

# Reliability and predictability of flexible working hours

## - effects on health and well-being

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Reliability and predictability of flexible working hours  
- effects on health and well-being

## Background

Stronger requests for flexible working hours - especially from employers

- for adaptation of work capacity to varying demands for products or services
- for a more efficient use of working capacity
- for saving costs
- in order to stay competitive on the market
- within the framework of global competition

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And another argument:

## time sovereignty for employees

but:

does that match with

- variable production / service demands in line with market requirements and
- a clear priority for production demands?

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Increased **time sovereignty** has come under discussion, because of:

- short-term changes (e.g. for „emergencies“) or adaptations of working time (duration and position) are mostly controlled by the company
- loss of fixed, predictable and reliable flexible working time schedules for employees, *i.e. uncontrollable re-adaptions of adapted work schedules*

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- loss of control over work and leisure time by the employees
- difficulties in establishing and maintaining social relationships, social interactions, and in establishing their individual lifestyle

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Thus in fact there might be **no increased but rather decreased time sovereignty** through flexible working hours for employees



- Is there such an advantage of flexible work hours for employees ?
- Or is there even an impairment of social life by flexible work hours ?

## Relevant characteristics of flexible working hours

- **VARIABILITY** in the chronometric **duration**
- **VARIABILITY** in the chronological **position**
- **INFLUENCE / AUTONOMY** of employees in organizing their own working hours

## Additional characteristics of flexible working hours

- **PREDICTABILITY** of working hours
- **RELIABILITY** of an existing schedule of working hours

## Hypotheses

1. Uncontrollable deviations from scheduled flexible working hours will influence the reliability of these working hours, which will necessitate changes in the planning and organisation of non-work related areas
2. Company controlled flexible work hours, which lead to unpredictable or unreliable working hours will lead to difficulties in planning non-work activities and in the end to an uncontrollable leisure time

short-term changes of flexible working hours



unpredictable flexible working hours



disturbances of social and family life



health and psychosocial impairments

## Methods

- data from a survey on the effects of flexible working hours in Germany (for details see Janßen & Nachreiner, 2004\*)
  - ✓ n = 660
  - ✓ companies = 17
  - ✓ branches = 5
- analysis of the effects of predictability and reliability of flexible working hours using uni- and multivariate statistical analyses

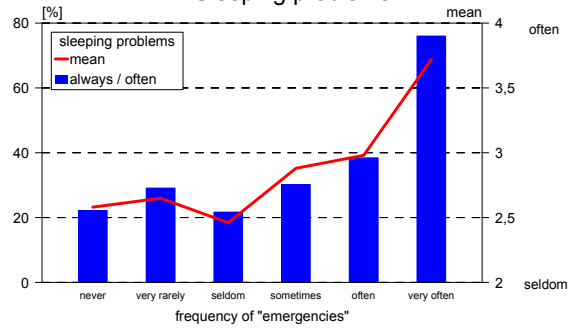
\*Janßen, D. u. Nachreiner, F., Flexible Arbeitszeiten. Bremerhaven: Wirtschaftsverlag Nordwest, 2004; Janßen, D. & Nachreiner, F. (2004). Health and psychosocial effects of flexible working hours. *Journal of Public Health - Revista de Saude Pública*, 38(Suppl.), 11-18.

## Statistical analysis

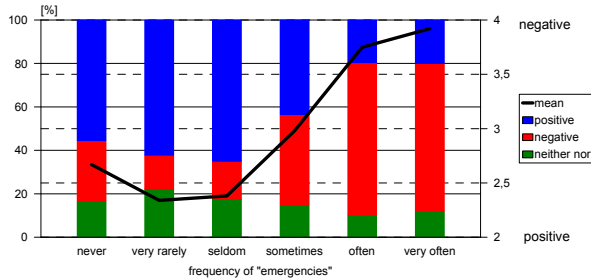
- **independent variable:** frequency of “emergencies“ (short-term changes of flexible working hours)
- **dependent variables:** health complaints, psychosocial well-being (different items for satisfaction, health, leisure activities, family live...)
- reduction of the number of the dependent variables to **factor scores** (effects on leisure time, family life and health)

# Results

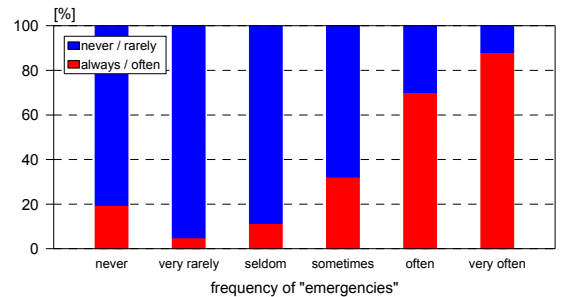
## Sleeping problems



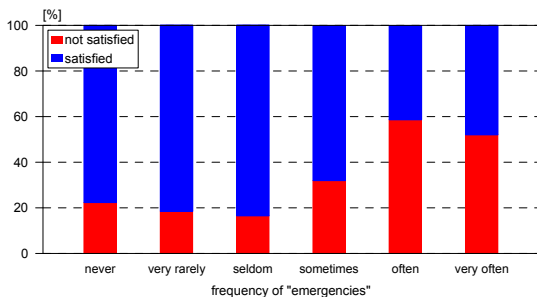
## Effects of working time arrangements on leisure time



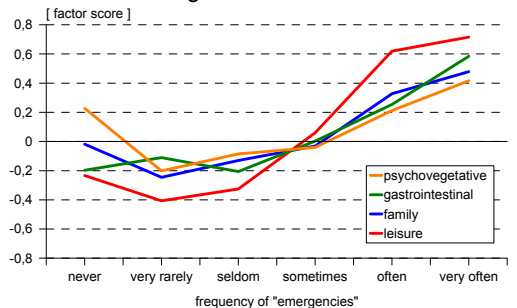
## Cancellation of leisure time appointments due to changes in working hours



## Satisfaction with working time arrangement



## Impairments as a function of uncontrollable changes of work schedules



## Summary

- unpredictable, company controlled short-term changes of scheduled flexible working hours affect the physical and psychosocial well-being of workers
- health and/or psychosocial impairments increase with decreasing reliability of work schedules

## Conclusions I

Apart from the variability of flexible working hours

***frequent, uncontrollable changes of work schedules at short notice***

lead to increased or additional impairments in health and psychosocial well-being

## Conclusions II

From an ergonomic point of view **flexible working hours** should thus be characterized by

- **an appropriate degree of reliability and predictability,**
- *besides an adequate amount of control (influence) by the employees and a rather low variability*

# Thank you for your attention!

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