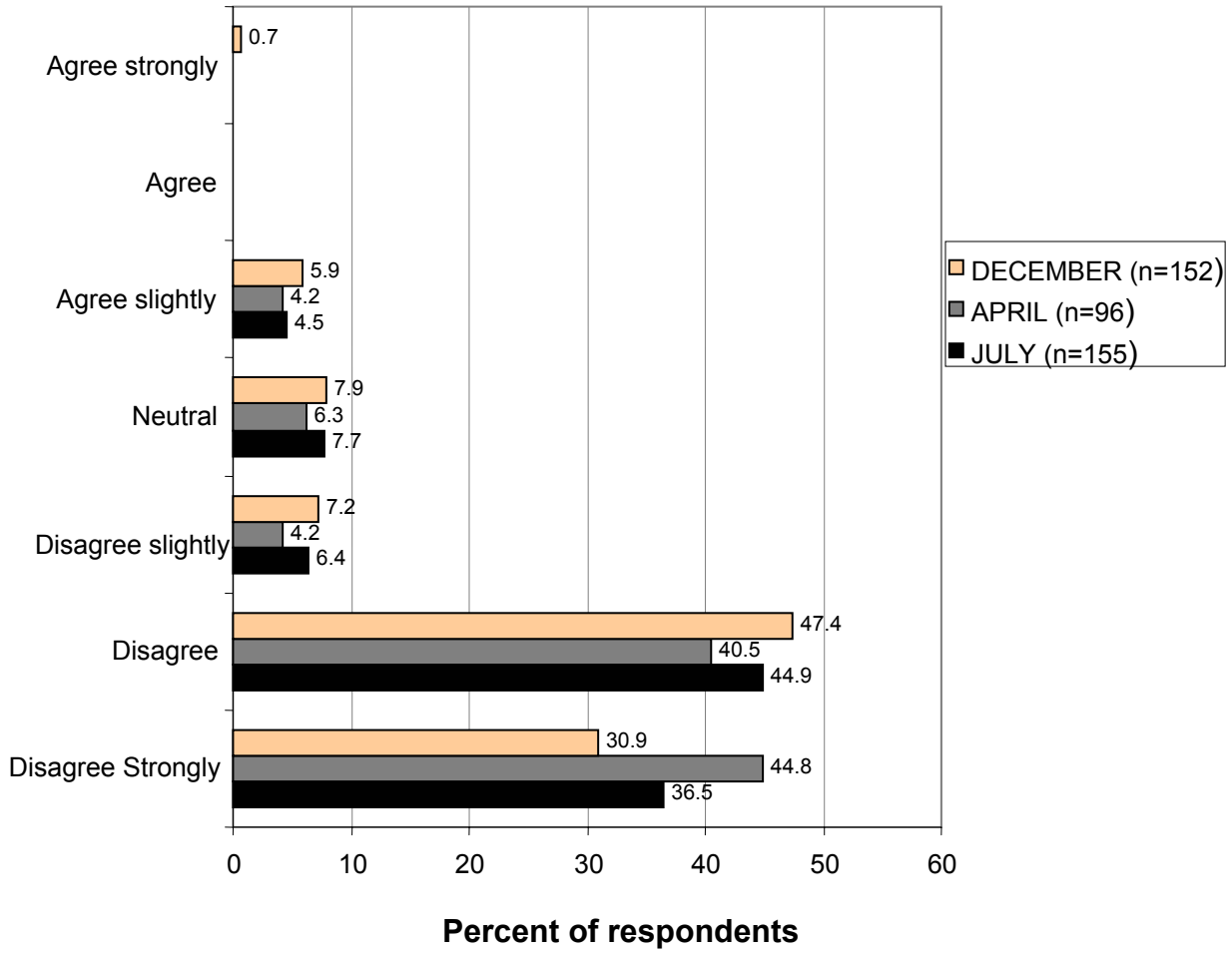
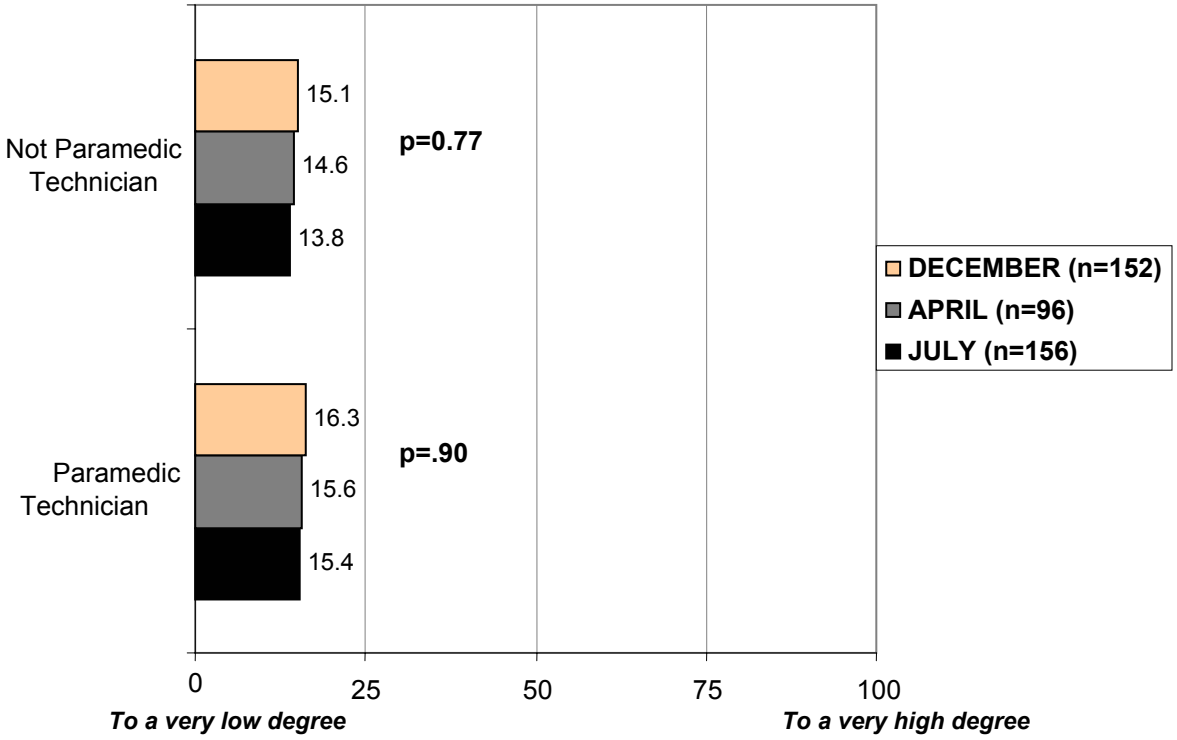
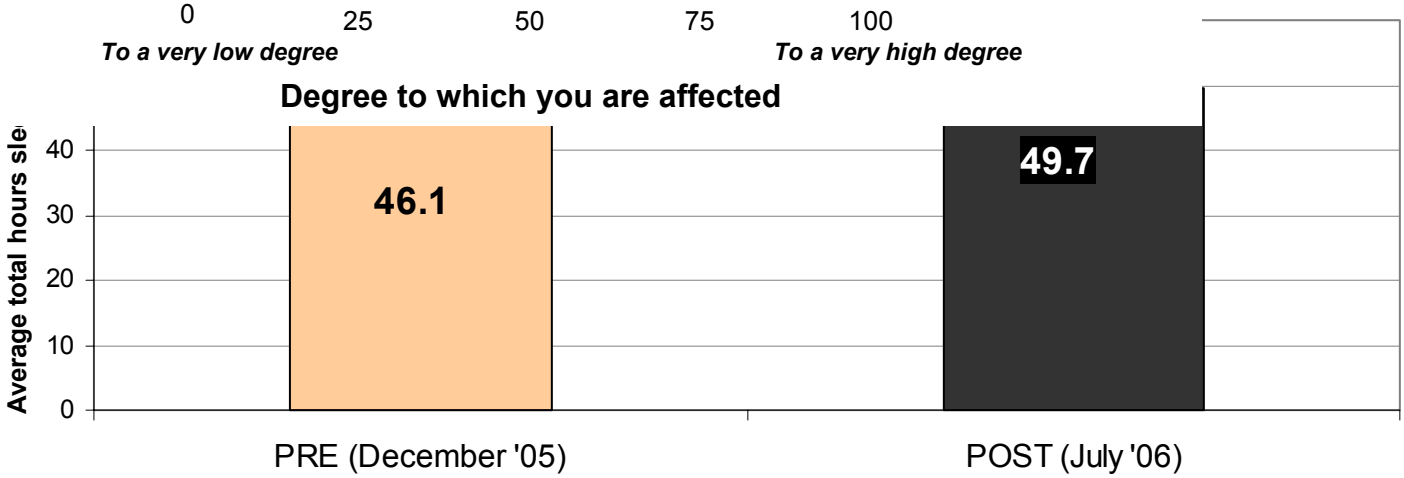
Figure 10. JOB SATISFACTION : "People on this job frequently think of quitting."



Statistical significance for differences between time periods: p=0.08

Figure 11. PATIENT WORK SATISFACTION: "Do you find it hard to work with patients?"





KEY to symbols: < = less than
≤ = less than or equal to

Figure 12. PATIENT WORK SATISFACTION: "Does it drain your energy to work with patients?"

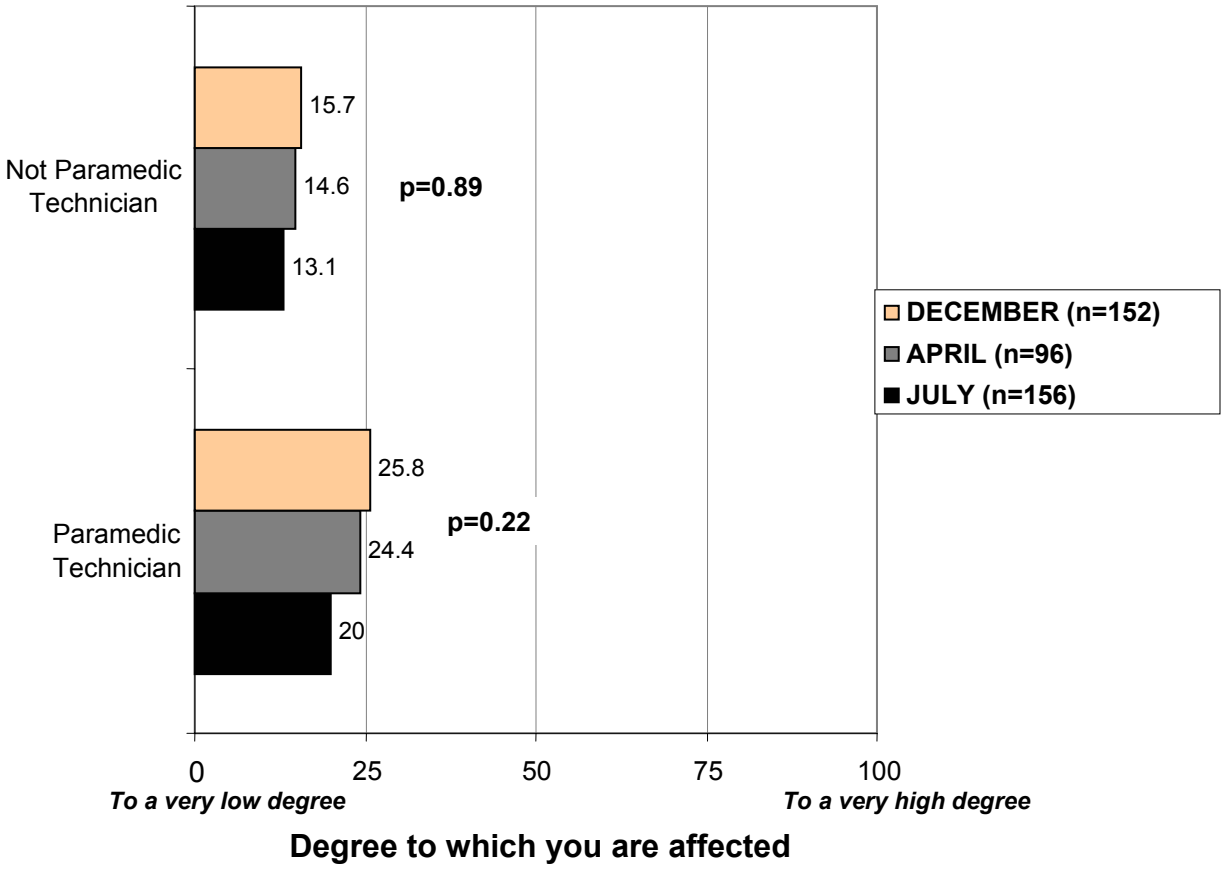
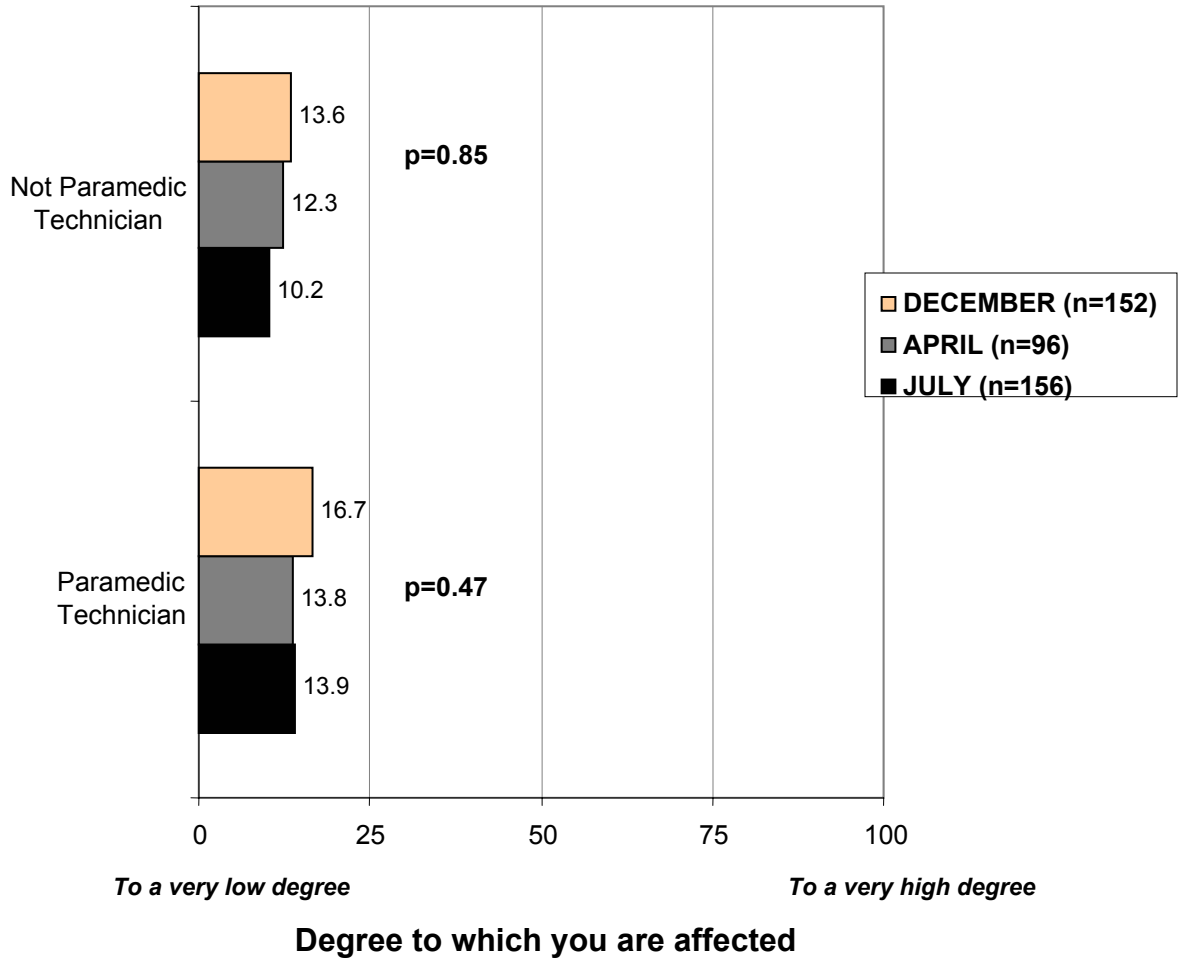
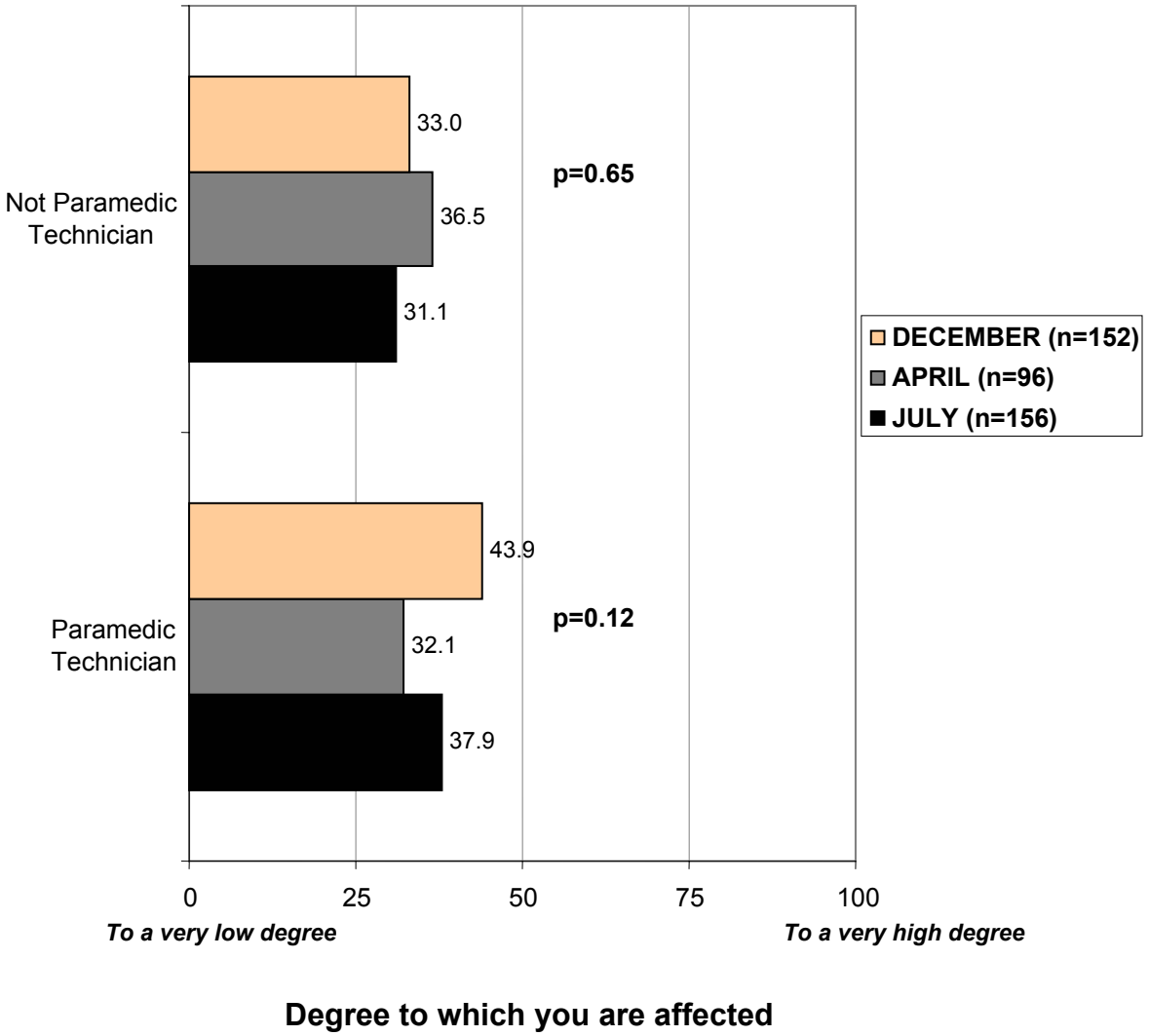


Figure 13. PATIENT WORK SATISFACTION: "Are you tired of working with patients?"



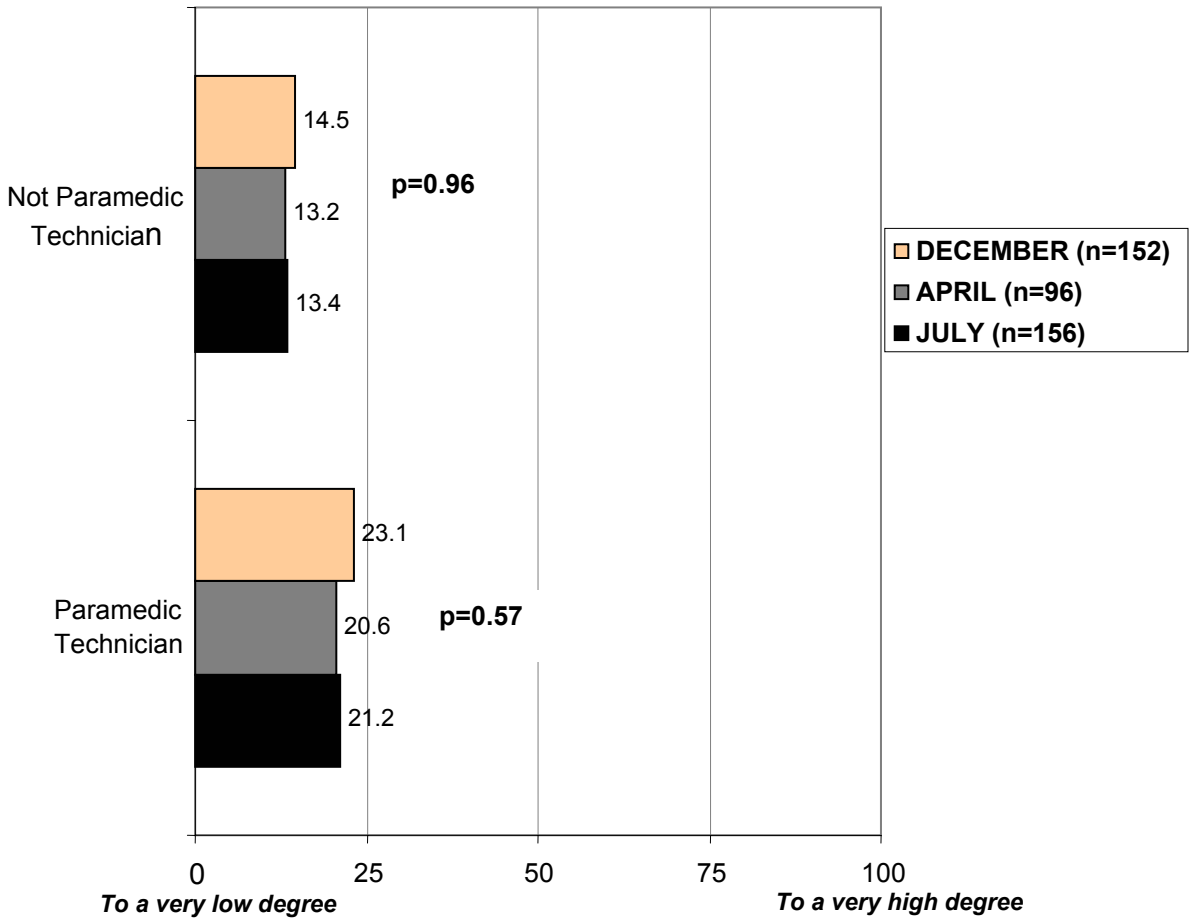
KEY to symbols: < = less than
≤ = less than or equal to

Figure 14. PATIENT WORK SATISFACTION: "Do you feel that you give more than you get back when you work with patients?"



Some people commented on this question that it was expected to give more than receive in their positions because of the nature of their work, e.g., they are actually administering a service. Therefore, this question may not be measuring what it was intended to measure with this population, i.e., emotional giving vs. job satisfaction. It's unclear.

Figure 15. PATIENT WORK SATISFACTION: "Do you sometimes wonder how long you will be able to continue working with patients?"



KEY to symbols: < = less than
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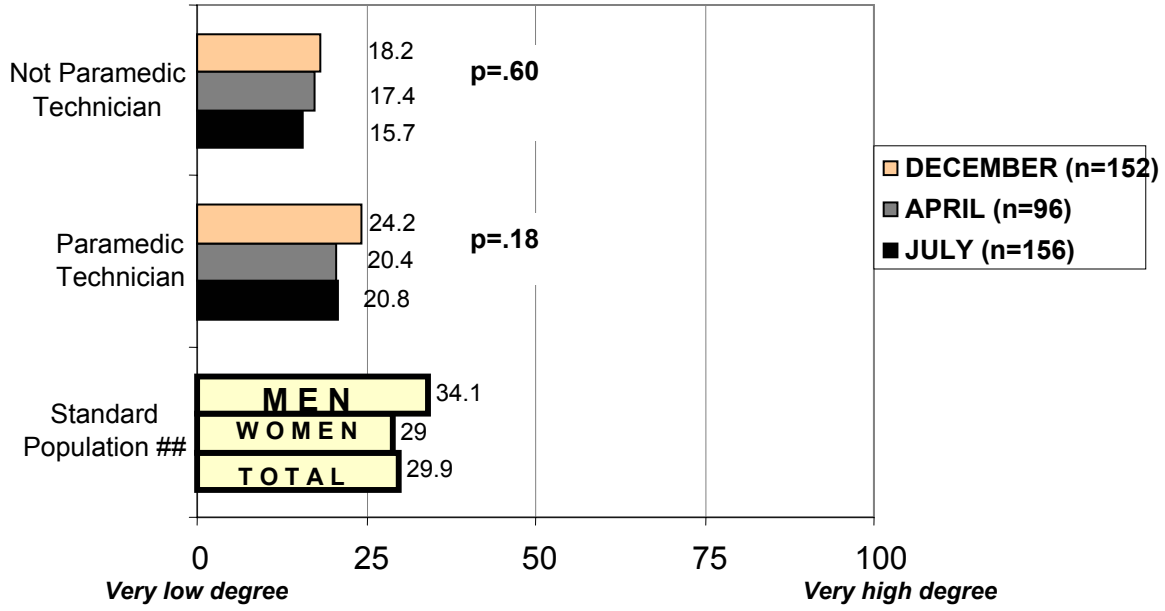
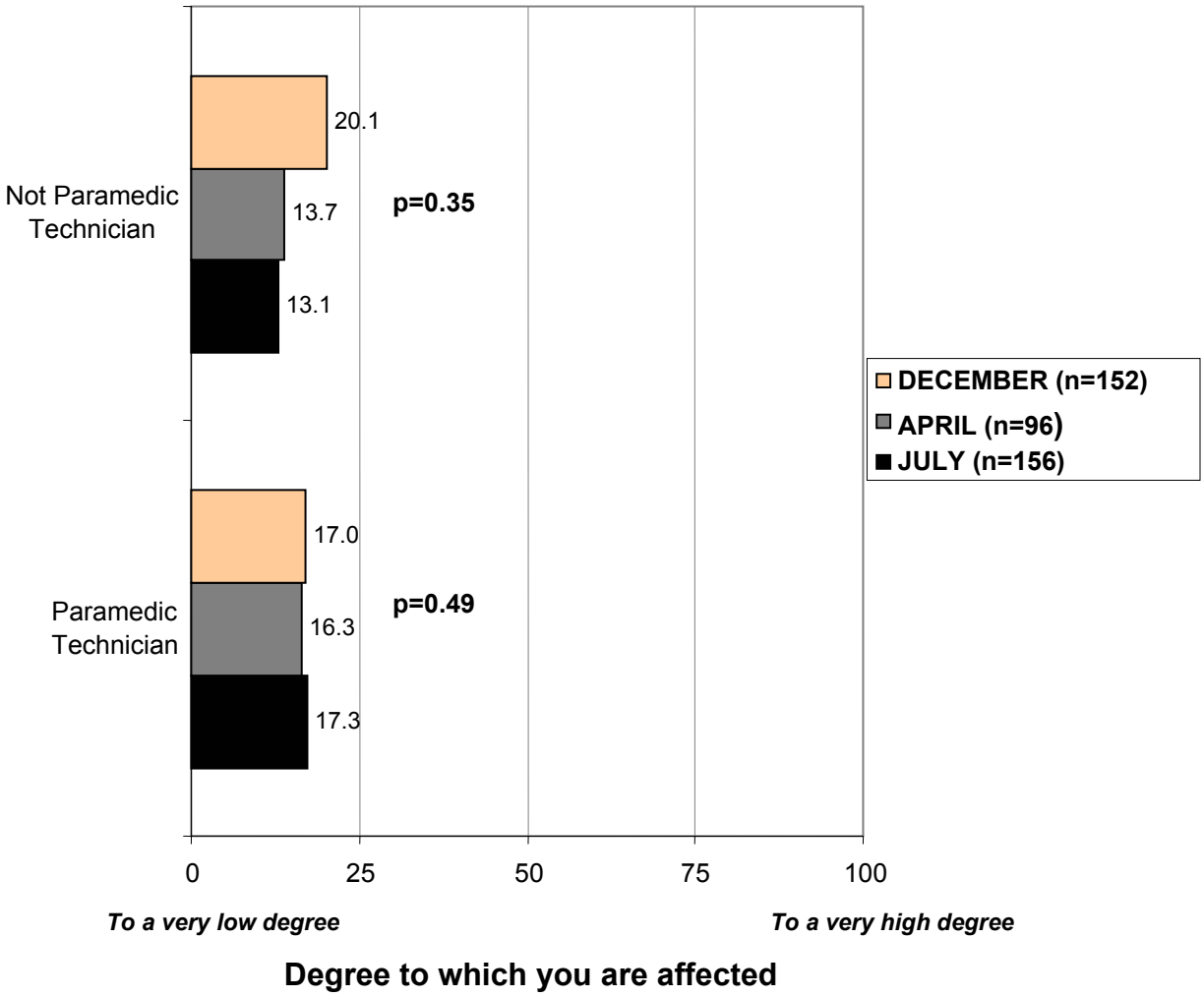
Figure 16. Average (mean) score of six questions pertaining to "burn-out" in taking care of patients



Degree of burnout in dealing with patients

Standard population consisted of 1,917 Danish persons working in human service professions (social workers, hospital staff, prisons, home helpers, etc.)

Figure 17. PATIENT WORK SATISFACTION: "Do you find it frustrating to work with patients?"



On the comments, several people noted that it was frustrating to take care of patients who abuse the system, but not frustrating to take care of people with true emergencies.

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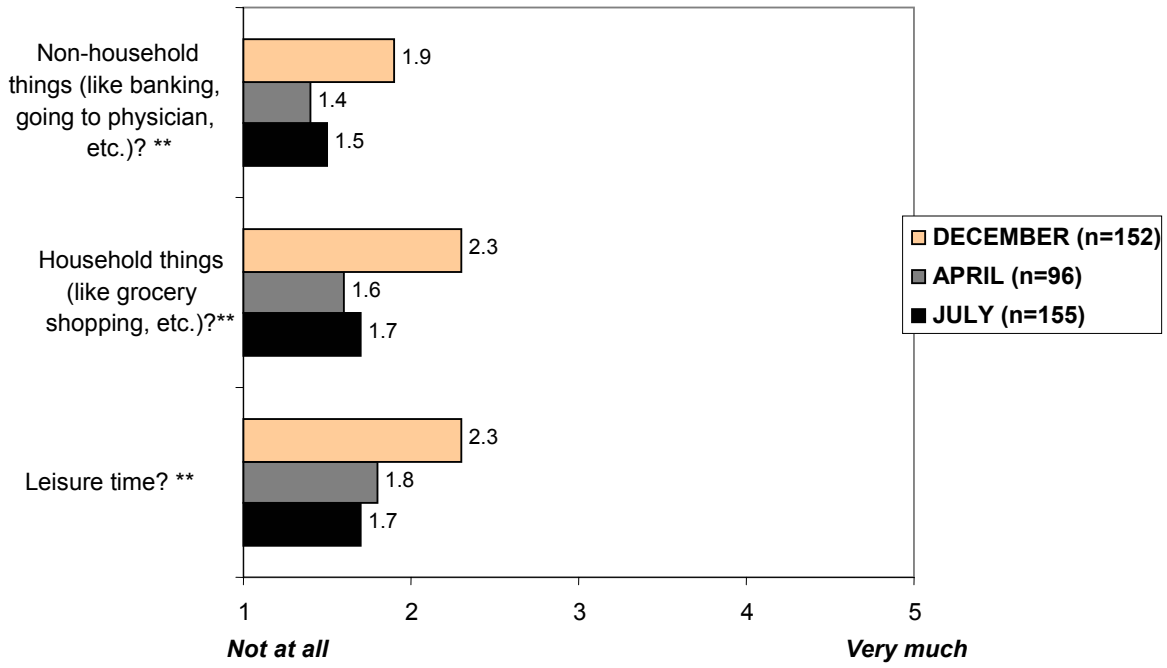
≤ = less than or equal to

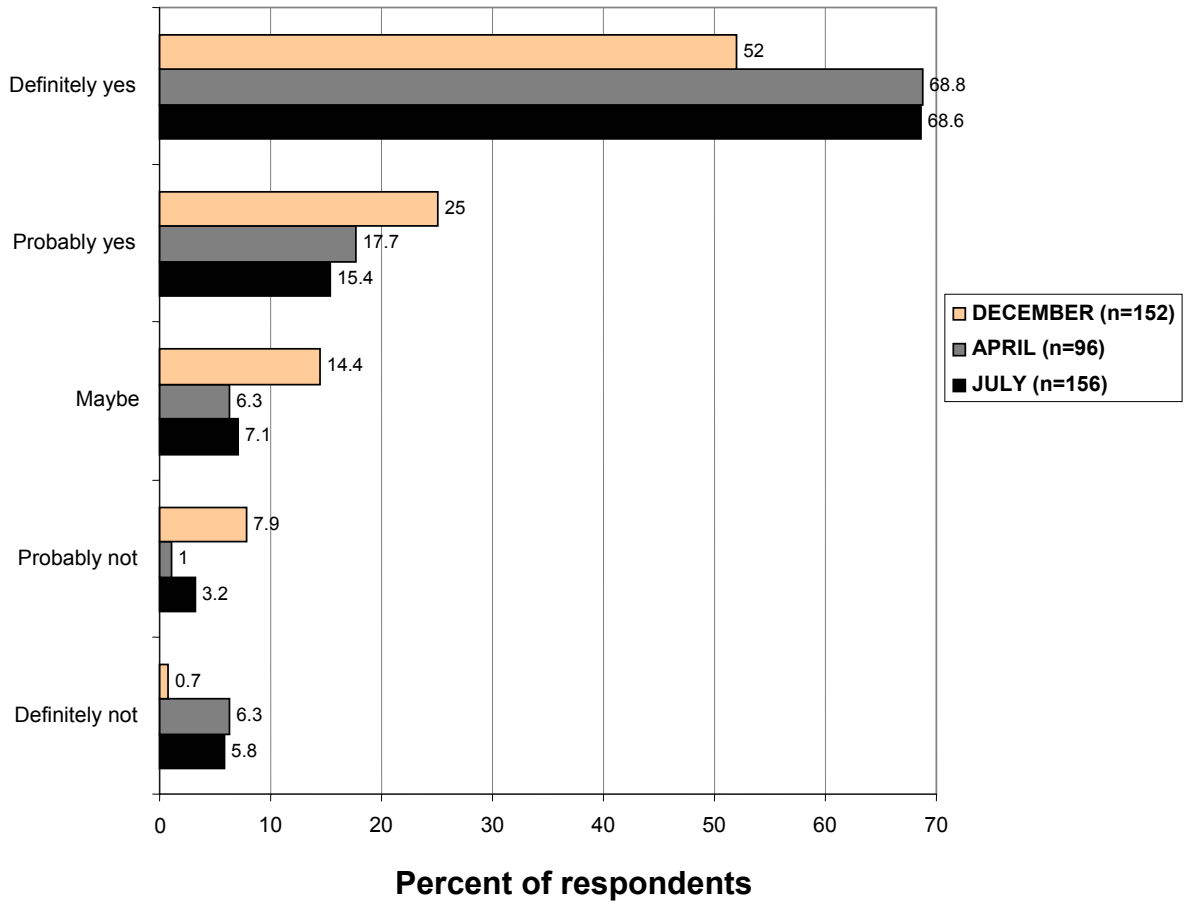
Figure 18. Answer to questions about: "How much does your CURRENT SHIFT interfere with..."



Average score of all respondents

**Statistical significance for difference in time periods: $p < 0.01$

Figure 19. Answers to question: "Do you feel that overall the advantages of your CURRENT system outweigh the disadvantages?"



* Statistical significance of difference in time periods: p=0.01

KEY to symbols: < = less than
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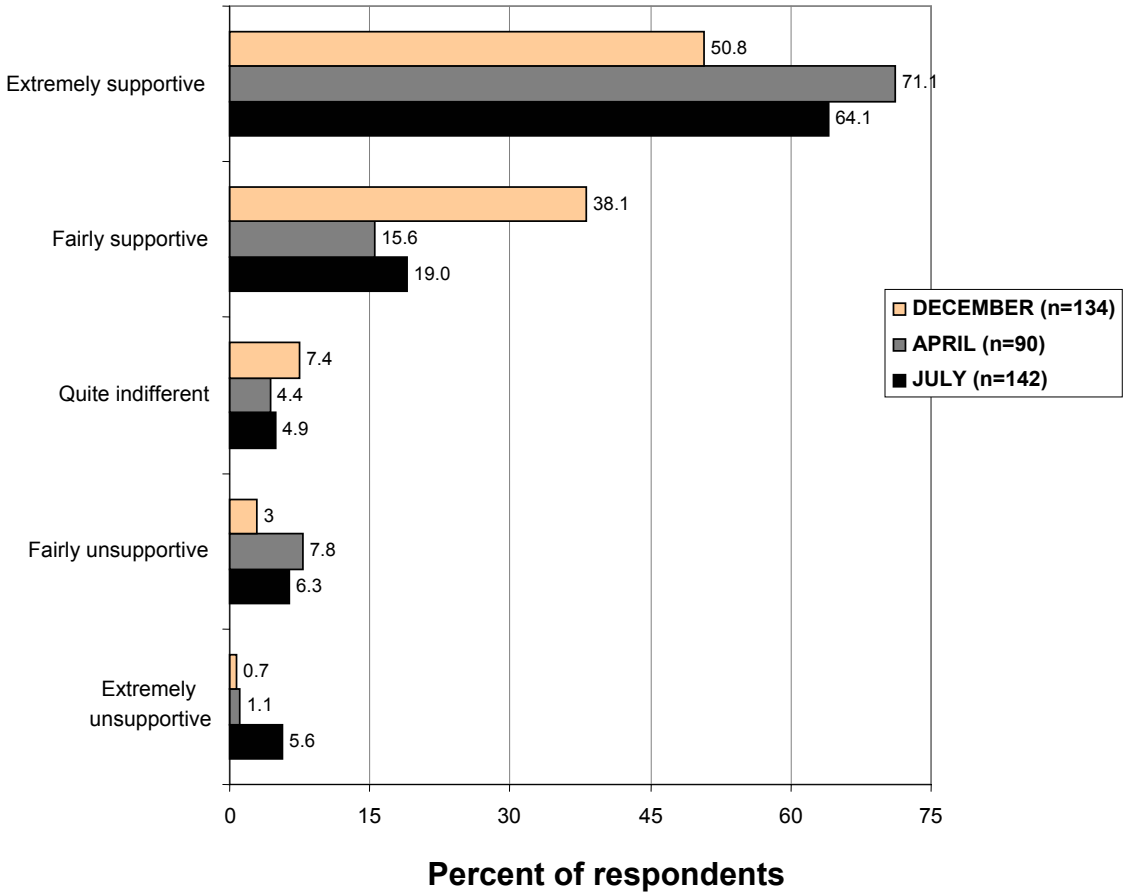
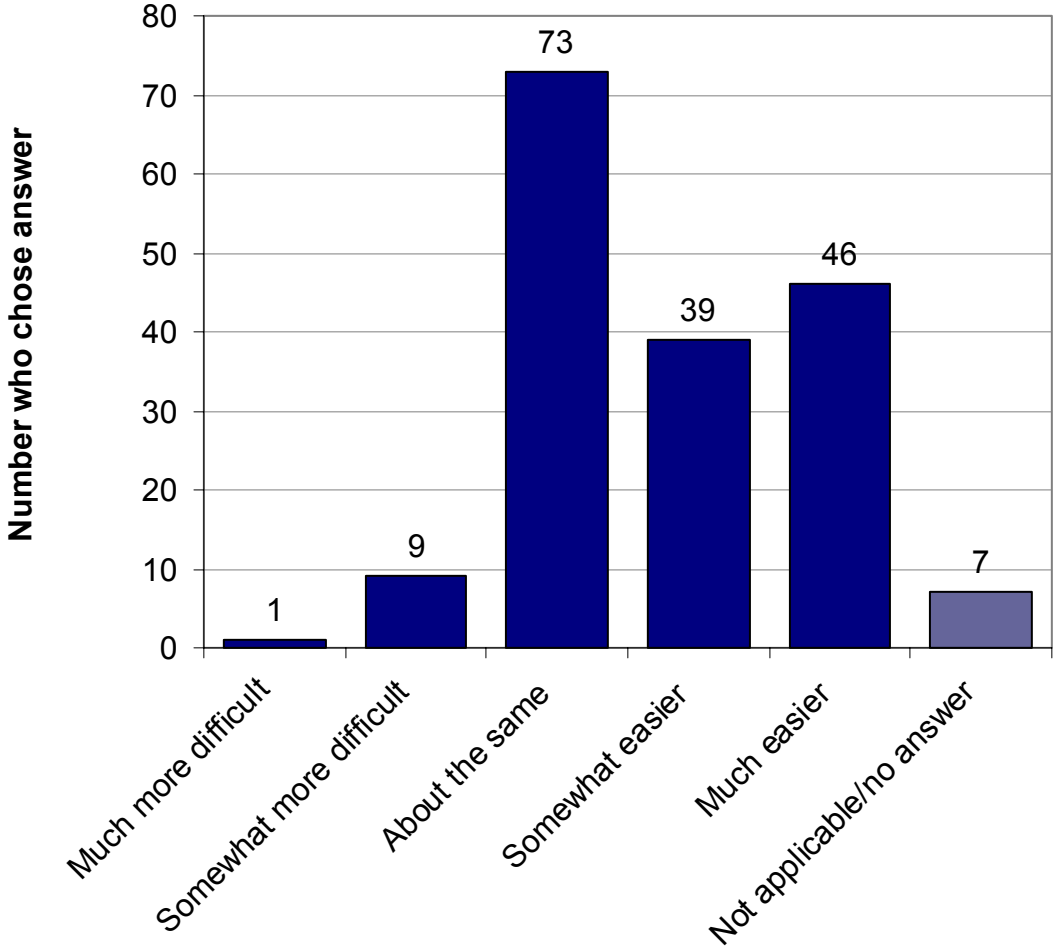
Figure 20. Answers to question: "How does your spouse/partner feel about you working your CURRENT shift?"



Statistical significance for difference between time periods: p=0.06

See results of family survey to see in more detail how families have found the 48-96 schedule (Figures 21 – 45).

Figure 21. Getting daily household tasks done (n=175)



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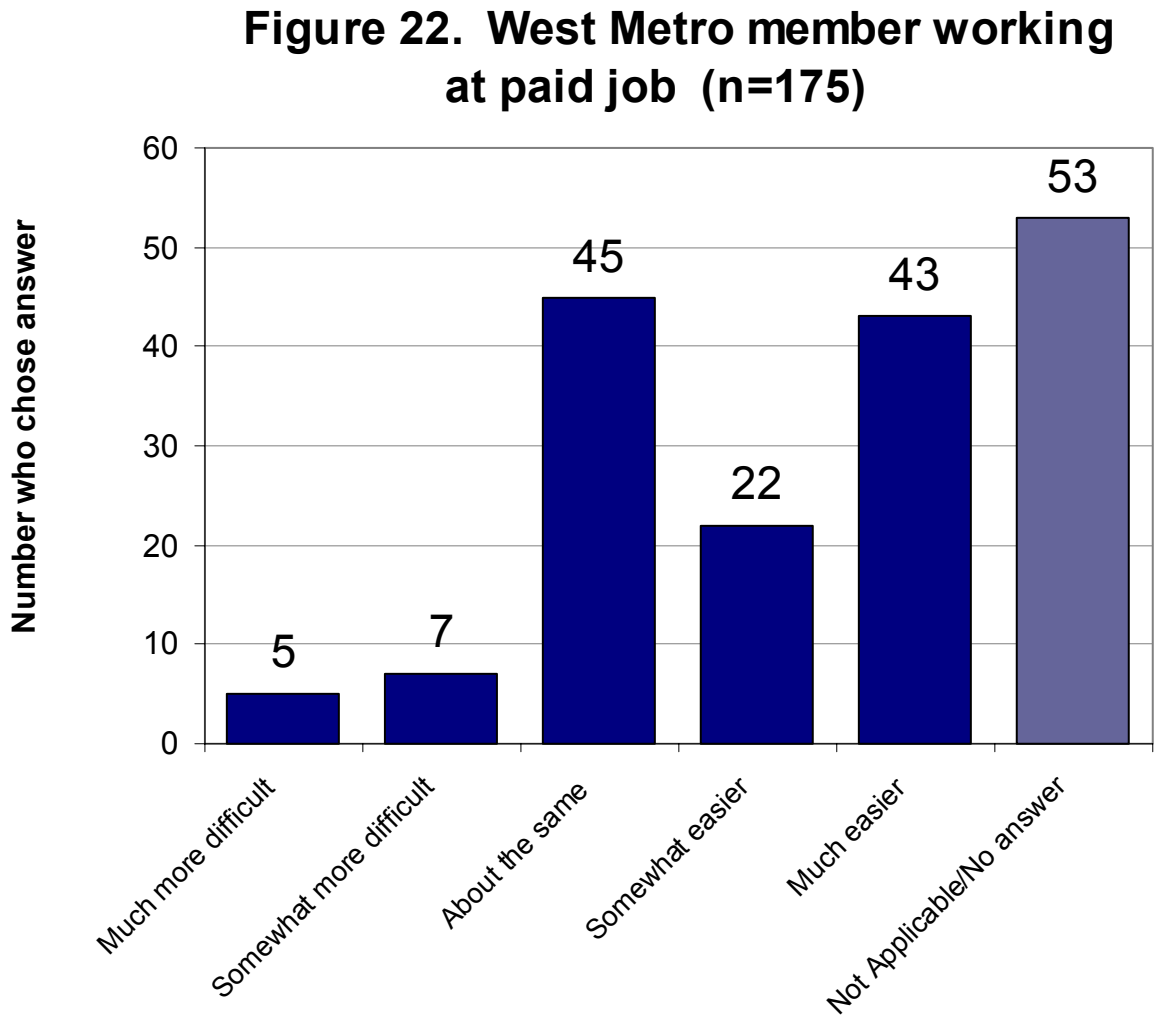
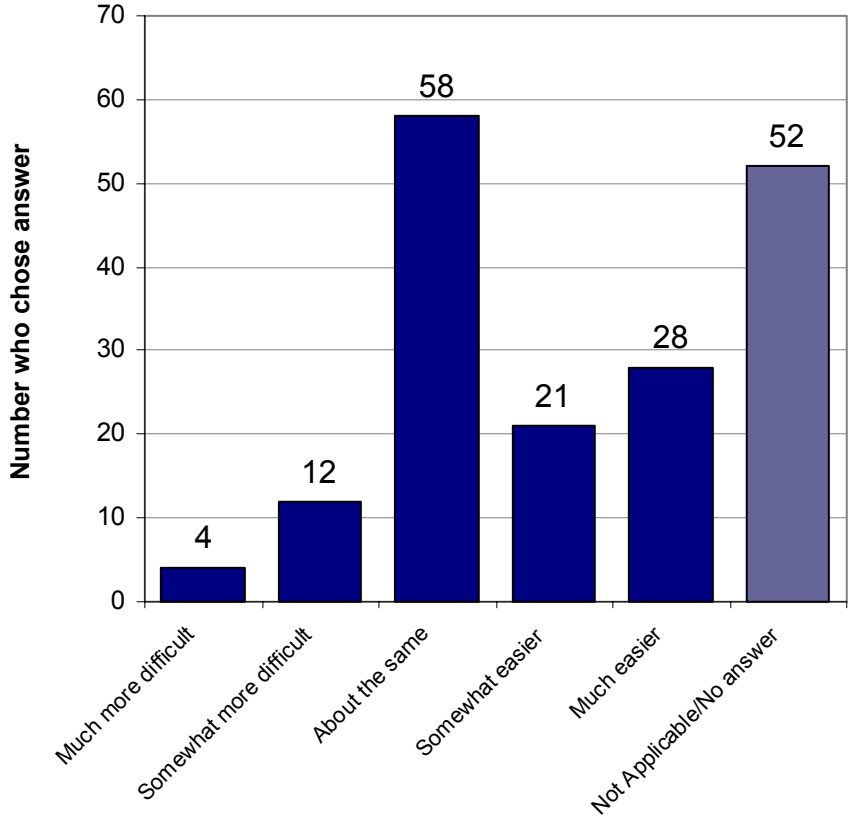


The answer to this question is somewhat perplexing since it pertained directly to the West Metro member, however, it may have been interpreted as working at a second paid job.

Figure 23. Spouse/Partner working at paid job (n=175)



KEY to symbols: < = less than
≤ = less than or equal to

Figure 24. Shopping for necessities (n=175)

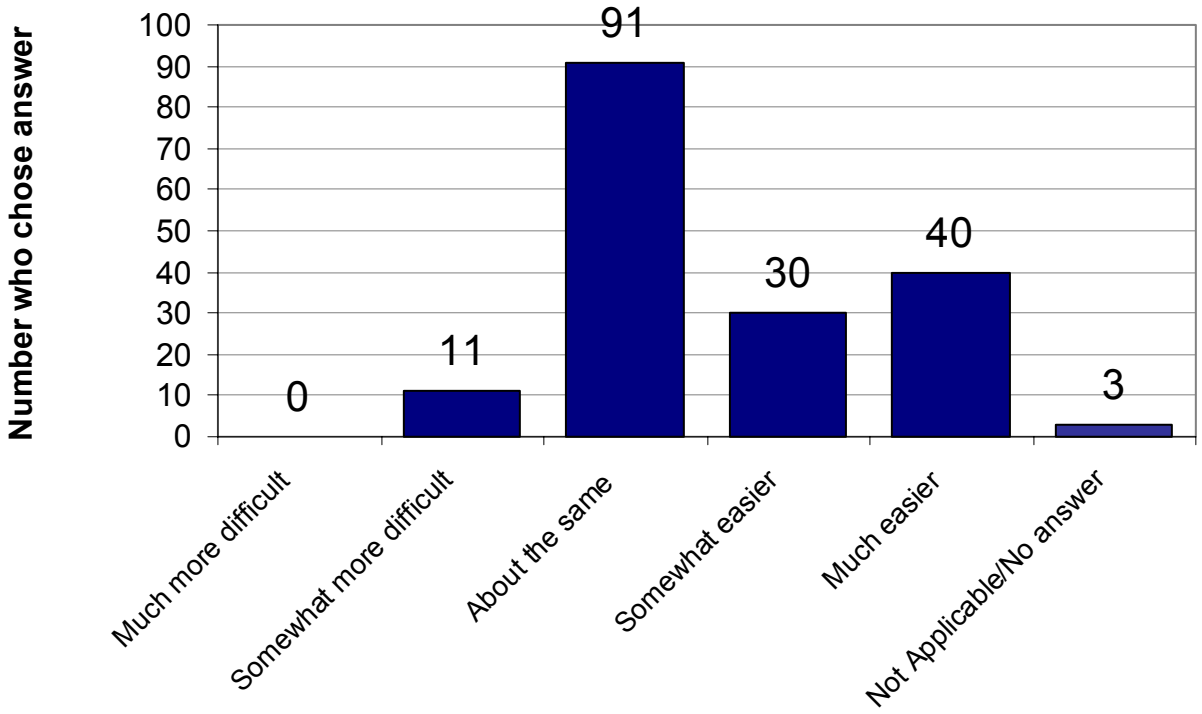


Figure 25. Handling financial matters (n=175)

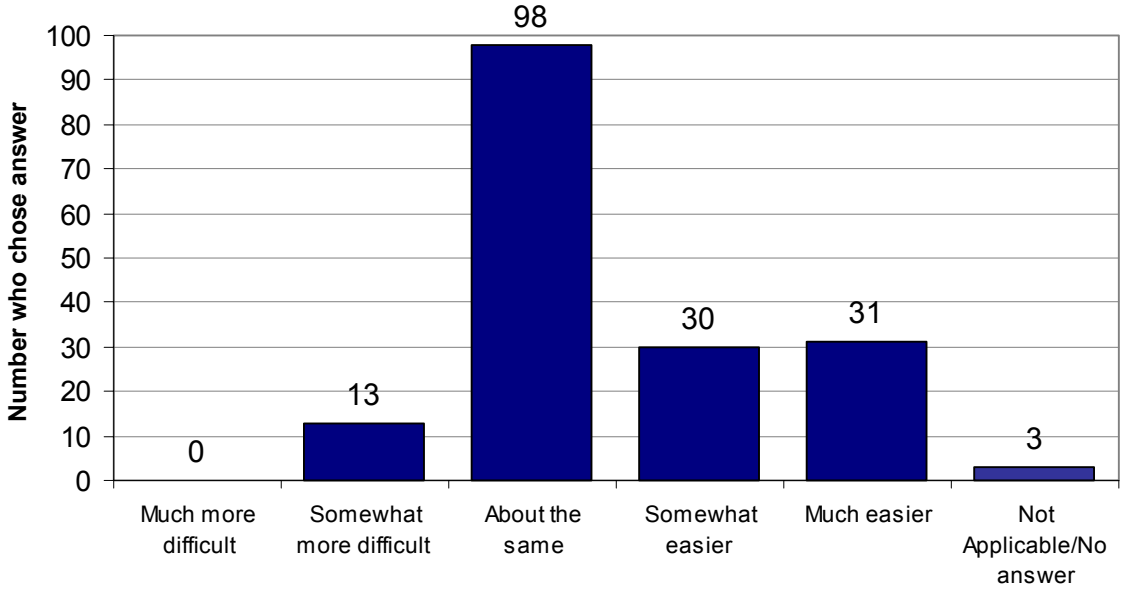
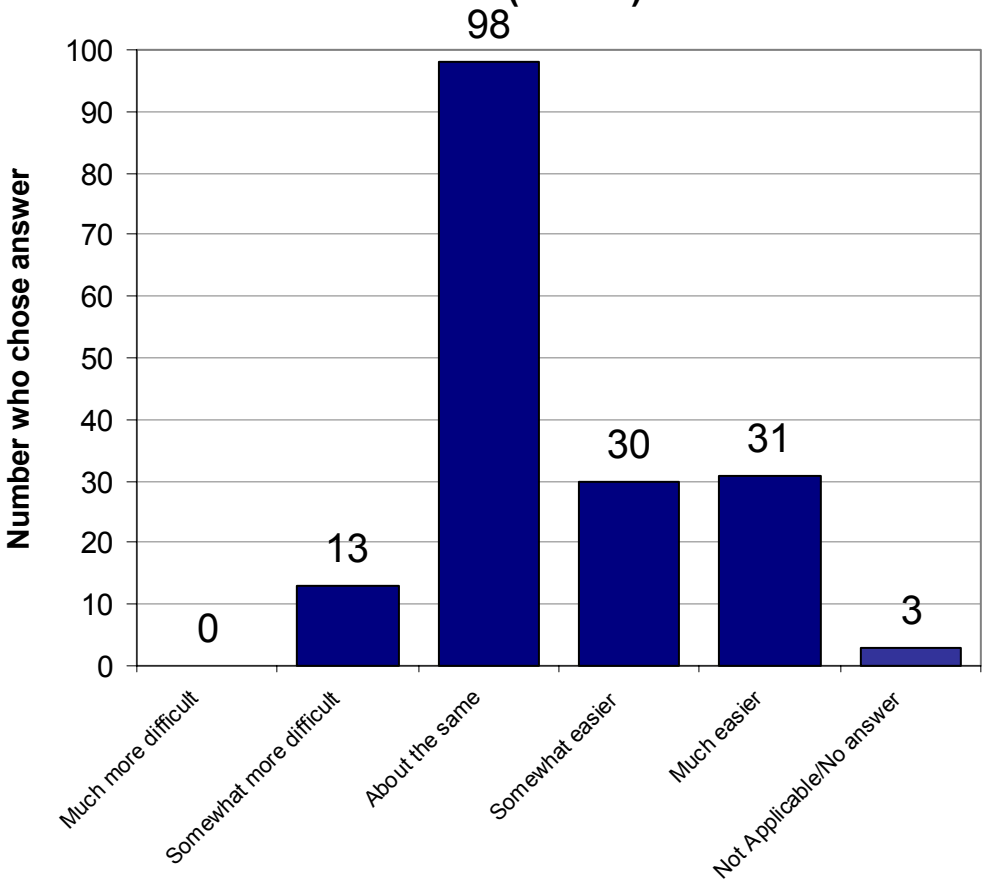


Figure 26 Maintaining safety/security of your home (n=175)



KEY to symbols: < = less than
≤ = less than or equal to

Figure 27. Maintaining automobile (n=175)

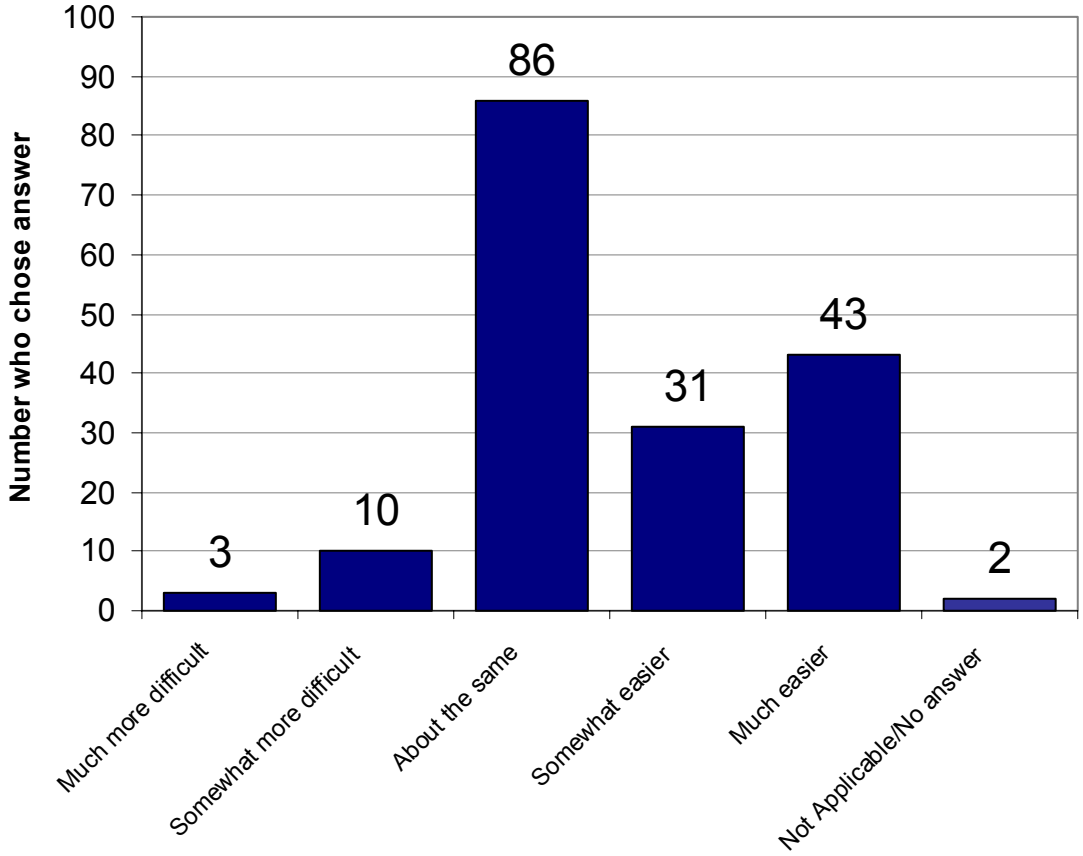
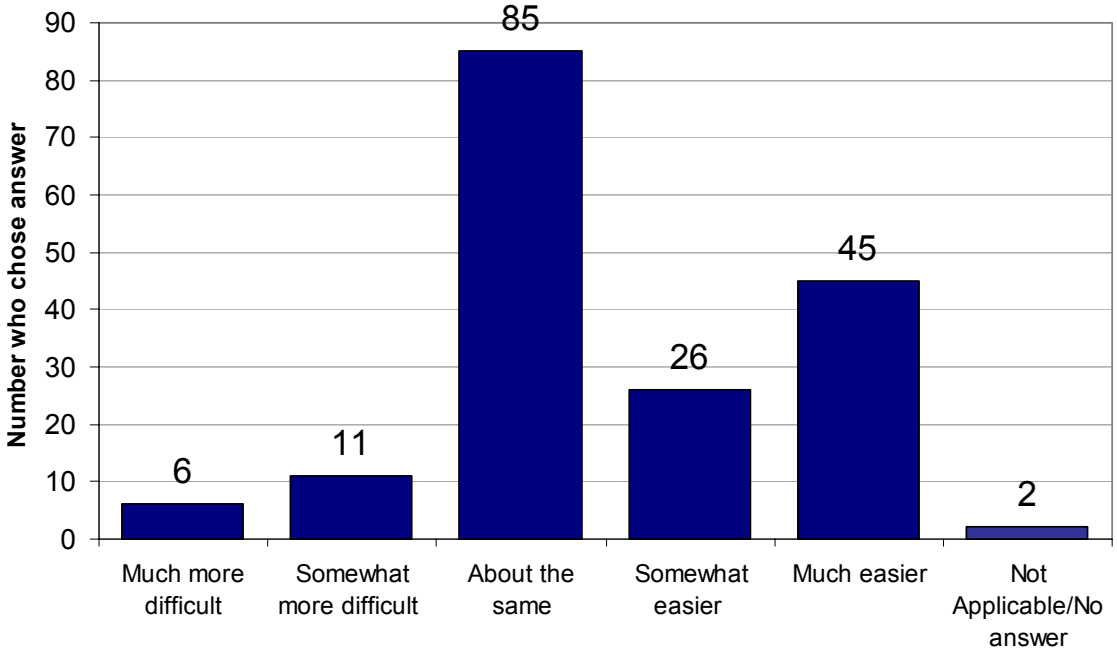


Figure 28. Taking care of member's health (n=175)



KEY to symbols: < = less than
≤ = less than or equal to

Figure 29. Taking care of spouse/partner's health (n=175)

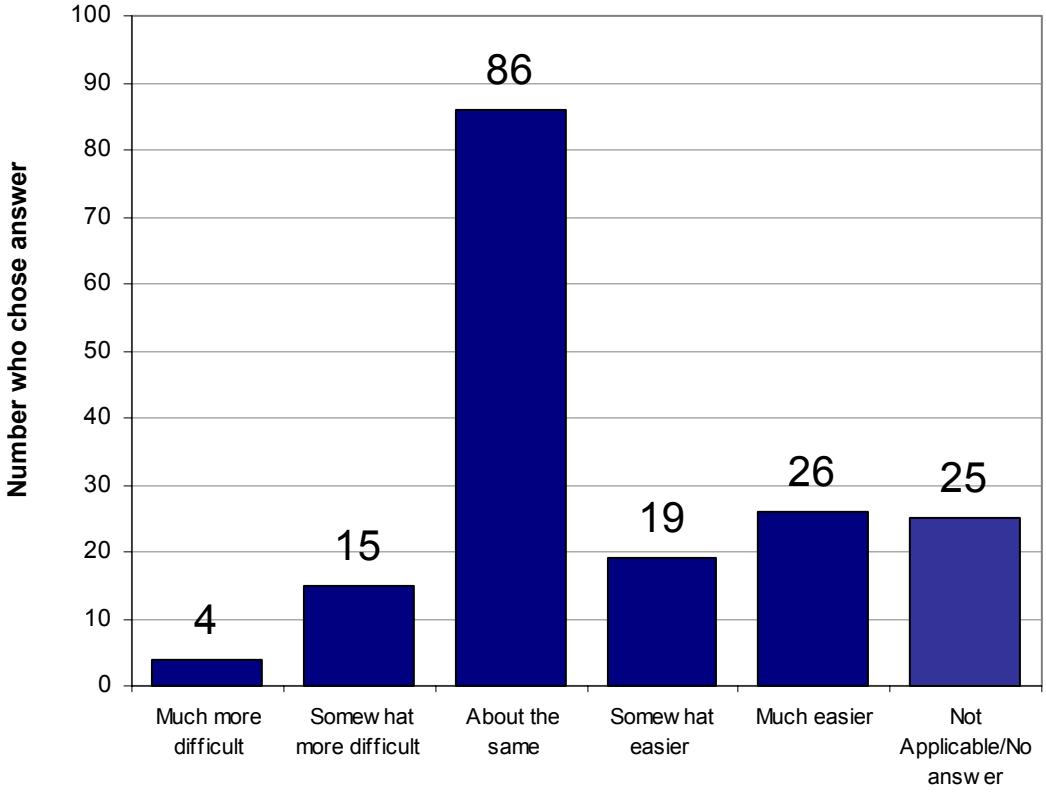


Figure 30. Taking care of elder's health (n=175)

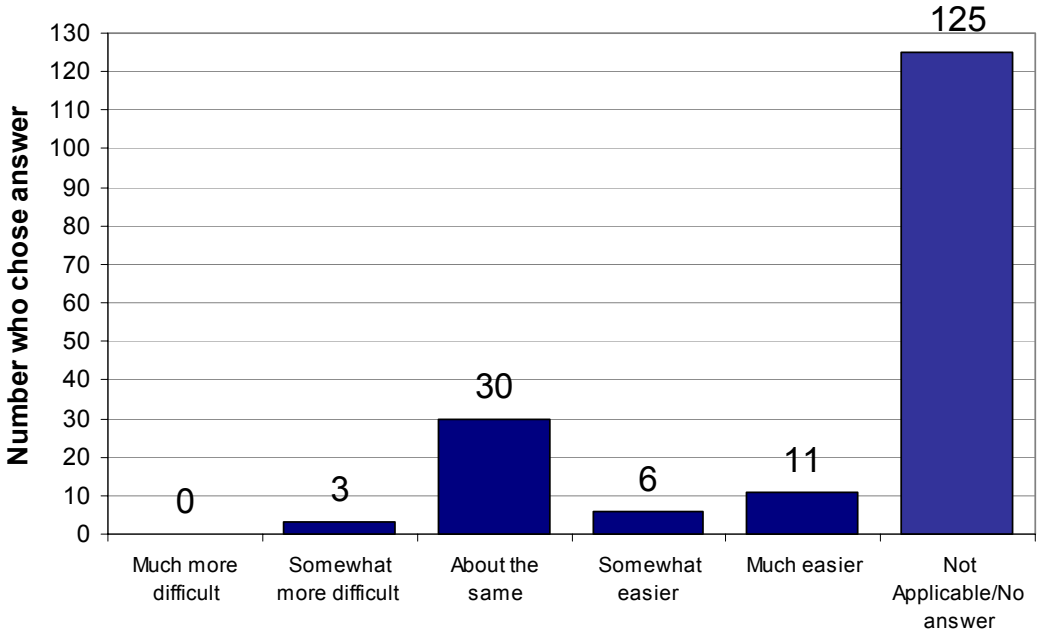
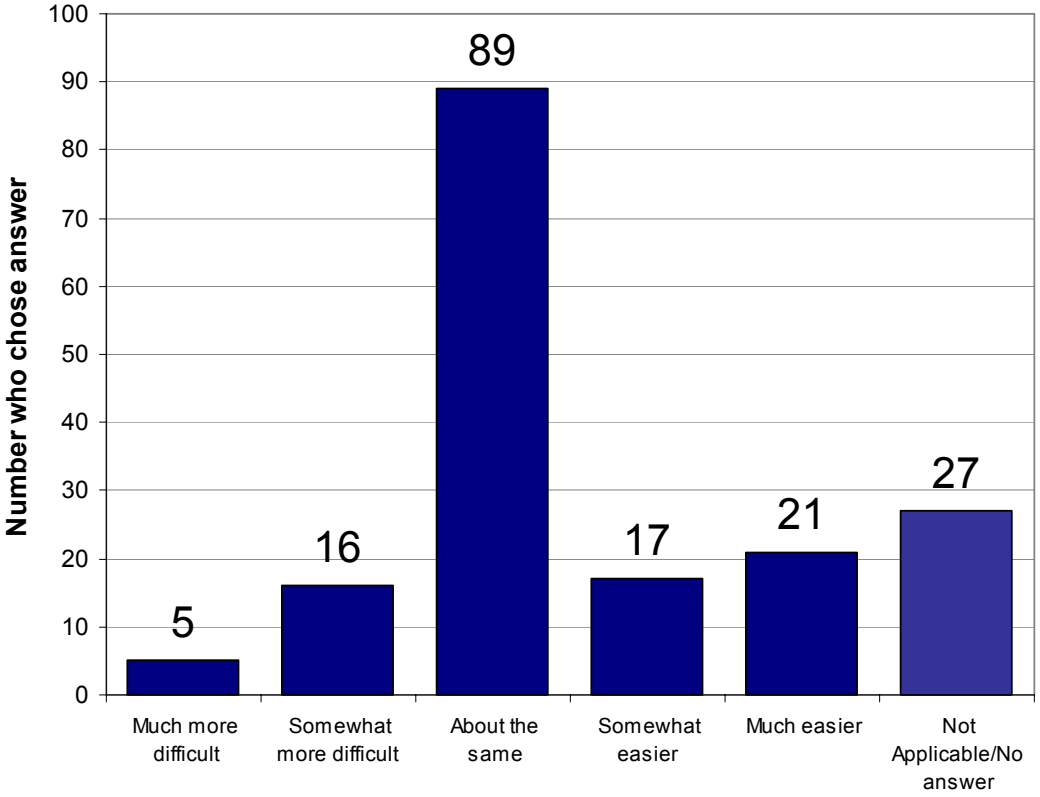


Figure 31. Taking care of pets (n=175)



KEY to symbols: < = less than
≤ = less than or equal to

Figure 32. Having a social life (n=175)

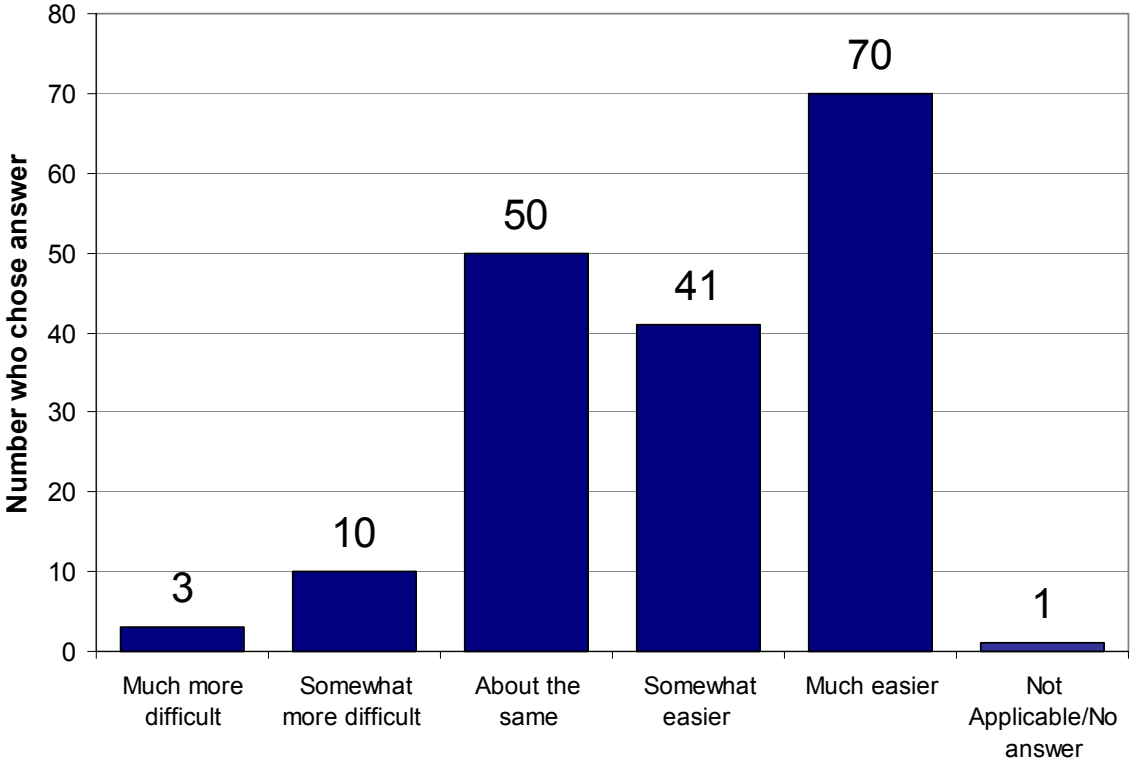
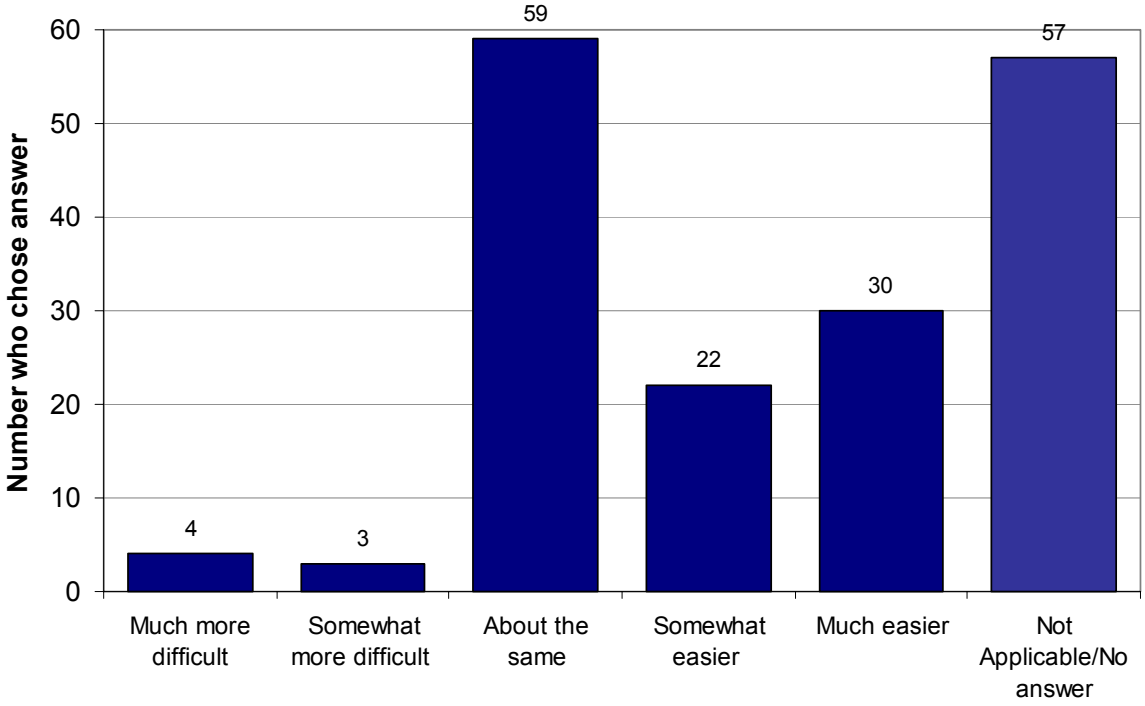


Figure 33. Doing volunteer work (n=175)



KEY to symbols: < = less than
≤ = less than or equal to

Figure 34 Doing special projects around the home (n=175)

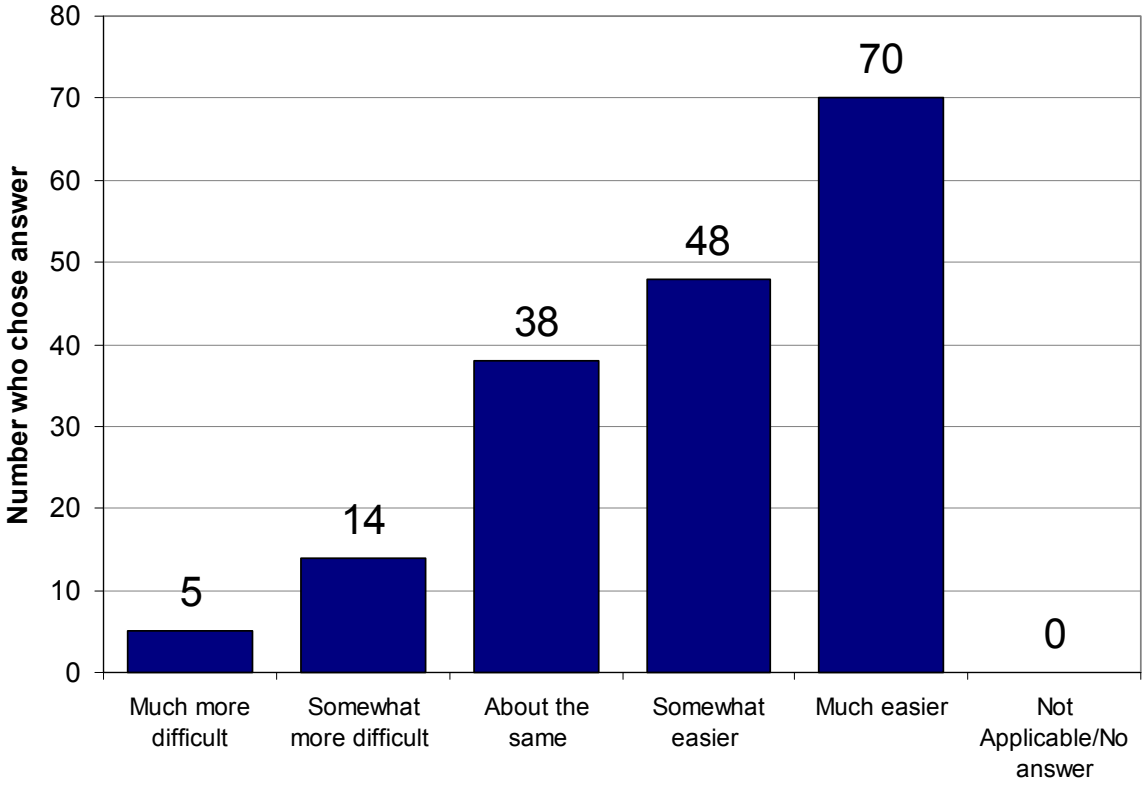
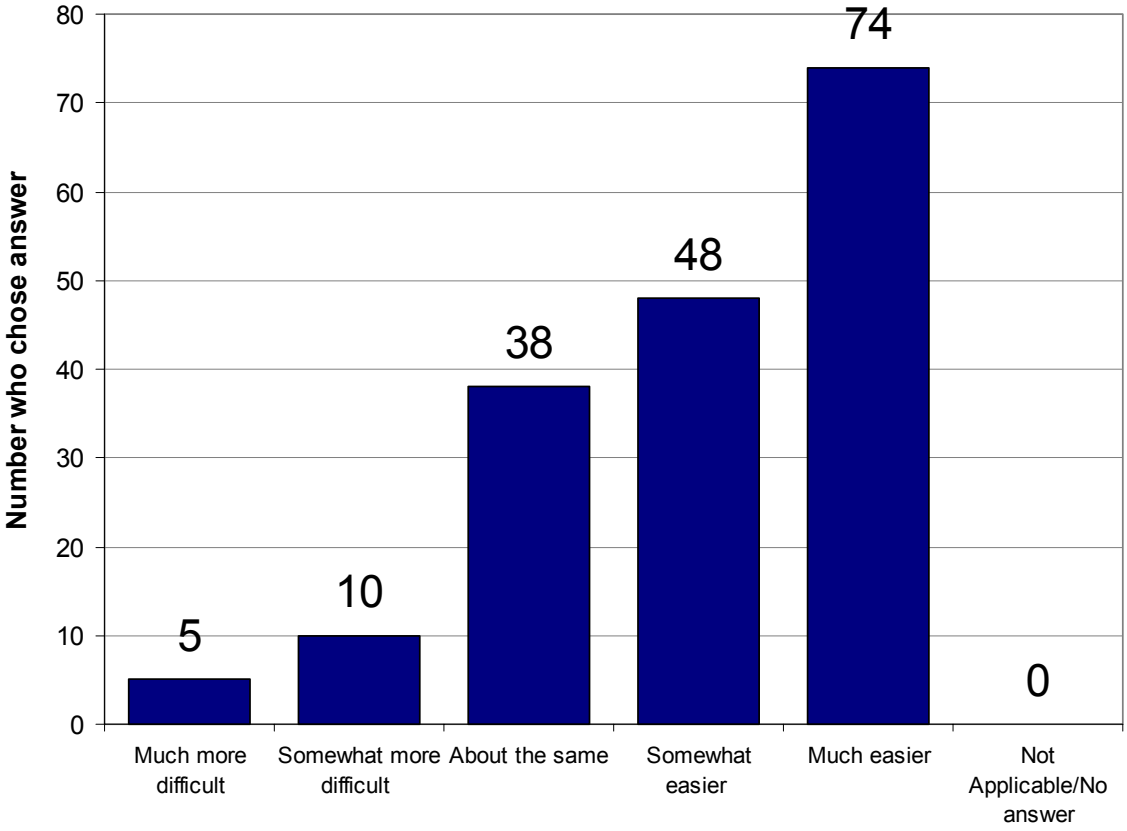


Figure 35. Participating in leisure time activities (n=175)



KEY to symbols: < = less than
≤ = less than or equal to

Figure 36. Taking personal for yourself (n=175)

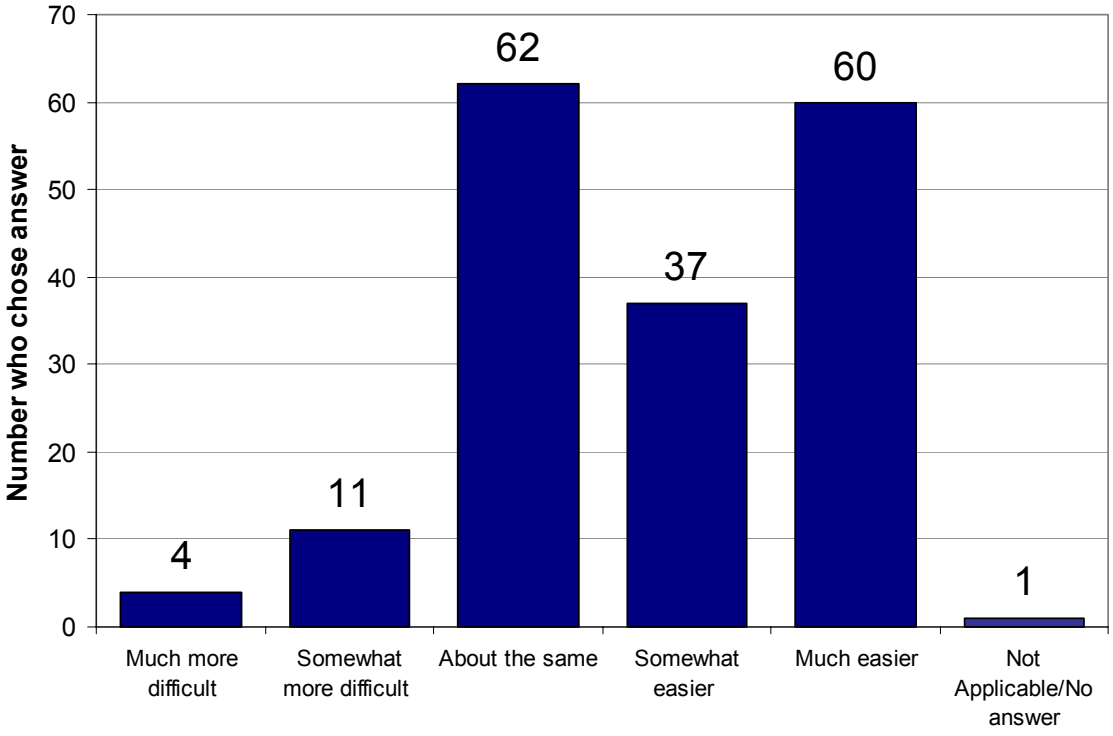
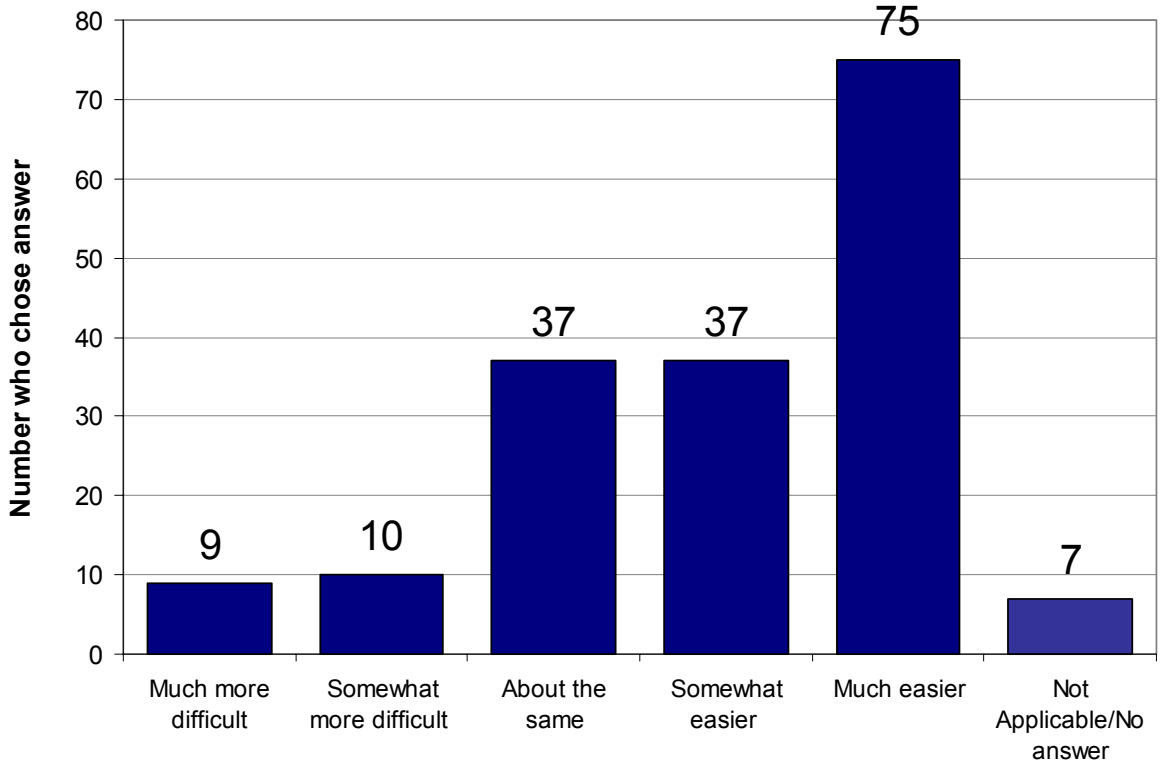


Figure 37. Spending time together as a family (n=175)



Answer to question: Since the shift change, how has your family found it to accomplish the following activities?

KEY to symbols: < = less than
≤ = less than or equal to

Figure 38. Taking care of elder at home (n=175)

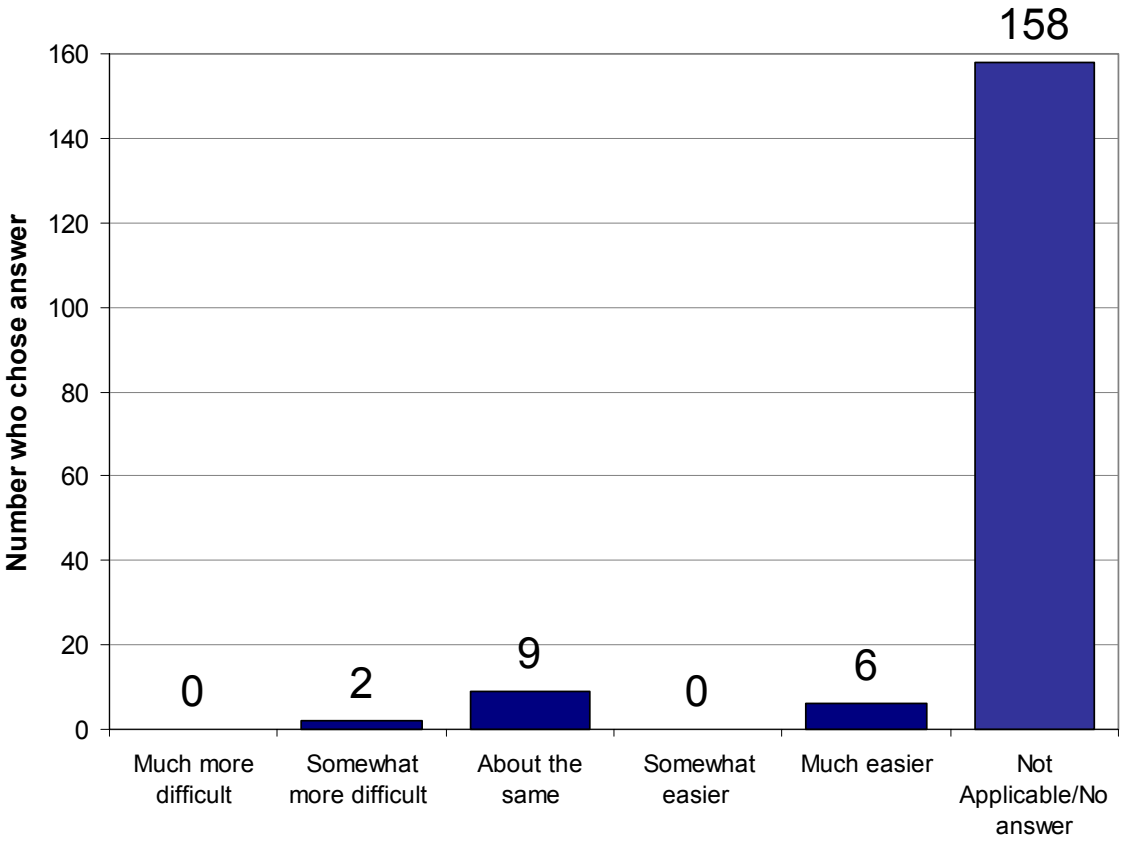


Figure 39. Arranging for child care (n=175)

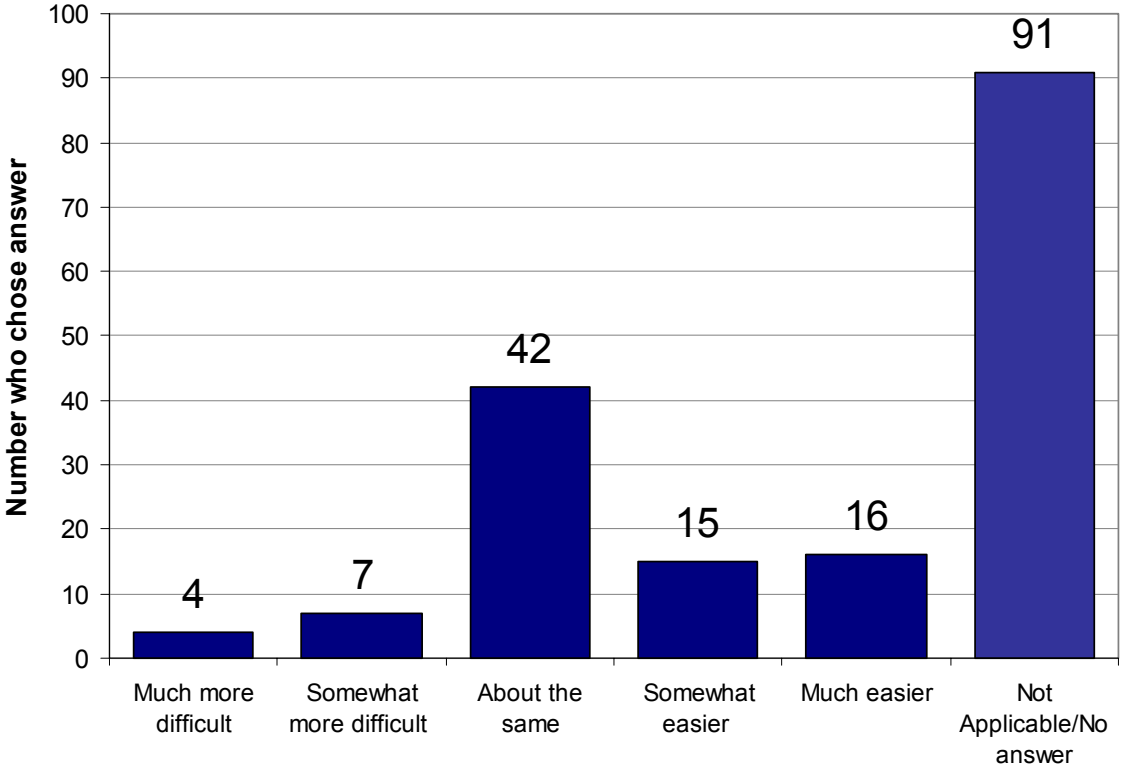
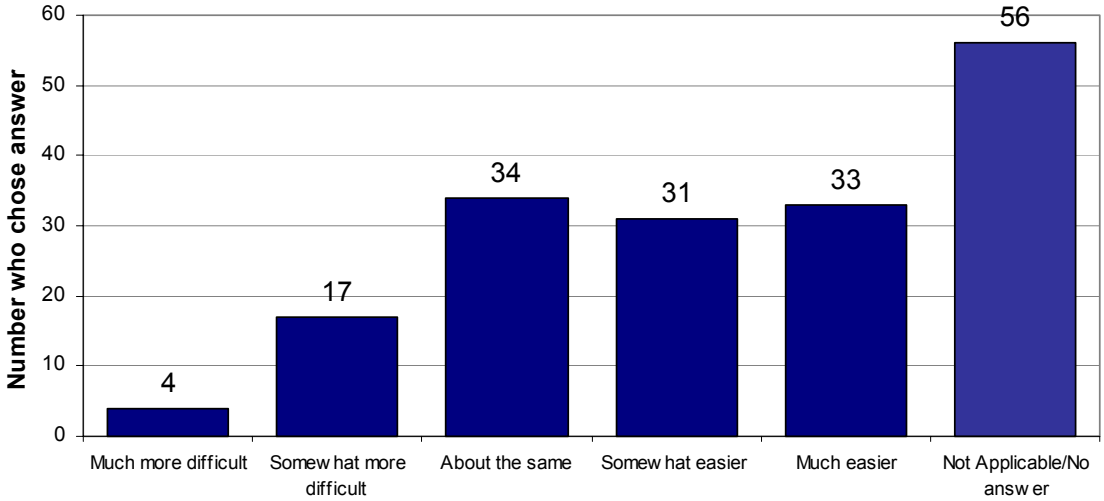


Figure 40. Taking care of children at home (n=175)



KEY to symbols: < = less than
≤ = less than or equal to

Figure 41. Taking care of children's health (n=175)

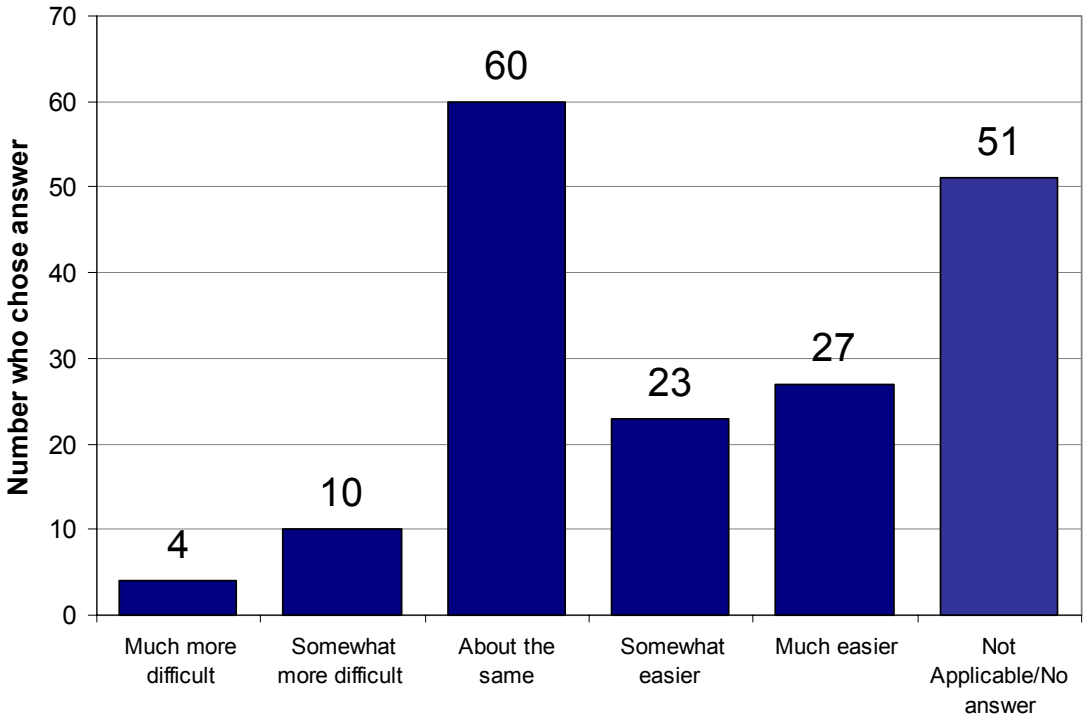
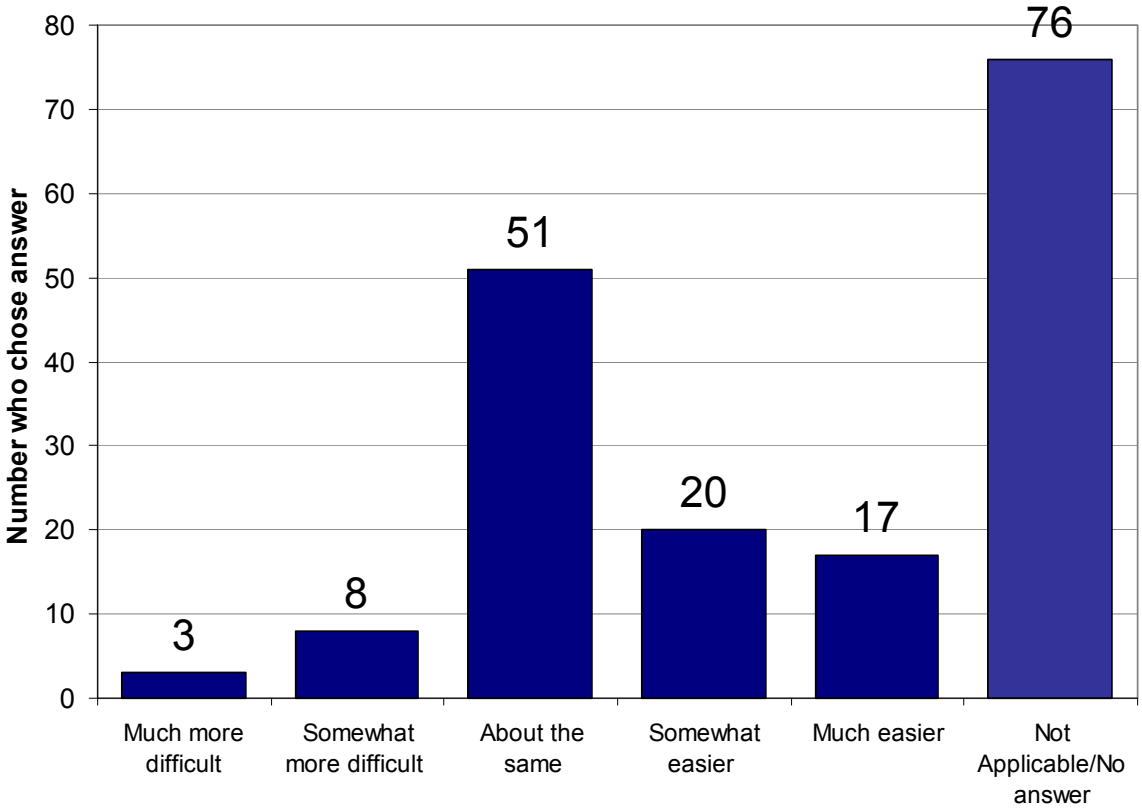


Figure 42. Ensuring children do schoolwork (n=175)



KEY to symbols: < = less than
≤ = less than or equal to

Figure 43. Supervising children's behavior and activities at home (n=175)

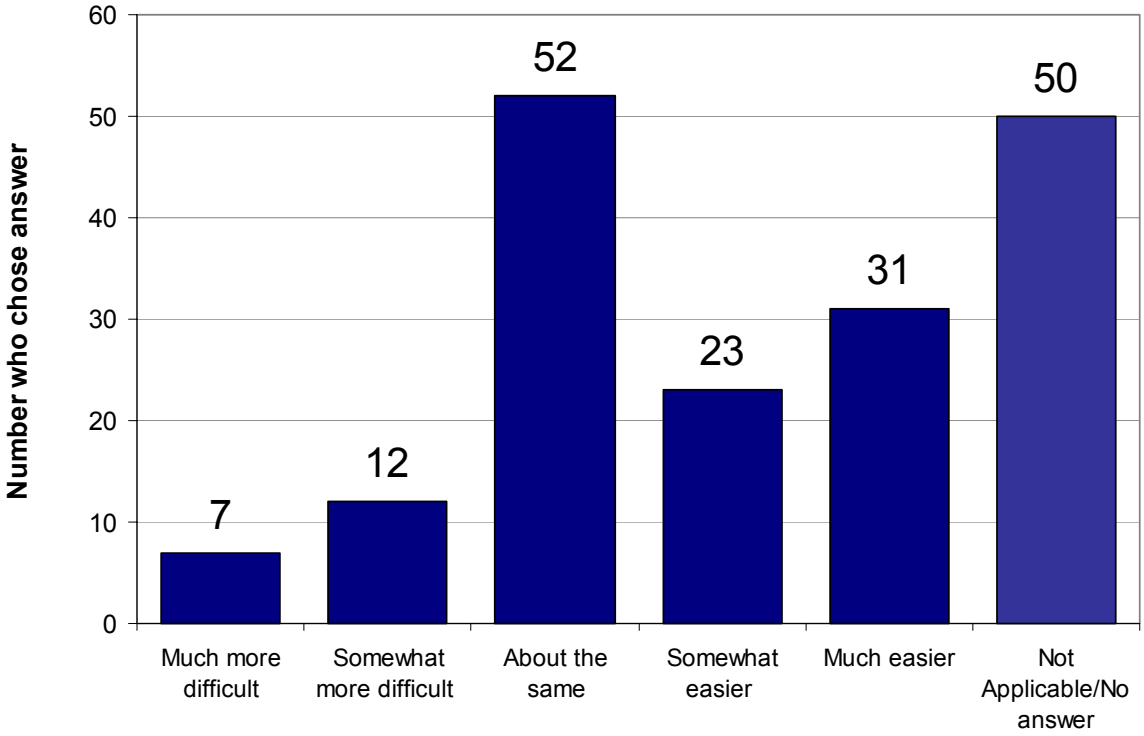
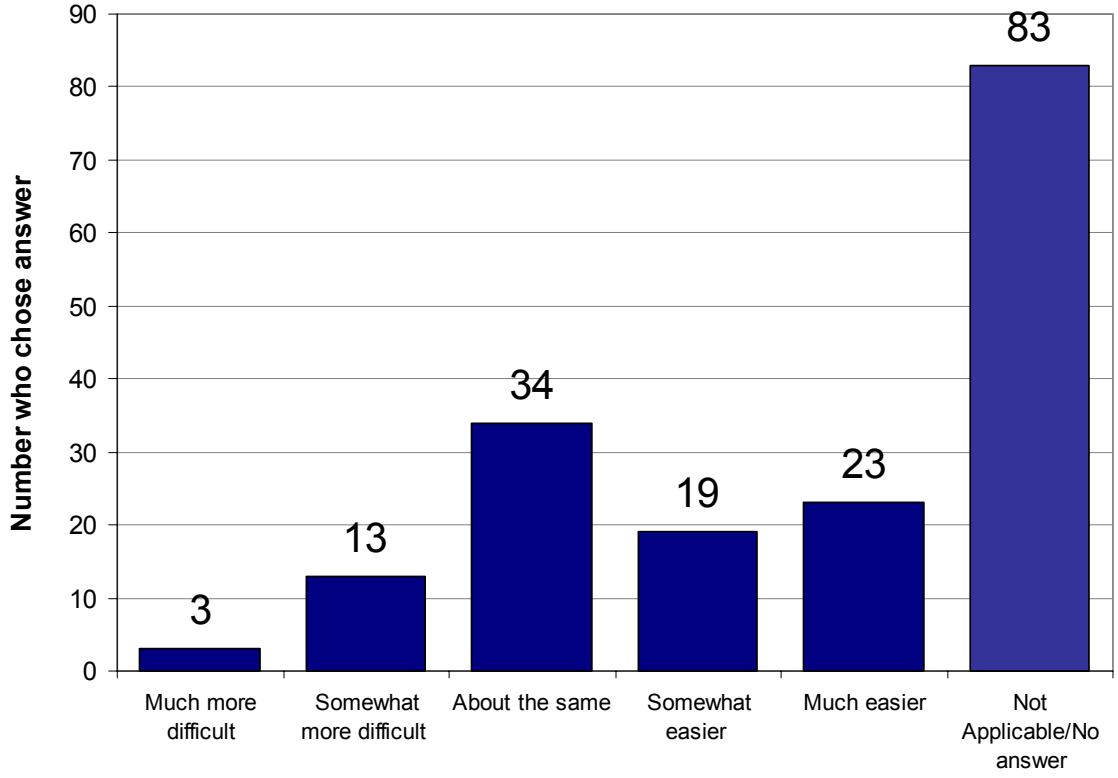


Figure 44. Having children take part in after school activities (n=175)



KEY to symbols: < = less than
≤ = less than or equal to

Figure 45. Participating in activities at your child(ren)'s school (n=175)

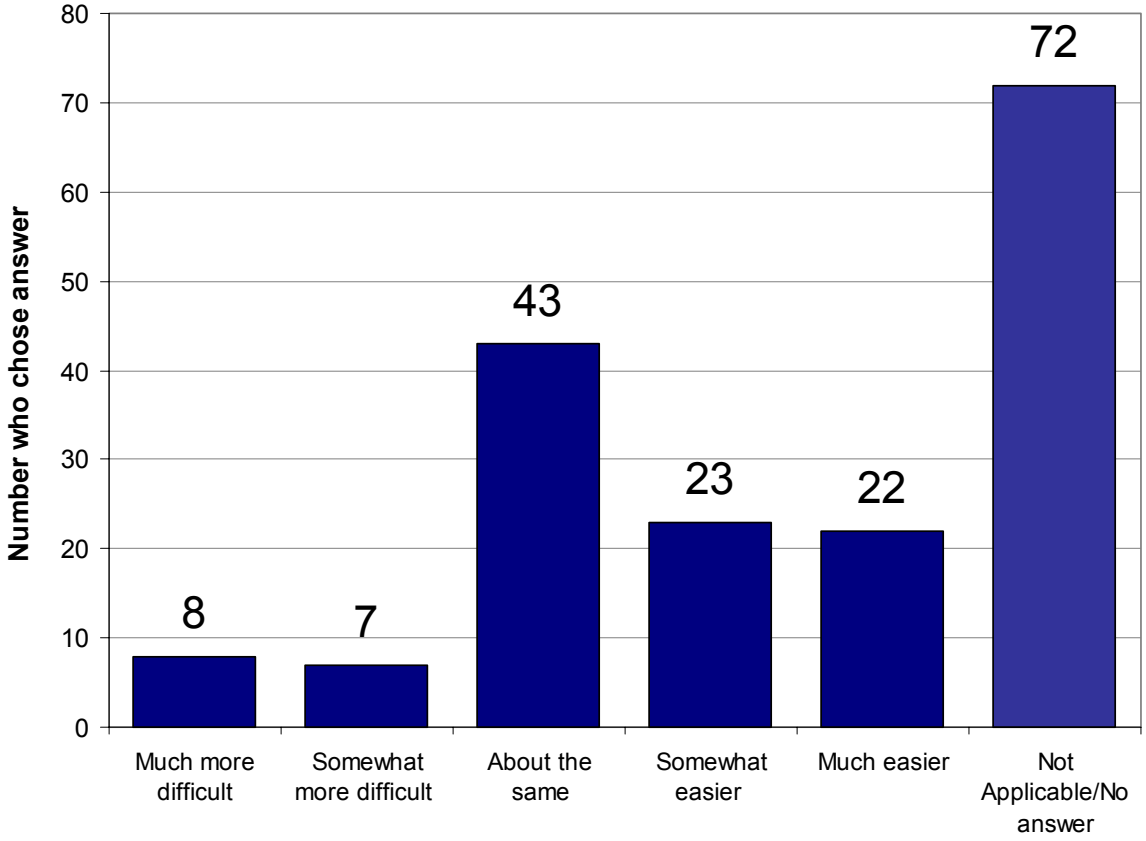
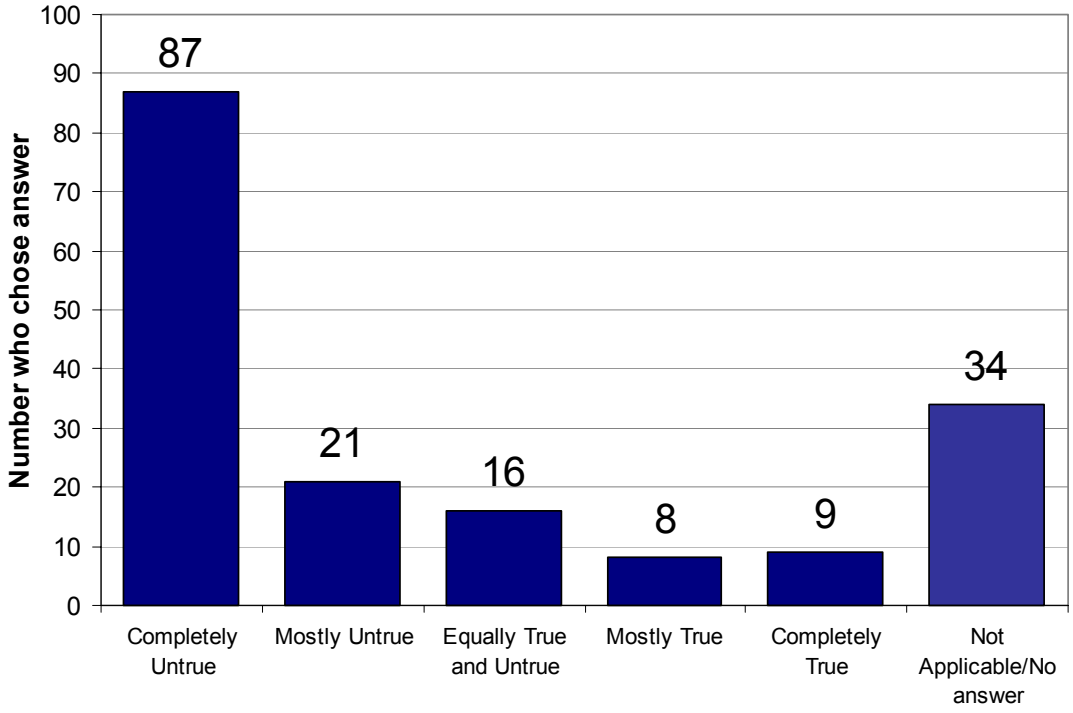


Figure 46. The 48/96 schedule creates a strain for our(my) child(ren) (n=175)



KEY to symbols: < = less than
≤ = less than or equal to

Figure 47. The 48/96 schedule leaves us (me) with too little TIME to be the kind of parent we (I) want to be (n=175)

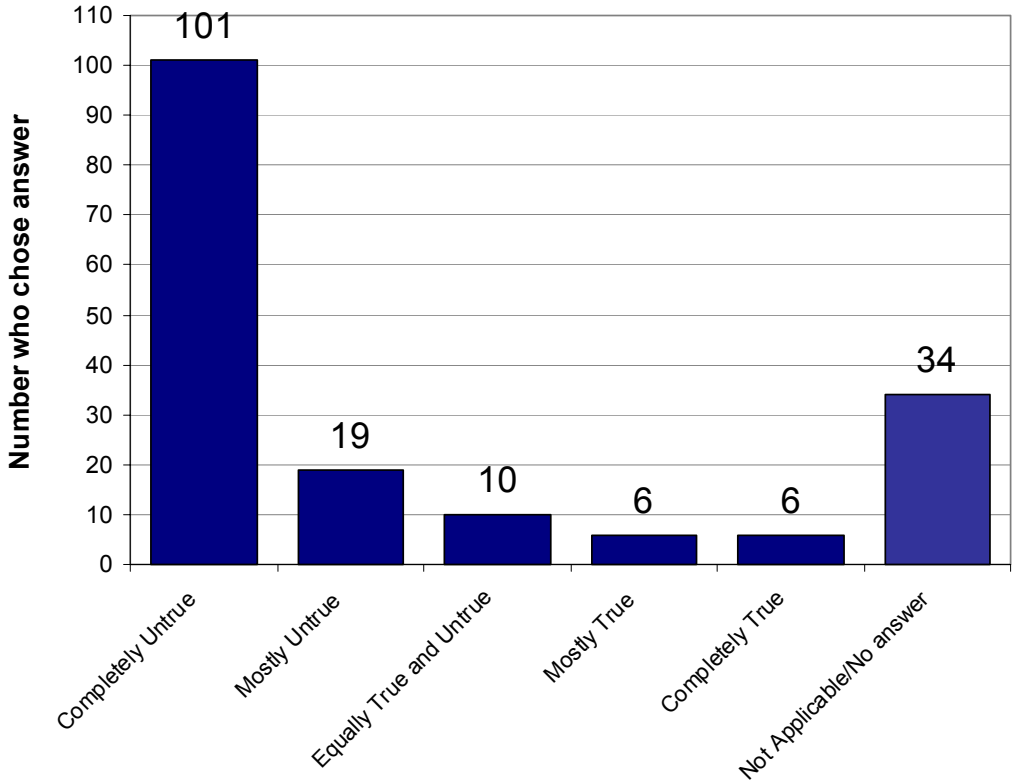


Figure 48. The 48/96 schedule leaves us (me) with too little ENERGY to be the kind of parent we (I) want to be (n=175)

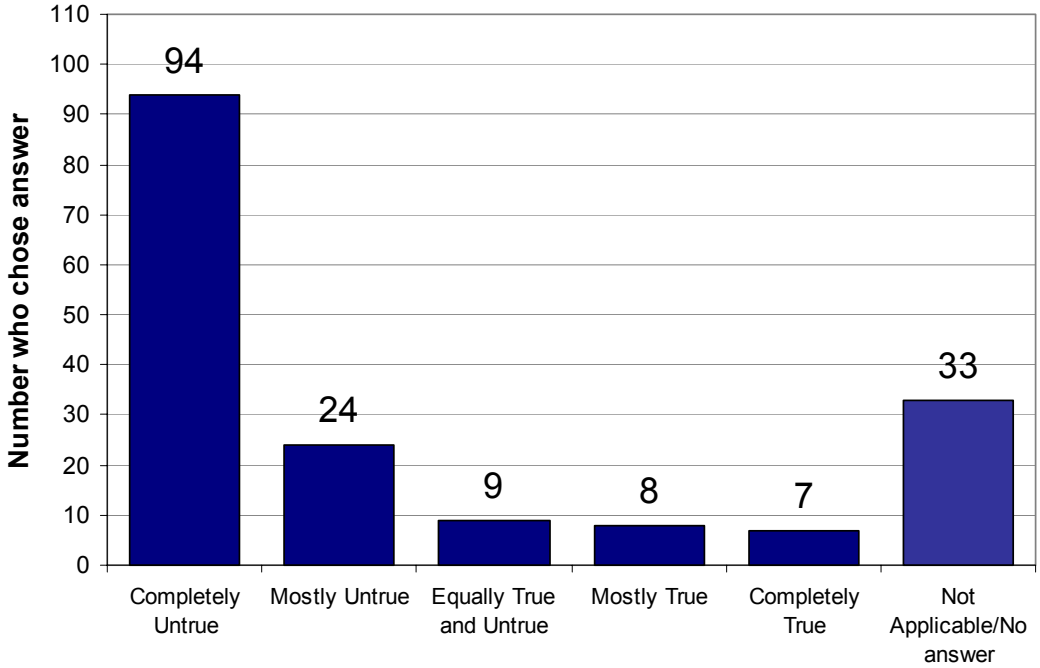
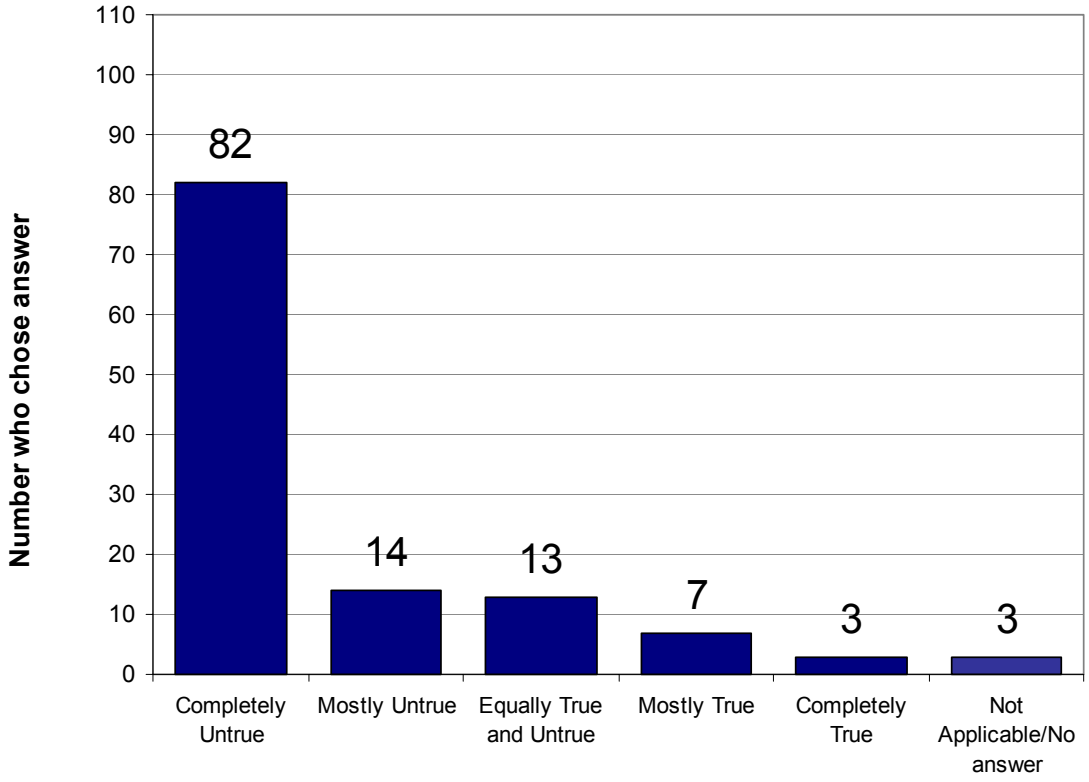


Figure 49. The 48/96 schedule creates a strain on our marital (partner) relationship (n=175)



KEY to symbols: < = less than
≤ = less than or equal to

Figure 50. Because of the 48/96 schedule, our (my) family time is less enjoyable (n=175)

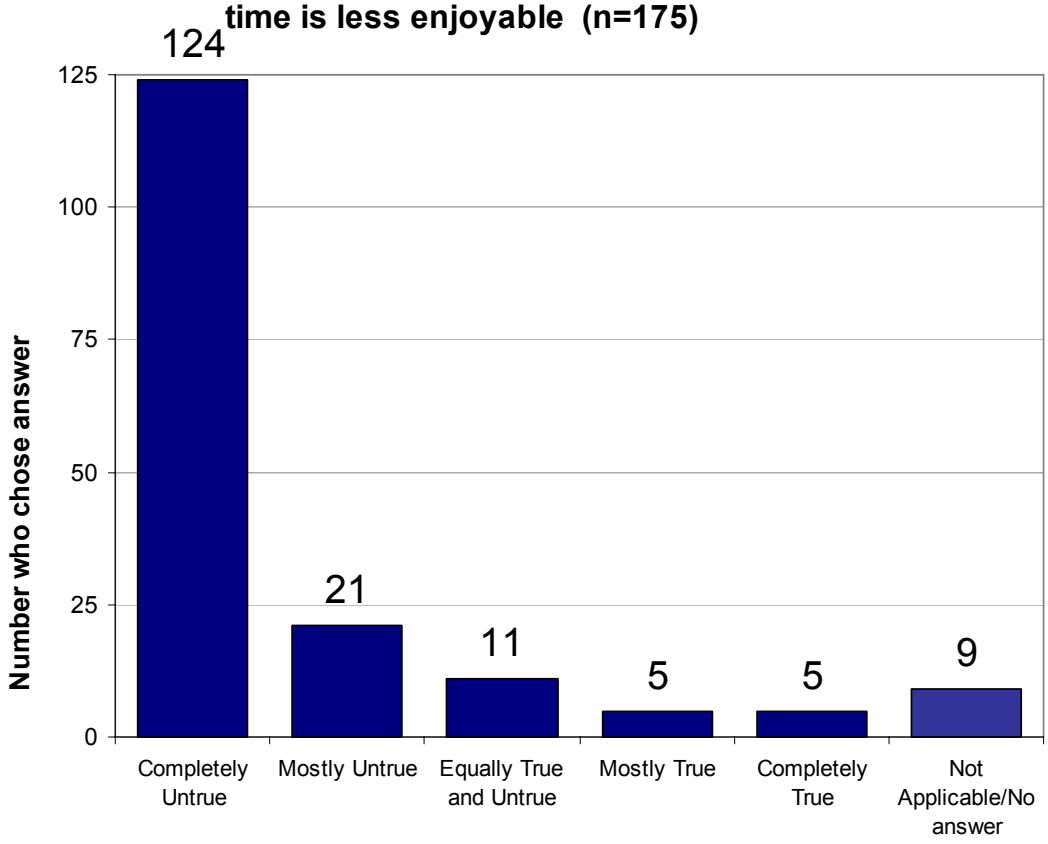
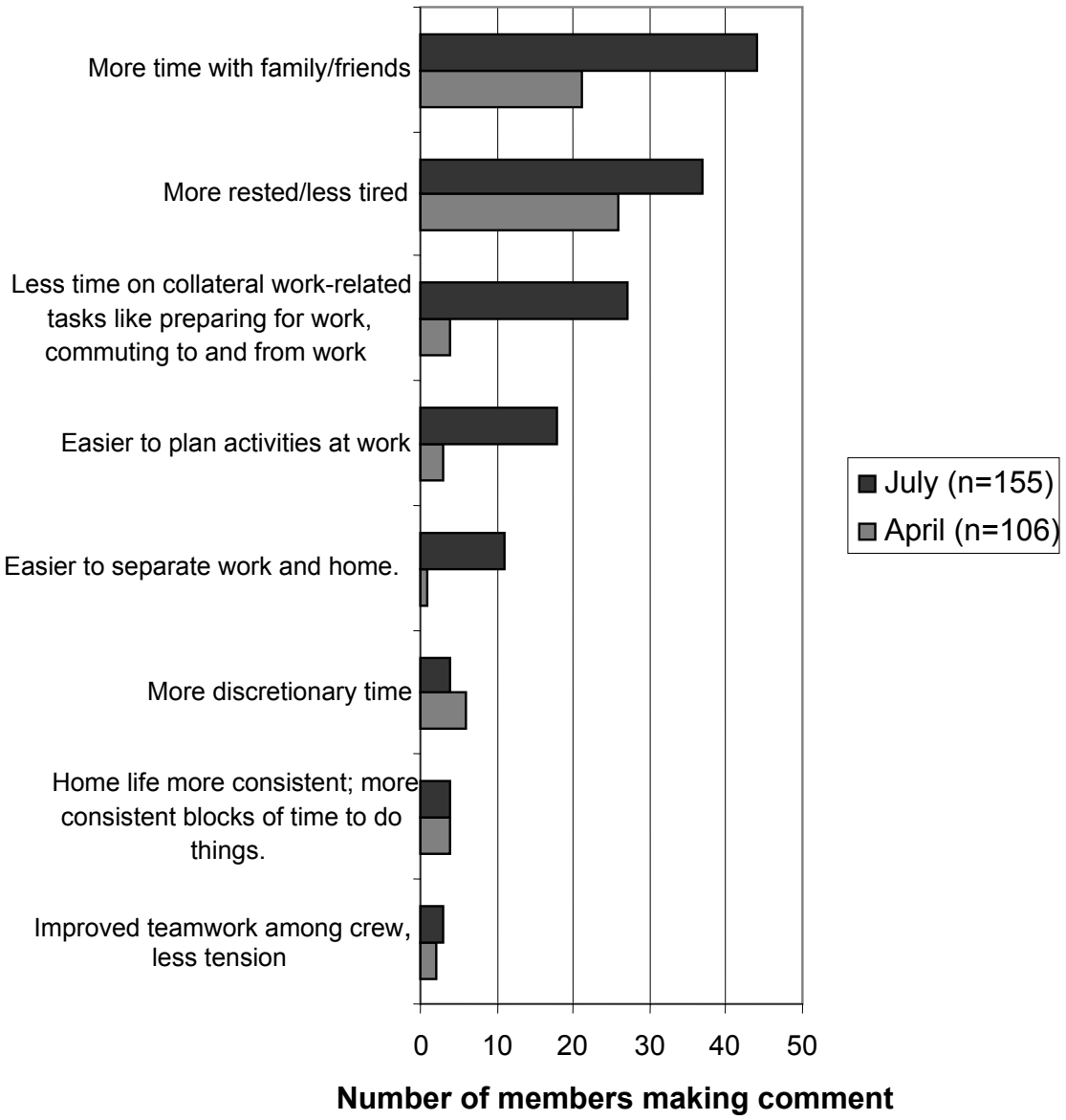


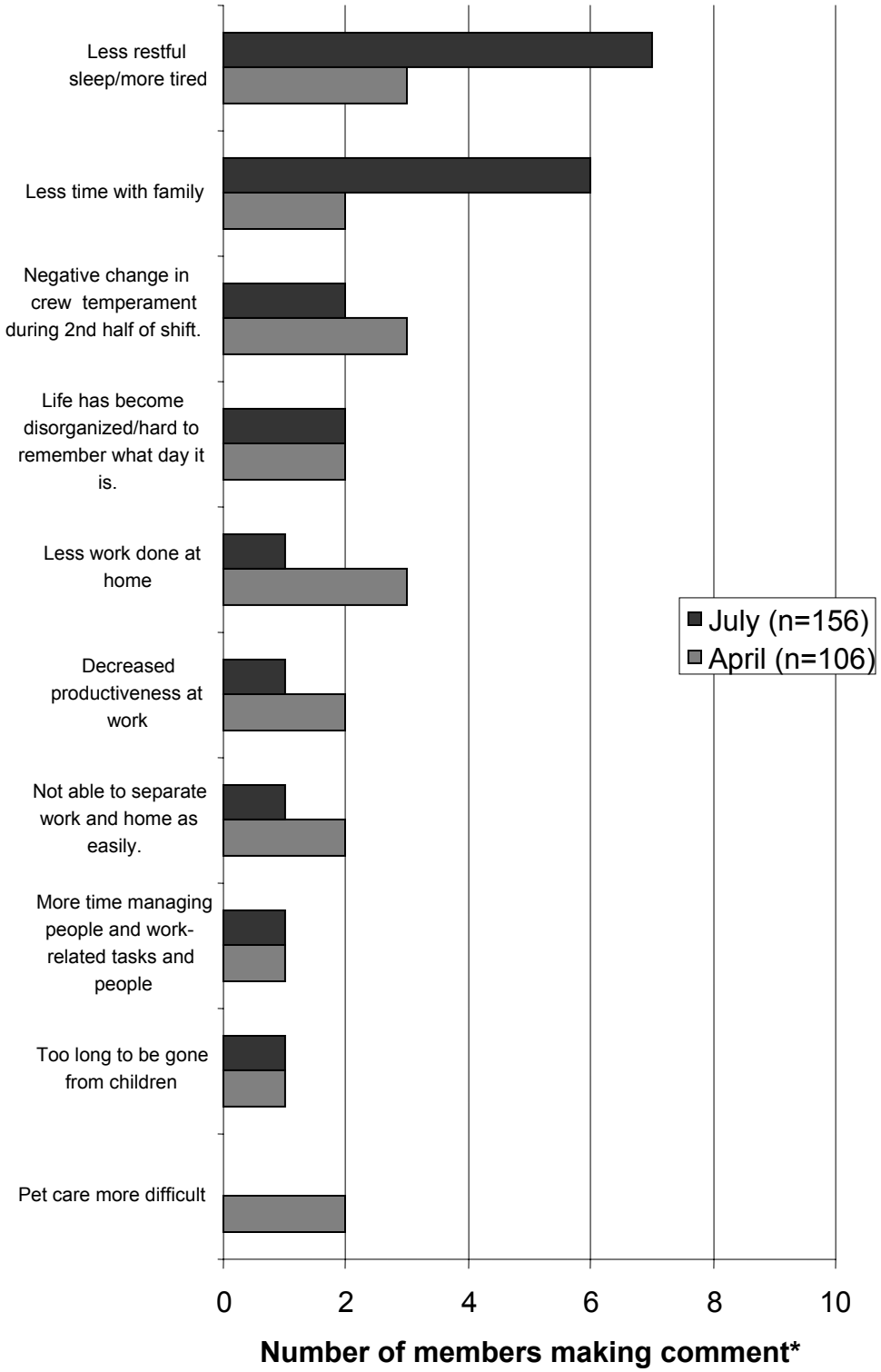
Figure 51 a. MEMBER SURVEYS: Positive comments about 48-96, April and July 2006



*Members could make more than one comment for each time period. Also, members who answered in April and July could make the same comment twice.

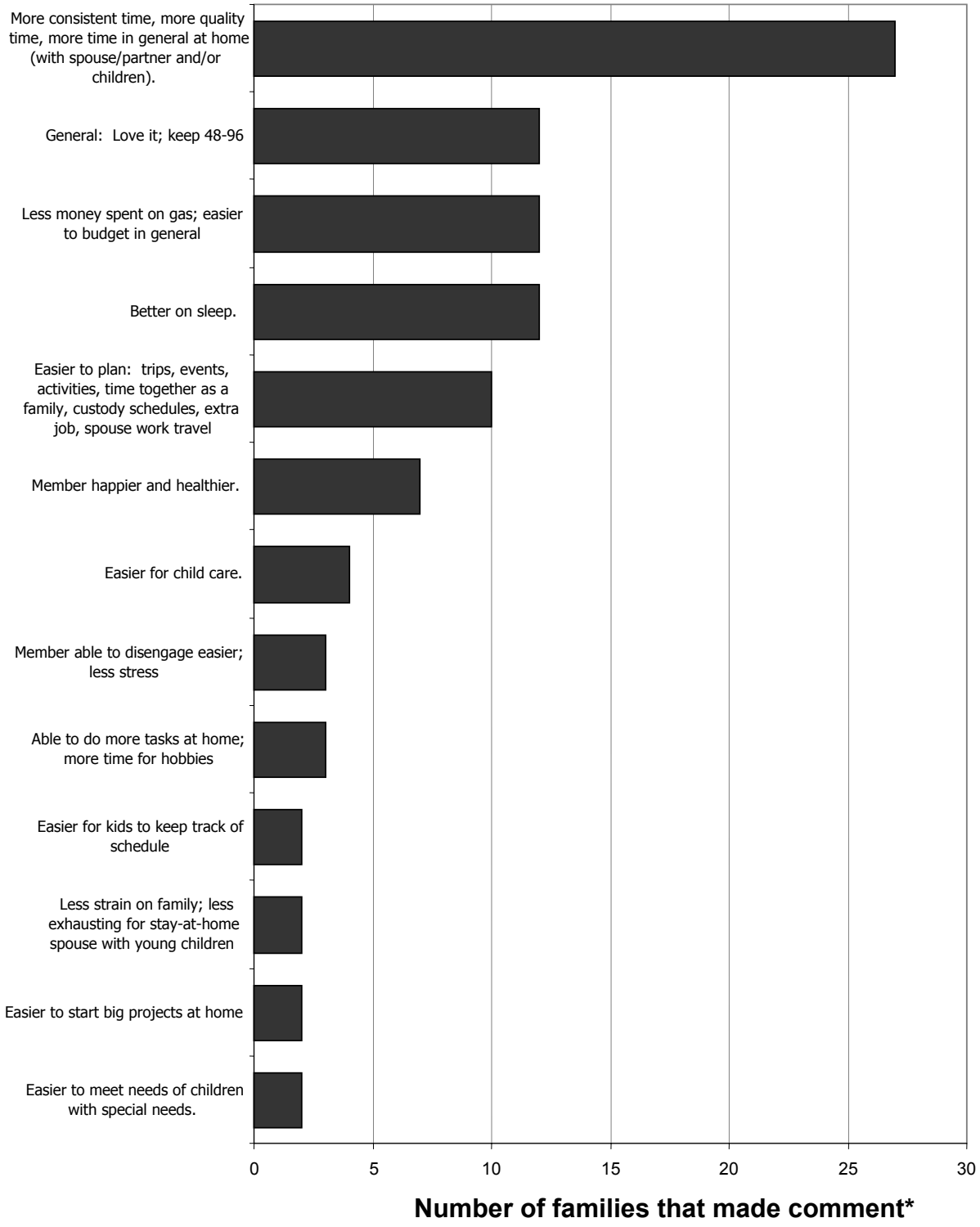
KEY to symbols: < = less than
≤ = less than or equal to

Figure 51 b. MEMBER SURVEYS: Negative comments about 48-96, April and July 2006



*Members could make more than one comment for each time period. Also, members who answered in April and July could make the same comment twice.

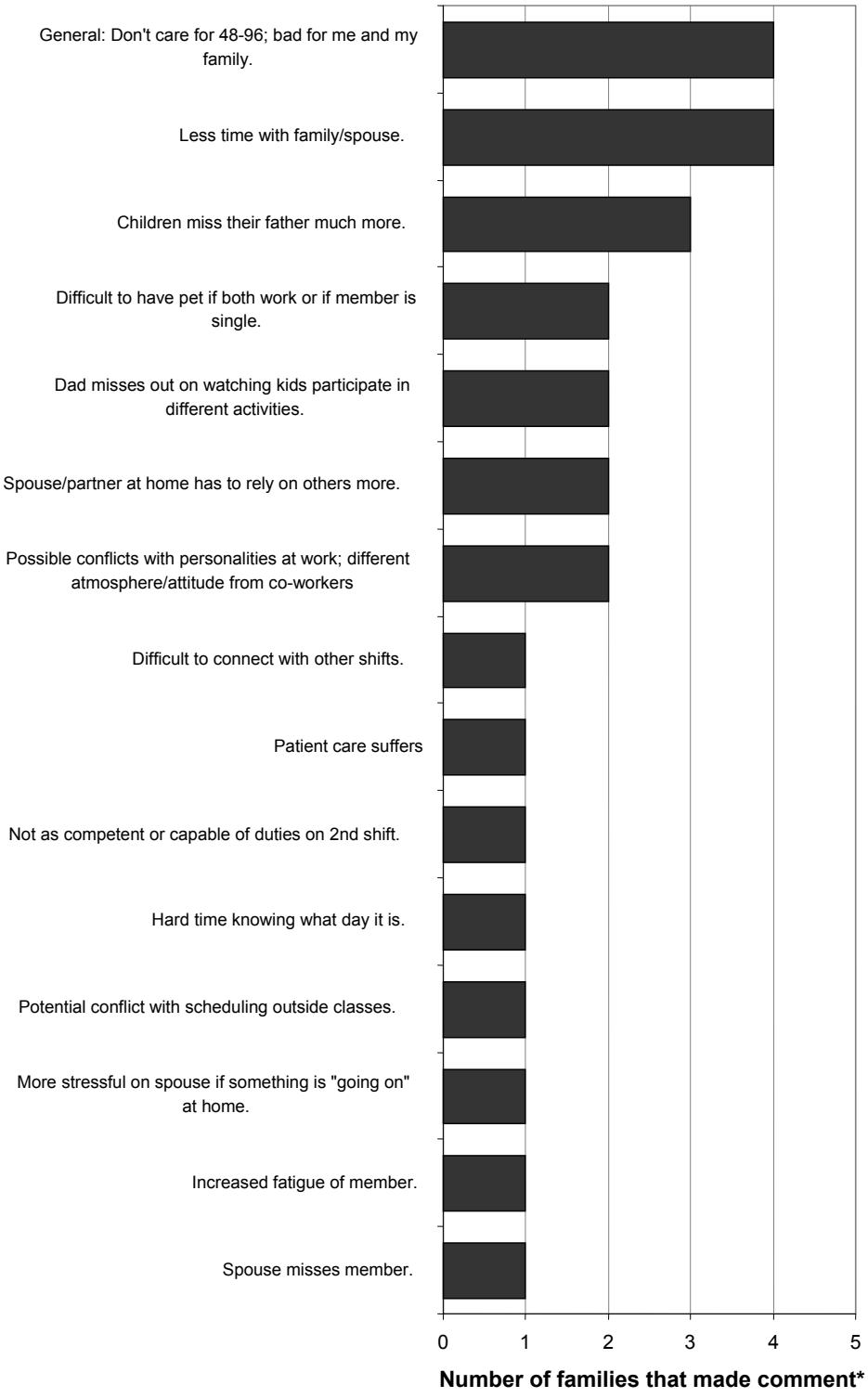
Figure 52 a. FAMILY SURVEY COMMENTS: Positive comments about 48-96 shift, August 2006



* Families could make more than comment

KEY to symbols: < = less than
≤ = less than or equal to

Figure 52 b. FAMILY SURVEY COMMENTS: Negative comments about 48-96 shift, August 2006



* Families could make more than comment

APPENDIX A

Statistical Methods and Notes

1. In order for the sleep diary to be in the analysis, the member had to include observations from two or three "ON-SHIFTS" and five or four "OFF-SHIFTS."

2. Statistical significance for paired data was assessed using the Wilcoxon Matched-Pairs Signed-Ranks Test. Accessed 10/1/2006 from http://www.fon.hum.uva.nl/Service/Statistics/Signed_Rank_Test.html.

3. p value is a measure of statistical significance. Significance levels show you how likely a result is due to chance. The p value tells you how likely something is to be not true. Thus, a p value less than (<) 0.01 says that there is a less than 1% chance that the results are not true; or in other words, there is 99% chance the results are true. (Adapted from Statistical Significance, accessed 10/18/2006 from http://www.surveysystem.com/signif.htm.)

4. Median is the middle number of the observed range. Mean is the average (sum of all observations/total number of observations). for the group of numbers 2,4,7,8, 9,10,15, the median is 8, and the mean is 7.86.

5. Johns KW. 1991. A new method for measuring daytime sleepiness: the Epworth sleepiness scale. Sleep 14(6) 540-5.

6. Statistical significance assessed by Chi-square test, Web Chi Square Calculator, Accessed from http://schnoodles.com/cgi-bin/web_chi.cgi.

7. Standard Shiftwork Index. Accessed November 18, 2005 from http://www.workingtime.org/images/5/5b/SSIQUES.doc

8. Barton J, Folkard S, Smith LR, Spelten ER, Totterdell PA. Standard Shiftwork Index Manual. Accessed November 18, 2005 from http://www.workingtime.org/images/3/31/SSIMAN.doc

9. Kristensen TS, Borritz M, Villadesen E, Christensen KB. The Copenhagen burnout inventory: A new tool for the assessment of burnout. Work & Stress, July – September 2005; 19 (3): 192-207.

10. Statistical significance assessed with the Kruskall-Wallis test using computing program Minitab, Release 14.

KEY to symbols: < = less than
≤ = less than or equal to

APPENDIX B (Member Questionnaire)

1. How long have you worked in your present shift system? (Can be with other EMS crews as well)

_____Years _____Months

2. How long altogether have you been working shifts? (Include all work, not just EMS work).

_____ Years _____ Months

3. On average how many hours do you work each week, excluding overtime? _____ Hours

4. Are you currently a paramedic technician? ❑ No ❑ Yes

5. On average, how long does it take you to travel to and from work? _____ Minutes

For questions 5-7, *please answer each question on a scale of 1-5, where 1 indicates the shift system does not interfere at all and 5 indicates that it interferes very much.*

6. In general, how much does your shift system interfere with the sorts of things that you would like to do in your leisure time (e.g., sports activities, hobbies, etc.)?

Not at all 1 2 3 4 5 Very much

7. In general, how much does your shift system interfere with the household things you have to do in your time off work (e.g., grocery shopping, looking after children, etc.)?

Not at all 1 2 3 4 5 Very much

8. In general, how much does your shift system interfere with the non-household things you have to do in your time off work (e.g., going to doctor, going to the bank, etc.)?

Not at all 1 2 3 4 5 Very much

9. Do you feel that overall the advantages of your current shift system outweigh the disadvantages?

○ Definitely not ○ Probably not ○ Maybe ○ Probably yes ○ Definitely yes

10. How does your spouse/partner feel about you working your current shift?

○ Extremely unsupportive ○ Fairly unsupportive ○ Quite indifferent ○ Fairly supportive ○ Extremely supportive ○ Not applicable

The following questions relate to general job satisfaction and <u>not</u> to your satisfaction with your shift system. Please choose the appropriate answer for each question.

11. Generally speaking, I am very satisfied with this job.

○ Disagree strongly ○ Disagree ○ Disagree slightly ○ Neutral ○ Agree slightly ○ Agree ○ Agree strongly

12. I frequently think of quitting this job.

13. ○ Disagree strongly ○ Disagree ○ Disagree slightly ○ Neutral ○ Agree slightly ○ Agree ○ Agree strongly

14. I am generally satisfied with the kind of work I do in this job**.**

○ Disagree strongly ○ Disagree ○ Disagree slightly ○ Neutral ○ Agree slightly ○ Agree ○ Agree strongly

15. Most people on this job are very satisfied with the job**.**

○ Disagree strongly ○ Disagree ○ Disagree slightly ○ Neutral ○ Agree slightly ○ Agree ○ Agree strongly

16. People on this job often think of quitting.

○ Disagree strongly ○ Disagree ○ Disagree slightly ○ Neutral ○ Agree slightly ○ Agree ○ Agree strongly

The following questions relate to your work with patients and how satisfying it is for you. Please choose the appropriate answer for each question.

17. Do you find it hard to work with patients?

○ Yes, to a very high degree ○ Yes, to a high degree ○ Somewhat ○ To a low degree ○ To a very low degree

18. Does it drain your energy to work with patients?

○ Yes, to a very high degree ○ Yes, to a high degree ○ Somewhat ○ To a low degree ○ To a very low degree

19. Do you find it frustrating to work with patients?

○ Yes, to a very high degree ○ Yes, to a high degree ○ Somewhat ○ To a low degree ○ To a very low degree

20. Do you feel that you give more than you get back when you work with patients?

○ Yes, to a very high degree ○ Yes, to a high degree ○ Somewhat ○ To a low degree ○ To a very low degree

21. Are you tired of working with patients?

○ Yes, to a very high degree ○ Yes, to a high degree ○ Somewhat ○ To a low degree ○ To a very low degree

22. Do you sometimes wonder how long you will be able to continue working with patients?

○ Yes, to a very high degree ○ Yes, to a high degree ○ Somewhat ○ To a low degree ○ To a very low degree

KEY to symbols: < = less than
≤ = less than or equal to

EPWORTH SLEEPINESS SCALE: The next set of questions asks about your sleep. **For questions 21 – 28*, use the following scale to indicate how likely you are to doze off or fall asleep in the following situations in contrast to just feeling tired. This refers to your usual way of life in recent times. Even if you have not done some of these things recently, try to work out how they would have affected you.***

0 = Would never doze; 1 = slight chance of dozing; 2 = Moderate chance of dozing; 3=High chance of dozing.

SITUATION	CHANCE OF DOZING
23. Sitting and reading	
24. Watching TV	
25. Sitting inactive in a public place (for example a theater or a meeting)	
26. As a passenger in a car for an hour without a break	
27. Lying down to rest in the afternoon when circumstances permit	
28. Sitting and talking to someone	
29. Sitting quietly after a lunch without alcohol	
30. In a car, while stopped for a few minutes in traffic	

31. Do you ever feel tired on YOUR TIME OFF?

○ Almost never ○ Rarely ○ Sometimes ○ Frequently ○ Almost always

32. Do you ever feel tired ON SHIFT?

○ Almost never ○ Rarely ○ Sometimes ○ Frequently ○ Almost always

33. When you or other crew members feel tired on shift, are you/other crew members more likely to do any of the following activities as compared to when you are not feeling tired? Put a check mark next to each activity that you are more likely to engage in when tired.

	Yes, more likely to do when tired.
a. Not take a patient to requested destination.	❑
b. Not chart completely.	❑

c. Others (describe)_____

_____

The following questions pertain your health habits.

34. On average, how many cigarettes do you smoke per week? _____

35. On average, how many alcoholic drinks do you drink per week? _____

(One alcoholic drink is 1 beer, 6 ounces of wine, or 1 shot/1 ounce liquor)

36. On average, how many cups of caffeinated coffee/tea/cola do you drink each day? _____ cups/day

37. Your current age _____years

38. Gender ❑ Male ❑ Female

APPENDIX C (Family Survey)

INSTRUCTIONS

This survey is meant for all families of West Metro Fire Rescue members. **Families can take many shapes and sizes.**

If you are:
Currently single without dependent children, and are not living with a partner, please answer these questions as they pertain to you.

Married or live with a partner, and do not have children, answer these questions with your spouse or partner. Your "family" is you and your spouse/partner.

Married or live with a partner and have children, answer these questions with your spouse or partner. Your "family" is you and your spouse/partner and your dependent children. *Dependent children* are children that depend on you for financial and/or emotional support, regardless of whether they live with you or whether they are biologically related to you.

If you are single and have children, your "family" is you and your dependent (child)ren. Dependent children are children that depend on you for financial and/or emotional support, regardless of whether they live with you or whether they are biologically related to you.

KEY to symbols: < = less than
≤ = less than or equal to

Activities At Home

Since the SHIFT CHANGE, how has your family found it to accomplish the following activities?

	January through June 2006 -- COMPARED TO – July through December 2005					
	Much more **difficult** to accomplish	Somewhat more **difficult** to accomplish	About the same	Somewhat **easier** to accomplish	Much **easier** to accomplish	Not Applicable
EXAMPLE: Taking care of yardwork.	❍	❍	❍	●	❍	❍
1. Getting daily household tasks done.	❍	❍	❍	❍	❍	❍
2. West Metro Member: Working at paid job(s)	❍	❍	❍	❍	❍	❍
3. Spouse/Partner - Working at paid job(s)	❍	❍	❍	❍	❍	❍
4. Shopping for necessities.	❍	❍	❍	❍	❍	❍
5. Handling financial matters.	❍	❍	❍	❍	❍	❍
6. Maintaining safety/security of your home.	❍	❍	❍	❍	❍	❍
7. Maintaining automobile.	❍	❍	❍	❍	❍	❍
8. Taking care of member's health.	❍	❍	❍	❍	❍	❍
9. Taking care of spouse/partner's health.	❍	❍	❍	❍	❍	❍
10. Taking care of elder's health.	❍	❍	❍	❍	❍	❍
11. Taking care of pets.	❍	❍	❍	❍	❍	❍
12. "Having a social life." Visiting with friends, etc.	❍	❍	❍	❍	❍	❍
13. Doing volunteer work.	❍	❍	❍	❍	❍	❍
14. Doing special projects around the home.	❍	❍	❍	❍	❍	❍
15. Participating in leisure time activities.	❍	❍	❍	❍	❍	❍
16. Taking personal time for yourselves (getting a hair cut etc.)	❍	❍	❍	❍	❍	❍
17. Spending time together as a family.	❍	❍	❍	❍	❍	❍
18. Taking care of elder at home.	❍	❍	❍	❍	❍	❍
The next 8 questions pertain to families with children.						
19. Arranging for child care.	❍	❍	❍	❍	❍	❍
20. Taking care of children at home.	❍	❍	❍	❍	❍	❍
21. Taking care of child(ren)'s health.	❍	❍	❍	❍	❍	❍
22. Ensuring children do schoolwork.	❍	❍	❍	❍	❍	❍
23. Supervising children's behavior and activities at home.	❍	❍	❍	❍	❍	❍
24. Having children take part in after-school activities.	❍	❍	❍	❍	❍	❍
25. Participating in activities at your child (ren)'s school (school events, PTA, parent-teacher conferences).	❍	❍	❍	❍	❍	❍
26. Participating in child(ren)'s extra-curricular activities like Boy Scouts or Girl Scouts.	❍	❍	❍	❍	❍	❍

27. With the onset of the 48/96 schedule, did you have to change who provides care for your child/children?

❍ YES
❍ NO (SKIP to Question #29)
❍ Not Applicable (SKIP to Question #29)

28. Are your current child care arrangements as satisfactory to you as the child care arrangements you had before January 2006?

❍ YES
❍ NO. Please briefly explain why they are not: _____
_____
_____

29. With the onset of the 48/96 schedule, did you have to change who provides care for your parent or elder adult?

❍ YES
❍ NO (SKIP to Question #31)
❍ Not Applicable (SKIP to Question #31)

30. Are your current arrangements as satisfactory to you as the arrangements you had before January 2006?

❍ YES
❍ NO Please briefly explain why they are not: _____
_____
_____

31. With the onset of the 48/96 schedule, did you have to amend your visitation rights?

❍ YES
❍ NO (SKIP to Question #33)
❍ Not applicable (SKIP to Question #33)

32. Are your current arrangements as satisfactory to you as the arrangements you had before January 2006?

❍ YES
❍ NO Please briefly explain why they are not: _____
_____
_____

Combining Work and Family

To what extent, if at all, is each of the following items true for your family?

	Completely Untrue	Mostly Untrue	Equally True and Untrue	Mostly True	Completely True	Not Applicable
33. The 48/96 schedule creates a strain for our (my) child(ren).	❍	❍	❍	❍	❍	❍
34. Because of the 48/96 schedule, our (my) family time is less enjoyable.	❍	❍	❍	❍	❍	❍
35. The 48/96 schedule leaves us (me) with too little **time** to be the kind of **parent** we (I) want to be**.**	❍	❍	❍	❍	❍	❍
36. The 48/96 schedule leaves us (me) with too little **energy** to be the kind of **parent** we (I) want to be**.**	❍	❍	❍	❍	❍	❍
37. The 48/96 schedule creates a strain on our marital (partner) relationship.	❍	❍	❍	❍	❍	❍

KEY to symbols: < = less than
≤ = less than or equal to

Information About Your Household

1. How long is the West Metro member's round trip commute to work?	_____Minutes
2. Are you (the West Metro member) a single parent with sole custody of a child (ren)?	❍ Yes ❍ No
3. Total number of adults living in household (including member).	_____Adults
4. Would your family be willing to participate in a focus group to discuss these important issues in a more in-depth way? (Separate focus groups will be held for members and for spouses/partners).	❍ Yes ❍ No ❍ Maybe

About Your Children

❍ I/WE DO NOT HAVE CHILDREN.

YOUR DEPENDENT CHILDREN: AGE, AND SCHOOL GRADE EACH CHILD WILL BE IN, AS OF SEPTEMBER 2006

(IF CHILD WILL BE CARED FOR AT HOME, WRITE "HOME").

	Current Age	School Grade as of September 2006 (if child will be cared for at home, write "HOME")
EXAMPLE:	6	First Grade
First Child		
Second Child		
Third Child		
Fourth Child		
Fifth Child		
Sixth Child		
Seventh Child		
Eighth Child		

Please use space below to make additional comments.

Thank you for taking the time to provide this important information.

Appendix D

Table 2. Response rates, by method and time of assessment

Method of assessment	TOTAL Response Rate ON-LINE members (n=269)	Number of uniform employees in administrative positions that responded
December 2005		
TOTAL questionnaires returned	160 (59.5%)	12
Consented	122	12
Anonymous*	38	
TOTAL sleep diaries returned	109 (40.5%)	10
Consented	102	
Anonymous*	7	
April 2006		
TOTAL questionnaires returned	106 (40.9%)	**3**
Consented	78	3
Anonymous*	28	
TOTAL sleep diaries returned	98 (36.4%)	**3**
Consented	74	3
Anonymous*	24	
July 2006		
TOTAL questionnaires returned	156 (57.9%)	7
Consented	113	7
Anonymous*	43	
TOTAL sleep diaries returned	129 (48.0%)	4
Consented	97	4
Anonymous	32	
Family Survey**	175 (65.1%)	NA
Focus Groups	See attached report	See attached report

* The response rate to the first survey and sleep diary was less than optimal, so the protocol was changed to allow members to respond anonymously.

** The Family Survey was not included in the research and the questionnaire was administered anonymously.

KEY to symbols: < = less than
≤ = less than or equal to

JVA CONSULTING, LLC
linking experience and vision

West Metro Fire Rescue

Focus Group Report Prepared By:

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September 2006

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INTRODUCTION

In July 2006, St. Anthony's Hospitals contracted with JVA Consulting, LLC to conduct focus groups with West Metro Fire Department staff and family members. The main purpose of the evaluation was to gather qualitative data on how a recent 48/96 shift change has affected the quality of family life for members and their families. This study served as a companion piece to a larger evaluation conducted by St. Anthony's Hospitals.

METHODOLOGY

JVA Consulting, LLC (JVA) worked with St. Anthony's hospitals to develop focus group protocols and structured discussion questions and to schedule participants (see Appendix A). JVA facilitators conducted a total of six focus groups, three with firefighters and three with spouses. JVA research associates facilitated the focus groups and transcribed audio-recordings of the discussions. A JVA senior research associate analyzed the data and prepared the final report.

Thirteen firefighters participated across three focus groups: four firefighters in the first group, three in the second, and six in the third. Eleven spouses/partners participated across three focus groups: two in the first group, three in the second and six in the third. Focus groups were conducted at West Metro Fire on August 29th, 30th, and September 1st at 6:00 in the evening. The West Metro Community Outreach Director scheduled the focus groups and invited all West Metro firefighters, staff, and spouses to attend. A final list of participants who had agreed to attend was sent to JVA in early August. These participants were mailed letters confirming the date, time, and location of the focus groups, as well as the focus group questions so that they would know what to expect. Firefighter/staff and partner focus groups were conducted simultaneously in different rooms to allow families who wanted to participate to travel together. Childcare and dinner were provided.

RESULTS

I. Firefighter Focus Groups

Length of time with West Metro Fire Department

The length of time that firefighters have been with West Metro Fire Department ranged from 6 to 20 years with an average of 11.5 years. Over half (7 out of 13) have been with the department for 10 or more years.

Shift Change Process

The majority of firefighters agreed that the transition to the new shift could not have been planned better. They were happy with how it was introduced and implemented. It was a matter of adjusting to a new routine, such as the new training schedule, which could not have been planned for. One firefighter stated,

"It was a lot easier than I thought. … I expected the first day to be really long and the second day to be even longer, but it didn't turn out that way at all. It was an easy transition."

The general consensus from firefighters across all three focus groups was that the process of changing to the new 48/96 shift went smoothly and without problems. Firefighters had some discussion on how to handle minor issues, such as housekeeping/chores and morning wake-up times, during the new shift. Firefighters also adjusted the training schedule so that trainings fit into two days instead of three to accommodate the new shift. One person working in the office did not have any problem with the shift change. Several said that they liked the new schedule compared with the previous schedule because it gave them more time at home or with family. One firefighter who was a volunteer previously reported no schedule preference. In commenting about a two-platoon shift and Kelly days at a previous department, another firefighter reported,

"They went to the old schedule soon after I left, but I certainly hope we don't go to a schedule like that ever again."

Strengths of the 48/96 schedule compared with the previous schedule

Firefighters felt that there were numerous strengths to the 48/96 schedule, including financial, physical/mental health, and time benefits, as well as increased productivity and home/work balance.

Financially, firefighters in two of the three focus groups have found that they spend a lot less on gas since they have to drive to the firehouse fewer times a week. One person views the saving of $300 a month on gas as the equivalent of a salary increase.

Most firefighters claim that they are less fatigued with the new schedule, which allows them to get more rest during time off. With the previous schedule, many felt that the in-between days were useless because they were so tired, or they couldn't sleep because they were so busy getting other things done. "It wasn't easy to switch gears," one firefighter said. With the new schedule, they claim to have less burnout and feel they can cope better so that tasks do not accumulate or overwhelm them as much.

Much of the feedback is related to the increased time firefighters now have in their new schedules:

Many like that they can now have more time for mini-vacations, especially if they go out of town. On the new schedules, staff have fewer days (10 vs. 13 days) per vacation, but they have a greater number of vacations per year (five times per year compared with three times).

They are able to schedule more personal time for projects and socializing with friends.

With the new shift, firefighters have more full weekends off. Many say they have more time with their children (especially with regard to custody time), to attend their extracurricular activities and school events. Some say that it feels like there are more days off, even though there are not.

Firefighters enjoy more rest time when they sleep at the firehouse on the second morning rather than waking up earlier at home to drive in.

Another strength of the new shift is the time saved by not driving to the firehouse as frequently. One person estimated that it is 10 hours less driving time per month for firefighters who commute from Castle Rock.

According to several firefighters, the new shift allows for increased productivity at work, because when they are at work for two days they are focused on work, and when they get off the shift they can go home and be focused on home life for four days. This equates to less stress and more balance between work and home. As a result, firefighters feel better physically and mentally and are able to exercise more frequently (on the second morning of the shift since they are already at the station).

They also find it easier to deal with family on the new shift because they are happier at work and at home. They report that their partners/spouses like the new shift because firefighters have more home time, and when they are home, they are easier to get along with.

Another plus is decreased stress and anxiety related to fewer shift changes in the mornings. Shift changes are stressful when a call comes in at the beginning of a shift change and the incoming crew does not have time to do inspections, etc. Since firefighters stay on duty for two consecutive mornings on the new shift, there are half as many shift changes to deal with. The result is greater efficiency and people receiving better service.

Several firefighters in one group agreed that they have more time to handle emergencies since they do not have to work the next day and can deal with contractors (i.e.,

pipes burst), or they can carry a project over from day to day.

Challenges of the 48/96 schedule compared with the previous schedule

Participants across all three groups felt that the 48/96 schedule does not pose many new challenges within their family/social life, and instead, it may relieve some of the challenges from the previous schedule. The main challenge reported was the initial adjustment to the new schedule for their children. For instance, one dad's young child misses him by the second night of the shift, but they cope by communicating by telephone. Another reported challenge was the stress for spouses/partners to manage the house for two days because they are more fatigued with home issues (i.e., taking care of the kids, appliance breakdowns, etc.), which they have to handle on their own. Firefighters see these as minor problems that are manageable. Special circumstances such as illness of a spouse/partner or children can also be difficult to deal with under the new schedule. Some of the single firefighters reported difficulty in caring for pets (i.e., feeding) when they are gone for 48 hours. Inevitably, they need someone else to help care for them or they have to give up their pets.

Another challenge is not getting enough rest for the second day of the shift. Firefighters have to get up early the next morning of the shift instead of sleeping in at home on the off day (previous schedule). Firefighters who work on ambulances reported that if they have a rough first day they will be tired for the second day shift.

Lastly, one person brought up the point that the 48/96 schedule makes it difficult to transition to another station. They reported feeling out of place and awkward. Similarly, with the 48/96, it is hard for people to move into busier houses (stations) with training and chores because it disrupts their routine.

Suggestions offered by participants for addressing challenges

Firefighter participants offered several suggests for how to address challenges posed by the shift change. For those who are busy on the first day of their shift, such as the ambulance workers, the solution is usually to have their schedules cleared until lunch (if there is not a training) so they can get some rest. Firefighters in all three groups feel it would also be helpful to have a supportive employer who lets staff take some hours to go home if they have a sick child or spouse without having to take the entire day (24 hour shift) off. Most are in favor of giving officers leeway to use their judgment to tailor their policies to the resources and needs of the individual crew. This can also be applied to caring for pets. They agree that additional support from the department, such as daycare for children, would help in critical situations. Others added that family support could be provided by team members and others they work with who are off duty and can go over to help spouses. Others seconded this idea by saying, *"It would be nice to have,"* and, *"It would make a lot more wives a little bit more at ease."*

Other intended or unintended changes

West Metro Firefighters in two of the three groups reiterated that as a result of the new shift, they are able to spend more time with their children, spouses, friends and family. As one firefighter shared, he now gets to put his child to bed more often because of the four days off. It is an unintended benefit for young children, as one dad pointed out, because four days

home have more of an impact for young children than having a parent gone for two consecutive days. One dad speaking about his young daughter stated, *"…It's like I am never gone to her."* Another firefighter added that he would like to see families visit the firehouse more, now that firefighters have 48 hours away from home. Others in the group agreed that having families visit the firehouse would be a positive change and that it is already happening at other stations. Additional comments regarding time included that firefighters enjoy time in general more now and they are able to get more done on the new schedule. In fact, one firefighter shared that he/she has had less sick time on the 48/96 schedule and has not called in sick yet since its inception. Participants in one group all agreed that the pros and cons of the 48/96 schedule really depended on the personal choices they make in their lives (i.e., where to live, whether to have a pet, etc.).

Although questions in the focus group centered on quality of home life outside of work, firefighters in two groups spent some time discussing concerns about the enforcement of safety guidelines related to rest and hydration during the 48/96 shift. They reported a lack of consistent policy regarding when a firefighter is expected to work during the day shift following a busy night that allows for little sleep. This, according to one firefighter, is easily handled if the officers call in a shift change. Along these same lines, another firefighter would like to see some flexibility built into the schedule with regard to training, especially for busy stations. He/she feels that training should not be as strictly enforced if they have not had a chance to rest from a busy night. Also, if they have been training on a live fire the first day of the shift and then get a call for an actual fire, they don't have a chance to rest, hydrate, recover, and eat. In other words, federal safety standards are not accommodated with this new schedule since some departments still expect the same activity level on a 48/96 shift. The department has not addressed this issue of a lack of flexibility with the new schedule and there has not been discussion around what small solutions have worked at other stations that can be implemented at West Metro. One example given of a "clever way to manage time" was of a station with a two-day shift schedule that posts all of its trainings, work to be done, and events as a means to splitting up the shifts. In the words of one firefighter, "It is important for the union or department to embrace ideas of what other stations are doing."

Lastly, the discussion in one group centered on the issue of time efficiency. Firefighters feel they have to be more efficient with their time to get everything done (fire inspections, for example) in two days on the new shift instead of three on the old shift. One person would be interested in seeing the statistics tracked for building inspections on this new schedule. Conversely, if a station is not busy with calls and there is a lot of free time, and the staff does not necessarily get along (eat together, etc.), "it would be crazy," as one person speculated. To which another responded that this was a departmental issue and the officer in charge would need to keep his staff busy in training as a potential solution.

II. Partner/Spouse Focus Groups

Shift Change Process

Spouses/partners of West Metro Firefighters across all three groups agreed that the process of

changing to the new shift was easy and that they were given plenty of notice (at least four months). As one spouse/partner shared, *"…After a couple of shifts you were used to it."* Several spouses in one group noted that the shift change was an ongoing process in which they were involved, via letters sent home and discussion groups. They also said that vacation times were selected before the transition and that they are based on seniority. Partners/spouses in another group said that the new shift has made it easier to plan family activities and that their partners like not having to drive to work as much. One spouse/partner who also works outside the home shared that when his/her spouse was on the old shift they never had mornings together. None of the participants who were interviewed felt that the shift change process could have gone better.

Strengths of the 48/96 schedule compared with the previous schedule

Spouses/partners shared several strengths of the 48/96 schedule compared with the previous schedule, including the benefits of having more time (spousal, family, vacation and weekend time), less daycare needs, more continuity at home, less fatigue for their firefighter spouses, and more personal time for themselves.

- Having more spousal time together was noted across all three groups as a significant strength of the 48/96 schedule. In fact, several spouses in one group felt that the new schedule was less stressful on their marriages and strengthened their relationships. One spouse stated improved communication and less anxiety:

  "We seem to talk more and he seems less distracted. We have a better relationship because the time is less distracted."

  Another partner/spouse also felt that the new schedule was less stressful on their relationship.

  "We'll make it work one way or another, but this is going to make it better. Maybe not better but easier."

  One spouse who also works outside the home added that her husband's schedule is much easier to follow; they have more time together, in particular mornings. Another partner stated that now she does not have to go to as many events alone.

Another strength of the new shift discussed in two groups is the need for less daycare. One partner/spouse has found it easier to obtain daycare for two days a week rather than the three days in the old schedule. Another does less driving with the new shift because she does not have to drive her children to babysitters as often.

Benefits of the new shift extend to the whole family in terms of more time and more quality interaction between family members. Spouses/partners reported that now both parents can attend children's activities, and spend quality time together as a family instead of watching TV and dosing off from fatigue. This strength was brought up in all three groups and applies to families with children of all ages (infants to teens). Those in separate households have more custody time with their children who may live farther away. Many agree that the new shift is easier on the whole family. Spouses/partners reported that firefighters are less irritable at home because they are not as tired. As someone reported,

"I see how much better he is, how much he gets done around the house, and how much more energy he has than me."

The new schedule also has the advantage of more time off, including weekends and additional vacation days. In the previous schedule, firefighters had weekends off o once every three months, compared to once every six weeks on the 48/96 schedule. If they trade out vacation days, families receive 50 days with the new schedule, compared with 39 days previously. The new schedule also decreases the need to have trade time (which is difficult to arrange, especially for some positions such as captain) since Firefighters have more days off.

Spouses/partners in all three groups find that the new schedule is less emotionally stressful because they no longer have to mentally "gear up" for that five-day stretch of their spouses working on and off. They didn't have much time in the evenings on the days off in between because their spouses/partners had to go to bed at nine to get enough sleep for the next work day.

The 48/96 schedule also allows for greater continuity at home since firefighters work for two days and then are home for four straight days. As one spouse/partner put it, *"They're gone for their period of time, and when they're home, they're home."* On the old schedule, *"He's got to be a dad as soon as he walks in the door."* On the new schedule, according to spouses/partners in all three groups, firefighters can integrate back into the home with greater ease. Many commented on how much easier it is for their firefighter partners to start and finish home projects.

As mentioned previously, spouses/partners across all groups notice their firefighter partners are less fatigued, more relaxed and happier on this new shift. For example, one spouse said that, *"…Before, he was fatigued by the sixth day; it would take a day to make it up, and then on his fourth day off he was focused on getting back into the schedule again."* With the previous schedule, their firefighter partners could not do much on the in-between days, which left only two days a week to do anything.

Lastly, spouses/partners in one group have found that they have more personal time for themselves with the 48/96 schedule, because they are no longer feeling that they

The need to be home for family time as they previously did on the in-between off days.

Several said that they have more time to exercise or indulge in a little time for themselves.

Challenges of the 48/96 schedule compared with the previous schedule:

Spouses/partners did not come up with sizeable challenges, but instead discussed some minor issues resulting from the 48/96 schedule. As discussed in two groups, it is difficult for spouses/partners to have their firefighter partners out of the house for two days when they and their children are sick and need some extra help. Or as one spouse put it, *"Everything happens the day he's gone."* It is also tough when the spouse/partner works all week and then the firefighters work on the weekend; however this only occurs once every six weeks. Some

spouses/partners in one group expressed concern that their firefighter partners might be switched to a busier firehouse and the fatigue they would undergo on the 48/96 shift.

In addition, firefighters cannot do too many trades for vacation time because they cannot work three days in a row. Another spouse/partner who has older children ready to “leave the nest” does not look forward to being alone for longer periods of time on the new schedule. Yet another stated that the new schedule does not work well with her school schedule. One spouse/partner is inconvenienced more since they have had to move farther away from the grandmother who cares for their child.

Suggestions of spouses/partners for addressing challenges:

Spouses/partners offered several suggests for how to address challenges posed by the shift change. One suggestion made was to have an internal system to handle trades, like a bank of people who want to work or need a trade, instead of having to call someone. Another spouse/partner feels the new schedule would be more convenient if his/her spouse worked closer to home.

Changes in your partner/spouse since the onset of the 48/96 schedule:

Quite a few spouses/partners in all three groups said that their firefighter partners are not as tired since the onset of the new schedule. They are able to sleep in longer at the firehouse on the second day of the shift as opposed to waking up early and driving in from home on the old shift. One spouse/partner mentioned that his/her spouse is more comfortable at the firehouse and is more settled in since he/she is there for two consecutive days. Another said, “*He loves not driving as much.”* Spouse/partners report that firefighters also receive fewer shift change calls and TeleStaff calls since the onset of the new 48/96 schedule.
Other intended or unintended changes

The general consensus across the three groups was that they all like the shift change and have not heard of many others who do not like it. One mother of five appreciates the schedule so much more because her firefighters partner can be home and help out more with the kids, like volunteering at their school. There is more consistency for the children. Another mother finds that she and the children do not have to be quiet around the house and sleep in the basement when the children are sick so that her firefighter spouse can get sleep. As one spouse/partner put it, “*Going back to the old schedule would be scary.”*

CONCLUSIONS

In summary, 13 firefighters and 11 spouses/partners participated in six focus groups, with a majority of firefighters having worked for West Metro for over five years. Focus group participants included firefighters in several different roles within the department, many of whom are firefighters. The transition into the 48/96 schedule was seen by participants in both groups as rather effortless. They felt they were given enough time to prepare for the change and it

could not have been planned any better.

Both firefighters and their partners/spouses are in agreement as to the main strengths of this new schedule. These include increased time for family, spouses, vacations/weekends, rest, and personal time/projects, decreased fatigue, a greater work/home balance and continuity at home, and much less stress and anxiety.

Among the challenges of the new shift, firefighters and their spouses report only minor ones, such as a concern for increased fatigue on the second day of the shift. Families also struggle with two consecutive days without their firefighters partner when they and their children are sick or something goes wrong around the house. The solutions given to these problems were to have shift changes when there is not enough time to rest, and to have more departmental support for families (for childcare, time flexibility, etc.).

In conclusion, both firefighters and their spouses/partners approve of the change to the 48/96 schedule and would not like to return to the old schedule.

APPENDIX A: FOCUS GROUP PROTOCOLS

West Metro Fire Rescue Firefighter Focus Group

Introduction:

Thank you for joining us to share your thoughts about the 48/96 West Metro shift change. We are independent evaluation consultants hired by St. Anthony Central Hospital to conduct focus groups with firefighters and their families to gather more in-depth information on how the shift change has affected your family life. Many of you also took the time to complete the survey, and we thank you for your responses. These focus groups are intended to build on those responses in a more detailed way. All of your answers will be kept completely confidential. There will be an evaluation report submitted to St. Anthony Central Hospital that will summarize the conversation we have this evening. However, no names or other identifying information will be associated with responses, and all responses will be reported in such a way as to mask the identity of the responder. St. Anthony Central Hospital will submit our evaluation report along with the survey results to West Metro Fire Rescue administration and the Board of Directors.

Ground Rules:

We ask that you adhere to the following ground rules during this focus group:

- Be respectful of the opinions/responses of others
- Whatever is said in the room remains in the room, to allow people to be as open and forthright as possible
- Turn off the ringer on your cell phone
- Allow for everyone to have a chance to respond

Discussion Questions:

1 How long have you been with the West Metro Fire Department? What is your role with the Department? (*ask this only if there are different levels all present (chief, captain, lieutenant, etc.)

2 How smoothly did the actual process of the shift change occur? How could this have been done better?

3 In thinking about your family/social life, your ability to care for children (if you have children), and your relationship with your spouse/partner, What are the strengths of the 48/96 schedule compared with the previous schedule?

4 In thinking about your family/social life, your ability to care for children (if you have children), and your relationship with your spouse/partner, What are the challenges of the 48/96 schedule compared with the previous schedule?

5 Do you have any suggestions for how these challenges might be addressed?

6 Are there any other changes, intended or unintended, that have occurred as a result of the shift change that we have not discussed?

West Metro Fire Rescue Focus Group: Partner/Spouse

Introduction:

Thank you for joining us to share your thoughts about the 48/96 West Metro shift change. We are independent evaluation consultants hired by St. Anthony Central Hospital to conduct focus groups with firefighters and their families to gather more in-depth information on how the shift change has affected your family life. Many of you also took the time to complete the survey, and we thank you for your responses. These focus groups are intended to build on those responses in a more detailed way. All of your answers will be kept completely confidential. There will be an evaluation report submitted to St. Anthony Central Hospital that will summarize the conversation we have this evening. However, no names or other identifying information will be associated with responses, and all responses will be reported in such a way as to mask the identity of the responder. St. Anthony Central Hospital will submit our evaluation report, along with the survey results, to West Metro Fire Rescue administration and the Board of Directors.

Ground Rules:

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- Be respectful of the opinions/responses of others
- Whatever is said in the room remains in the room, to allow people to be as open and forthright as possible

- Turn off the ringer on your cell phone
- Allow for everyone to have a chance to respond

Discussion Questions:

1 How long has your spouse/partner been with the West Metro Fire Department?

2 How smoothly did the actual process of the shift change occur? How could this have been done better?

3 In thinking about your family/social life, your ability to care for children (if you have children), and your relationship with your spouse/partner, what are the strengths of the 48/96 schedule compared with the previous schedule?

4 In thinking about your family/social life, your ability to care for children (if you have children), and your relationship with your spouse/partner, what are the challenges of the 48/96 schedule compared with the previous schedule?

5 Do you have any suggestions for how to address these challenges?

6 What changes have you seen in your partner/spouse since the new schedule?

7 Are there any other changes, intended or unintended, that have occurred as a result of the shift change that we have not discussed?