

# A qualitative study on effects of working unsocial hours

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**Abstract** Crew, S. (2006) A qualitative study on effects of working unsocial hours. *Nursing Times*; 102: 23, 30-33.

**Aim** To look at the perceived effects of working unsocial hours.

**Method** Six people who worked unsocial hours were sent a questionnaire using open and closed questions, and then interviewed using a semi-structured interview technique. Qualitative analysis of the transcripts of these interviews was performed using a content analysis approach within a framework.

**Results** The analysis revealed that although

there were some positive effects of working unsocial hours, there were more negative effects. Analysis also demonstrated that all the participants had concerns about working unsocial hours. There was agreement from all the participants about the effects of working these hours, except on one point relating to planning where there was a difference of opinion between two people.

**Conclusion** While there are some positive effects, the negative effects and concerns relating to working unsocial hours far outweigh them. Although some people prefer to work these hours, the majority of the individuals who took part in this small study expressed a preference for working during the day.

Shift work has been defined as 'any regularly taken employment outside the working window, characterised arbitrarily as the hours between 0700 and 1800 hours' (Reilly et al, 1997).

There has been a lot of research into the individual effects of working unsocial hours, specifically in relation to health, sleep, medical problems and concentration. However, there appear to have been no qualitative research studies that ask individuals for their response to working these hours.

## Literature review

The effects of working unsocial hours have been examined from many different perspectives, including influence on the biological and psychosocial systems as well as impact on the quality of performance.

Cavallo et al (2002) found that difficulty falling asleep, waking frequently during the day's sleep, feeling depressed or moody, never adjusting and feeling more tired were problems when on nights, as well as feeling that thinking and performance was slower. Dula et al (2001) demonstrated a decline in performance after working five consecutive night shifts. In addition Bartel et al (2004) found that performance of simple repetitive tasks deteriorated.

A study by Hossain et al (2003) showed significant sleep pathology in night workers, while Garbarino et al (2002) suggested that many cases of sleep disturbance and sleep disorders could cause sleep-related accidents.

In a study into the effects of cardiovascular

disease, Furlan et al (2000) suggested that an excessive rate of disease in shift workers could be due to the continuous changes of the time of maximum cardiac sympathetic modulation over the years. Van Amelsvoort et al (2004) found that shift workers had a slightly higher age and a substantially less favourable cardiovascular risk profile, and that significantly more shift workers were smokers and males. Shift workers also showed a higher sickness record than daytime workers. These results agreed with Knutsson et al (1999), who found that a higher proportion of shift workers smoked, and tended towards a lower educational level, but added that shift work was more prevalent among unskilled workers and that cardiovascular disease is related to socioeconomic status.

Conversely Bøggild et al (1999) found that the risk of coronary heart disease did not differ between shift and day workers, as did McNamee et al (1996).

Sakata et al (2003) demonstrated that the type of job schedule was significantly associated with the onset of hypertension, as were drinking habits, body mass index and cholesterol levels, which were all statistically higher in shift workers than day workers.

Night and rotating shift workers frequently report disrupted eating habits, poor diets and gastrointestinal complaints, such as hyperacidity, nausea, diarrhoea and constipation, as well as more serious conditions such as peptic ulcers; there is also an association with weight gain or loss (Knauth and Hornberger, 2003; Parkes 2002). Expanding on this theme, Karlsson et al (2001) and Spiegel et al

## BOX 1. INTERVIEW SCHEDULE

- Tell me about yourself, your home and social life.
- Tell me about your job.
- What do you perceive to be the effects of working unsocial hours on you and your family?
- What do you think are the good effects of working unsocial hours?
- What do you think are the bad effects?
- How do things improve once you start your days off?
- What have you read or heard about that worries you about working unsocial hours?
- What concerns do you have about working unsocial hours/shifts?
- How easy do you find it to work shifts?
- What unsocial hours/shifts are the hardest and why?
- If you had a choice what would you work?
- What extra pay do you get for working unsocial hours?
- For about how long do you sleep during the day if you have worked night duty?
- How often do you need to doze in the afternoon or morning before/after a shift?
- Do you take sleeping tablets:  
When sleeping during the night?  
When sleeping during the day?
- What other medications do you take to help you get through your shifts?
- Do you smoke – how much?
- What is your average alcohol intake?
- Is that across the week, or do you save it for a specific night?

(1999) noted that having two or more of the three metabolic risk factors was significantly more common in both men and women working shifts. They conclude that sleep debt could increase the severity of age-related pathologies such as diabetes and hypertension.

Hansen (2001) showed a positive trend towards breast cancer in women with an increasing duration of work at night. However, Knutsson (2003) states that there is no conclusive evidence that night shifts increase the risk of cancer.

## Methodology

The convenience sample was chosen from people who worked either shifts, or worked hours outside 9am–5pm. Of the six participants, four were male and two female, with an age range of 33–64 years. Their jobs were: a project manager; a theatre porter; a shelf-stacker; a police officer; a registered nurse; and an ambulance paramedic trainer.

Interviews were held in participants' homes at suitable times and lasted at least 15 minutes. They were tape-recorded for accurate transcription. Anonymity and confidentiality were maintained. The interview schedule (Box 1) was designed using information gleaned from the literature review. Respondent validation was carried out by sending transcripts to participants for feedback on accuracy. A framework analysis was used to collate data.

## Results

The data analysis resulted in the identification of several main themes.

## Positive effects of unsocial hours

The comment that stands out among the positive effects of working unsocial hours is that participants said they got more time off when they worked longer shifts that included unsocial hours. Because time off was usually when others were working, they were able to 'get things done' and take advantage of things like the good weather during the week. *'You can... get to places when they are open without masses of crowds being around and relying on the weekend. You often have more days off in the week than you would if you did a nine-to-five job; you can get extra holidays if you are working shifts. If you are doing nights you work a week of nights and get a week off instead of taking leave,'* (registered nurse).

Another positive effect identified was pay, with only one person, the project manager, not reporting extra pay for working unsocial hours. Finally, the ability to take time out to be with the family, and a reduction in the need for childcare, seems quite a large reason for participants to work unsocial hours.

## Negative effects of unsocial hours

The negative effects can be grouped into two main areas: family and social life; and sleep, or lack of it. Lack of sleep was identified as having a negative impact. One theme, which occurred in two of the interviews, related to working unsocial hours during the later months of the year.

*'The winter can be quite depressing. You get up to go to work in the dark. You go to work in the dark. You work in the dark. You come home in the dark and you go to bed. And when you wake up – it's dark,'* (paramedic instructor).

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## Concerns about unsocial hours

There has been a large amount of work exploring the effects that working unsocial hours can have on health. However, there was only one comment made in the interviews relating to actual physical health: 'My digestive system got all out of order, and I also suffered a fair bit of ill health, mainly things like mouth ulcers,' (theatre porter).

The participants all agreed on their other concerns. First, their system or body clock was never in order, meaning they were constantly tired. They also suggested that lack of sleep seemed to lead to an increase in the risk of making a mistake. These concerns become even more pronounced when another person's life might depend on their actions. 'Your body clock is at its lowest and you are actually expected to operate at your peak of performance... [including] emergency driving,' (paramedic instructor).

## The effect on the first day off

The first day off after working unsocial hours – particularly if that involves night duty – can often be lost because the day is spent sleeping and recovering. It is also a day when it is difficult to concentrate, due to being constantly tired.

Not only did participants use this day to recover, they also used it to catch up with family, friends and things that needed to be done. The nurse used her days off more proactively, by using time before and after shifts for tasks that needed to be done at home. 'I think you make the most of your days off. You sort of fill them to capacity and do your odd jobs in the morning before you go to work or in the afternoon when you come home, so that leaves your days off to be socialising days, and getting out and about and doing what you want to do rather than mundane jobs,' (registered nurse).

The police officer sums up the effect that unsocial hours have on his first day off in this very telling sentence: 'It's almost like starting living again, in effect, in the real world.'

## Hours that are hardest to work

There was no consensus of opinion on what were the worst shifts, though the shelf-stacker and registered nurse agreed the twilight shift was worst. All participants felt that one or other of their shifts was worst for them and gave their reasons for this.

## Preferred work hours

Two participants would prefer not to be working at all. However, they did state that they would prefer a Monday to Friday, 9am-5pm, or one-fixed-shift pattern. Perhaps surprisingly, three of the participants – the project manager, the registered nurse and the paramedic instructor – would all prefer

to work unsocial hours. In addition to this, there was a consensus that once you got accustomed to working unsocial hours, then they were not difficult. 'I've been doing it for so long I think you just get used to the routine,' (shelf-stacker).

## Duration of sleep achieved

There was a very different span in the number of hours of sleep achieved when working unsocial hours, particularly in relation to night duty. The lowest was three hours' sleep and the longest eight-and-a-half hours. The average was seven hours. Most agreed that the sleep achieved was not good sleep.

## Remedies and aids

All the participants drank alcohol when they worked unsocial hours. This varied from an occasional glass of wine to three pints of beer a night. It is not clear if this is due to the fact that they work shifts or something that they would do anyway to relax. The police officer also admitted that he smoked 'too much'. Two participants also mentioned that they drank coffee. The theatre porter had tried yeast, as he had been told that it could boost you when tired.

## Discussion

Despite the number of people now working unsocial hours there seems to be very little research on its positive effects. The results of this study show that for some individuals there are very positive effects of working unsocial hours, though this theme has not previously been identified in the literature.

Sleep loss is a major effect of shift work and this is most noticeable after the night shift, when the quantity of sleep may be reduced by up to two hours a day. There is also an effect on the quality of sleep. Sleep loss and the need to work at the low point of the circadian cycle increases the risk of being less alert than would ideally be the case. This may impair the efficiency with which they carry out their duties.

Sleep disorders and sleep deprivation are frequently associated with working unsocial hours. Workers often have difficulty in adjusting their internal clocks and often experience insomnia, sleepiness and mood disorders (Green-McKenzie and Behrman, 2001).

Shift work can produce problems in a couple's relationship, especially if they are working different shifts. Studies show that shift work is associated with a higher incidence of divorce, family violence, social isolation and sexual dysfunction (Green-McKenzie and Behrman, 2001). Bauer (1993) states that the negative influences of unsocial hours can break down a person's health, marital or family dynamics, job performance and job satisfaction. Having an intolerant partner, noisy neighbours or childcare problems can all add to the stress experienced.

Alertness and performance are negatively affected by night work, with a reduction in the ability to

concentrate and an increase in the risk of errors. Hossain et al (2003) discovered improved task vigilance on the night shift, and faster response time, while Dingley (1996) found that reaction times on first nights were slower than those on the fourth night, suggesting that alertness improved over the first four nights on duty. The conclusions reached by Dula et al (2001), however, indicate that although physicians may be able to perform their role in emergency medicine, activities that need more cognitive performance may be impaired after working consecutive nights. These results could be due to disruption of circadian rhythms. Judgement can be impaired and response time slowed, and relatively minor accidents can have catastrophic effects.

The minor effects that working unsocial hours can have on health include fatigue, lethargy, forgetfulness, irritability and nervousness, as well as higher levels of stress, loss of appetite, sleep disturbance, mood swings and depression (Michie and Williams, 2003). The problems of irritability and short-temperedness are manifested because of tiredness and lack of sleep. As shift workers also have relatively high levels of stress there is the potential problem of increased sensitivity to criticism and mental health disorders, such as anxiety and depression, which have also been linked to shift work (Niedhammer et al, 1995).

In the study by Cavallo et al (2002) the residents felt their bodies never adjusted to night work, and of those who did adjust it took up to eight days to achieve this, at which point a day off would occur, so restarting the whole process. Härmä et al (2002) felt that increased time off between shifts would probably decrease levels of sleepiness.

Some individuals have a better adjustment to irregular work schedules. Late sleepers (owls) adapt more easily to night shifts and rotating shifts than those who go to sleep early (larks). One form of shift work is internal rotation, which became common in the mid-1980s (International Labour Office, 1993).

Some people suffer a condition termed shiftwork intolerance where they are unable to tolerate working shifts at all. However, flexible rostering is believed to reduce the problems associated with this as well as staff retention and recruitment. The RCN (1997) states: 'All nurses should have the opportunity and ability to review their own work patterns and to secure the working arrangements which best suit their professional and personal interests and their commitment to patients' care.'

It has been suggested that shift workers are more likely to abuse legal and illegal drugs, including caffeine, cigarettes, sleeping pills, laxatives, painkillers and cough medicine (Green-McKenzie and Behrman, 2001). In the study by Hansen (2001) alcohol intake was shown to be higher in night workers, and Van Amelsvoort et al (2004) showed that smokers account for a large proportion of those who work

## BOX 2. KEY POINTS

- There is an increased risk of sleep pathologies in shift workers as they usually experience fewer hours sleep.
- Shift workers are more at risk of cardiovascular disease, due to the lifestyle associated with their shift patterns.
- Gastrointestinal upset is often worse in shift workers compared with day workers.
- Although shift work can help with childcare problems, it can increase relationship problems.
- Other people don't realise the effects that working unsocial hours can have on someone.
- There are individuals who would rather work shifts.

unsocial hours. Both Martins et al (2003) and Parkes (2002) noted that smoking and alcohol intake was not different between shift and day workers.

## Limitations of the study

This study was carried out using a sample of only six people, all of whom were known by me to work unsocial hours. The interview schedule did not include all the issues raised in the literature review. Lack of experience as a qualitative researcher meant I was unable to draw as much information from some of the participants during interviews.

Because of these factors there is an element of risk that there may be some bias within the findings, especially as I am a permanent night worker.

## Conclusion

The study shows how these participants feel about working unsocial hours and the effects working such hours can have. From these views and the literature review, it can be seen that working unsocial hours has a profound effect upon people's lives.

However, the literature review only uncovered negative effects and this study identifies that some people actually prefer to work unsocial hours. Benefits include easier childcare, pay incentives, time off in the week and extra time off for working longer shifts.

As a wide difference exists in how night work is tolerated, night duty should be a matter of personal choice and should never be compulsory.

The findings of this study have certain implications for shift workers – it is important to obtain sufficient sleep during the day, working unsocial hours is an important health and safety problem, and can cause an increase in work-related stress.

Further in-depth investigation is required, relating to the wider effects of working unsocial hours. ■

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