# Impact of irregular working hours

Data from the Netherlands Working Conditions Survey 2010 indicate that a quarter of Dutch employees worked overtime as part of their normal working week, about a quarter regularly worked evenings and nights, and about 30% regularly worked at weekends. The data also show that 13% of Dutch employees regularly worked shifts in 2010. Working irregular hours had several negative outcomes, contributing to emotional exhaustion and increased numbers of accidents at work.

# **Background**

The Netherlands Working Conditions Survey (NWCS) is a national survey on working conditions that has been conducted annually since 2005 among around 23,000 employees a year. Research based on NWCS findings for 2005–2010 examined the prevalence and trends in non-standard working hours in the Netherlands (Van Zwieten et al, 2011a, 2011b). The study looked at the relationship between irregular working hours and indicators of health and performance levels.

# **Key findings**

### **Irregular working hours**

Dutch employees work on average slightly less than 31 hours a week, divided between four days. Many employees in the Netherlands work non-standard hours outside the standard working hours of about eight hours a day, in the daytime, Monday to Friday. The study used evenings, night and weekend work, overtime and shift work as indicators of non-standard working hours.

### **Working overtime**

The NWCS defines overtime as the average number of hours worked a week above the contracted working hours. Data from NWCS 2010 indicate that about three-quarters of Dutch employees worked overtime at least occasionally while a quarter worked overtime as part of their normal working week (Table 1).

Dutch employees worked an average of 3.4 hours of overtime per week in 2010 (Table 1). Given an average regular working week of just under 31 hours, this means a typical Dutch employee worked on average 34 hours per week, including overtime.

It is mainly men who routinely work overtime. On average, men also work the highest number of hours of overtime. The percentage of employees who work overtime remained relatively stable in the period studied.

Table 1: Trends in working overtime						
2005 2006 2007 2008 2009 2019						
Working overtime (% yes)	72	73	73	74	74	73

Routine part of job (% yes)	28	29	28	28	26	27
Incidental (% yes)	45	45	46	46	48	47
Overtime per week (in hours)	3.4	3.6	3.6	3.6	3.4	3.4

Source: NWCS 2005-2010

### Evening, night and weekend work

About a quarter of the population of the Netherlands regularly worked evenings and nights in 2010, while about 30% regularly worked weekends (Table 2). Working during the evening, at night or at the weekend was more common among men than among women. The research also found that employees aged between 15 and 24 were more likely to work irregular hours than other age groups.

Working at weekends was more common among employees with low and moderate levels of education, while working evenings or nights was more common among moderately and highly educated employees. The percentage of people working evenings or nights and weekends remained relatively stable between 2005 and 2010 (Table 2).

Table 2: Trends in working evenings, nights or weekends									
	2005	2006	2007	2008	2009	2010			
Evening or night work (% yes)	52	52	51	51	51	51			
Regularly (% yes)	24	24	23	24	24	24			
Weekend work (% yes)	54	54	54	54	55	55			
Regularly (% yes)	28	28	27	28	28	30			

Source: NWCS 2005-2010

#### Shift work

On average, 16% of Dutch employees worked shifts at least occasionally in 2010, with 13% working shifts regularly (Table 3). Shift work was most prevalent among employees aged between 15 and 24. The percentage of people working shifts remained stable over the years studied (Table 3).

Table 3: Trends in shift work in the Netherlands								
	2005	2006	2007	2008	2009	2010		
Shift work (% yes)	15	15	15	15	16	16		
Regularly shift work (% yes)	12	13	12	12	13	13		

Source: NWCS 2005-2010

#### **Risk sectors**

Working in shifts, working during the evening and at night, and at weekends was most common in 2010 in the hotel, restaurant and catering sector (Horeca), the healthcare and welfare sector, and in transport and communications Employees in the Horeca sector and in transport and communications worked the highest number of overtime hours. Industrial workers and workers in the building industry had the most contractual working hours per week in 2010 (Table 4).

,	Table 4: Non-standard working hours by sector, 2010								
	Contractual work (hours per week)	Shift work (regularly)	Evening or night work (regularly)	Weekend work (regularly)	Overtime (hours per week)				
Industry	35	18.3%	21.3%	20.6%	3.39				
Building industry	37.7	2.2%	6.7%	10.5%	3.16				
Trade	27.7	10%	24.6%	42%	3.25				
Horeca*	23.1	23.8%	57%	73.5%	4.07				
Transport and communications	33.7	21.8%	37.3%	41.2%	5.59				
Financial services	33.9	1.1%	11.7%	10%	3.34				
Business services	32.3	7.6%	17.5%	18.5%	3.37				
Public administration services	34.3	12.3%	19.8%	19.4%	2.65				
Healthcare and welfare	25.3	27.1%	43.4%	43.4%	2.81				

Note: \* Hotel, restaurant and catering

Source: NWCS 2010

### Irregular working hours and health

The study also looked at the relationship between non-standard working hours and indicators of health and productivity. It found that employees who routinely worked overtime or who worked shifts were more likely to report being emotionally exhausted and more likely to be overweight or obese (Table 5). Employees who routinely worked overtime, in shifts, or in the evening and at night were also more likely to have accidents at work and more likely to neglect family activities because of work. Significantly, they were also more likely to omit or neglect duties at work because of family responsibilities.

Absence from work was most common among shift workers, while employees who routinely worked overtime were less likely to be absent from work.

Table 5: Non-standard working hours and health, well-being and productivity								
	Overtime		Shift work		Evening or night work			
	Routin	Never or	Sometimes/regularl	Never	Sometimes/regularl	Never		

	e part of job	incidenta l	y		y	
Number	6,229	17,176	3,637	19,28 5	11,618	11,17
Emotional exhaustion (% yes)	16.7▲	11.7▼	14.4 ▲	12.8 ▼	13.4	12.7
<b>Body mass</b>	index (k	g/m <sup>2</sup> ):				
overweigh t (%)	35.2▲	33.5▼	33.8	33.8	33.6	33.9
- obese (%)	10.1	9.6	11.0▲	9.5▼	9.6	9.9
Accident at work in last 12 months with mental and/or physical injury resulting in absence (% yes)	3.6▲	3.0▼	5.4▲	2.7▼	3.8▲	2.5▼
In the last 12 months, have you been absent from work? (% yes)	45.8 ▼	51.5▲	53.6 ▲	49.5 ▼	49.8	50.4
Do you mis	s or negl	ect family a	activities because of y	your wo	rk?	
% yes, often	15.2▲	5.0▼	12.4▲	6.7▼	11.2▲	4.1▼
% yes, very often	3.1 ▲	0.8▼	2.3 ▲	1.2▼	2.1 ▲	0.7▼
Do you mis	s or negl	ect your du	ties because of famil	y respor	nsibilities?	
% yes, often	2.9▲	1.4▼	3.1 🛦	1.5▼	2.3 ▲	1.3▼
% yes, very often	0.8▲	0.3▼	0.8 🛦	0.4▼	0.7 ▲	0.2▼

Note: The symbol  $\blacktriangle$  is used when a group scored significantly higher than the total and the symbol  $\blacktriangledown$  is used for a significantly lower scoring group (p < 0.05).

Source: NWCS 2005-2011

# **Commentary**

The study shows that working irregular hours is quite common among employees in the Netherlands. The percentage of Dutch employees working non-standard hours has also remained relatively stable over the years.

In addition, the results show that working non-standard hours contributes to several negative outcomes such as emotional exhaustion and accidents at work. It can be concluded that irregular working hours seem to have negative consequences for Dutch employees.

# **References**

Koppes, L., Vroome, E. De, Mol, M., Janssen B. and Bossche S. van den (2011), *Nationale Enquête Arbeidsomstandigheden 2010: Methodologie en globale resultaten* [National working conditions survey 2010: Methodology and overall results], TNO, Hoofddorp.

Zwieten, M.H.J. van, Houtman, I.L.D. and Klein Hesselink, D.J. (2011a), 'Impact van afwijkende arbeidstijden: wat weten we vanuit de wetenschappelijke literatuur?' [Impact of irregular working hours: What do we know from scientific literature?], *Tijdschrift voor Bedrijs*, Vol. 19, No. 10, pp. 436–445.

Zwieten, M.H.J. van, Klein Hesselink, D.J. and Houtman, I.L.D. (2011b), 'Impact en omvang van afwijkende werktijden in Nederland' [Impact and extent of abnormal working hours in the Netherlands], *Tijdschrift voor Bedrijs*, Vol. 19, No. 10, pp. 473–477.

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