



Does the Compressed Working Week affect the health and work-life balance of shift workers?

Results of a systematic review

- Work has long been acknowledged as an important social determinant of health and health inequalities in industrialised societies.
- The past two decades have seen the development of labour market practices in which skills, working hours, contracts, conditions, pay and location are more flexible. The emergence of the 24 hour society has raised concerns about the effects of shift work on health and wellbeing.
- Shift work involves working at times and on days that may make it difficult to maintain a balanced domestic and social life “work-life balance”. Shift work may therefore be an important determinant of health and wellbeing for many workers.
- One common change to the organisation of shift work involves introducing a Compressed Work Week, in which the hours worked per day are increased whilst the days worked are decreased in order to work the standard number of weekly hours in less than five days - a radical break with the typical eight-hour working day.
- Introducing the Compressed Work Week seems to improve the work-life balance of shift workers, with few adverse health or organisational effects. It is also generally beneficial, or at least not detrimental, to health in the short term.
- The Compressed Work Week could be an important tool for both policymakers and employers in terms of promoting healthier work places and improving working practices.

Background

Work has long been acknowledged as an important social determinant of health and health inequalities in industrialised societies. However, the nature of work has altered considerably over the past two decades, not least in terms of the development of labour market practices in which skills, working hours, contracts, conditions, pay and location are more flexible. Similarly, a 24 hour society has started to emerge with associated concerns about abnormal working hours and work-life balance, and the workplace is increasingly being considered by policymakers as an important intervention point through which health can be improved and health inequalities reduced.

There is also a large body of evidence which describes the effects of shift work on health and wellbeing. Some of this research suggests that there may be health problems associated with shift work, such as sleep disturbances, fatigue, digestive problems, and stress-related illnesses, as well as increases in general morbidity. Shift work also involves significant *social* desynchronisation, involving working at times and on days that may make it difficult to maintain a balanced domestic and social life “work-life balance”. Shift work may therefore be an important, but largely overlooked, determinant of health and wellbeing for many workers. According to the Health and Safety Executive 3.5 million people are employed in shift work in the UK. Shift work is also socially patterned, being more common amongst manual workers and those working in the manufacturing or health care sectors.

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Methods

As part of the Public Health Research Consortium's (PHRC) programme of research on wider determinants, we carried out a systematic review of studies of the effects on health and work-life balance of Compressed Work Week interventions. The full review also examined other changes to

shift work schedules; only the Compressed Work Week findings are reported here for reasons of space. Further details of the review can be found on the PHRC website at (www.york.ac.uk/phrc/).

We sought to identify all empirical studies (both prospective and retrospective, with or without control groups) that had examined the effects of Compressed Work Week interventions. We examined any health-related outcome (such as specific diseases) as well as more general indicators of physical or psychological health and wellbeing, including sickness absence, health behaviours and injuries, and measures of physical and mental wellbeing such as tiredness, fatigue and sleep. The social (e.g. work-life balance) and organisational impacts of the interventions were also noted.

Key findings

We found 40 studies (of which five were prospective controlled studies) that had examined effects on health (broadly defined) and work-life balance. The majority of studies had examined changes from 8-hour to 12-hour shifts. Most of the studies had been conducted in health care organisations, the police force, manufacturing companies and energy industries. In a sizeable number of the Compressed Work Week studies, the intervention was either at the behest of the work force, or from the management out of a stated desire to improve health or work-life balance. However, in other studies, the motivation was more obviously efficiency or productivity.

Health and work-life balance

The five prospective cohort studies with control groups provide mixed evidence on the health and related effects of the Compressed Work Week compared to the traditional pattern of five days of shifts and two days off. In most of the studies however some health improvements were recorded. For example, in one Canadian study of 30 police officers, physical activity increased in the intervention group compared to the control group though sickness absence rates did not change significantly. Most of the controlled studies also found improvements in work-life balance amongst the intervention group compared to the control group. The changes included increases in time spent on family matters,

and time spent socialising with friends. For example, in one small study of UK police officers all work-life balance indicators were improved. Other small studies found few changes however, though these studies tended to employ relatively short periods of follow-up.

The 18 uncontrolled prospective studies were also inconclusive with respect to health outcomes, but they consistently found that some aspects of work-life balance improved after the introduction of Compressed Work Week. The pattern was similar for the 17 retrospective studies.

Organisational outcomes

Overall, the balance of best evidence suggested that there were few positive or negative organisational effects (such as job satisfaction or effectiveness at work), though it is possible that negative findings in this area may not have been published (for example, for reasons of commercial confidentiality).

Conclusions

The evidence base on the health effects of Compressed Work Week interventions is perhaps best described as cautiously positive: positive, because whilst the Compressed Work Week interventions might not always improve the health of shift workers, they are seldom detrimental; and cautious because in two hospital based studies, the introduction of the Compressed Work Week seemed to have some negative

effects (such as increases in health complaints).

Shift work is often associated with fatigue and it might be expected that Compressed Work Week, due to the longer working day, or excessive overtime, might further increase fatigue. However, of the studies in this review which measured fatigue or tiredness, few recorded increases in fatigue levels. These positive findings may be due to the popularity of Compressed Work Week interventions amongst workers (for example, because they can increase the available leisure time) and this may bias the findings of evaluations in a positive direction, especially in studies with a short follow-up period.

In contrast, the evidence about the positive effects of Compressed Work Week interventions on the work-life balance of shift workers seems more persuasive. Compressed Work Week are often popular amongst shift workers largely because they value the additional days off, and, in many of these studies, the intervention was either specifically requested by the employees, or implemented with their support.

Overall, the evidence presented in this review suggests that the Compressed Work Week can positively improve the work-life balance of shift workers, and that it may do so with a low risk of adverse health or organisational effects.

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