



Health

NURSING CARE – OCCUPATIONAL STRAIN AND WORKING CONDITIONS

Destatis, 18 August 2009

In 2007, some 4.4 million persons worked in the health sector. By far the largest occupational group among the health service occupations is the nurses with a total of 712,000 employees. That occupational group is of central importance for the medical care of the population, not only because of the large number of employees but especially because of the high degree of responsibility involved in nursing care and attendance of the patients – so there is sufficient reason to examine their strain and working conditions. For this purpose, data of health personnel accounts, basic data of the hospital statistics of the Federation and the Länder and of the microcensus are used.

Nurses primarily work in hospitals (490,000 employees) and in domestic care (98,000 employees). By far most persons in that occupational group are women (about 85%). The total number of employed nurses rose by 5% from 678,000 in 1997 to 712,000 in 2007. Nevertheless, when converted to agreed full working hours, the number of full-time equivalents was down from 518,000 to 512,000 over the same period. This is due to the reduction of full-time jobs by just under 12% and to the increase in part-time and minor employment by some 39% in that occupational group between 1997 and 2007.

Strain on nursing staff in hospitals

Hospital statistics shows annually, among other things, the number of patients treated – that is cases of treatment –, the occupancy and billing days – which is the number of beds to be taken care of –, and the nursing staff in full-time equivalents. Those three figures are used to calculate two nursing staff strain rates: the average number of treatment cases per full-time equivalent per year (treatment cases/full-time equivalent) and the average number of beds to be taken care of per full-time equivalent per year (occupancy days/full-time equivalent). As the share of nurses in the total nursing staff was between 87% and 91% in the years 1997 to 2007, the nursing staff strain rates shown below are applicable also to nurses.

Strain rates per full-time equivalent

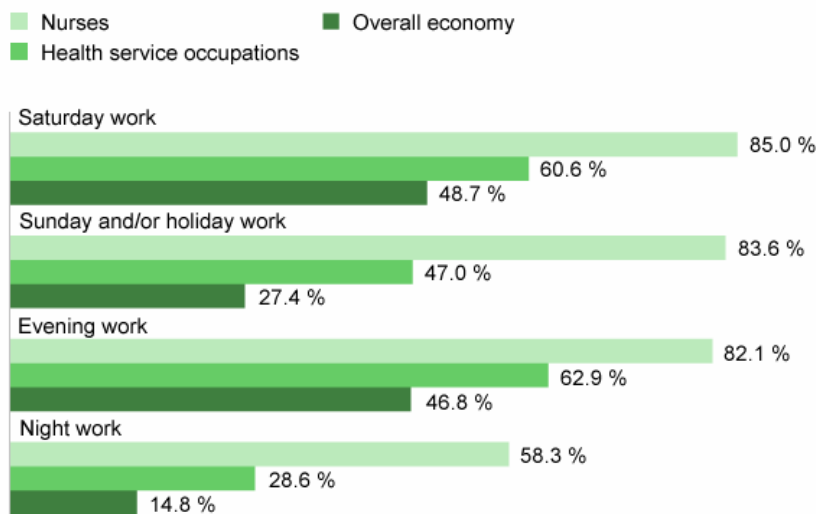
Strain rates per full-time equivalent by	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
treatment cases	48	50	51	52	52	53	54	54	56	56	58
beds to be taken care of	504	509	507	505	493	489	480	474	478	475	479

Source: Hospital statistics, Federal Statistical Office, 2009

When measured by the average number of treatment cases within a year, the nursing staff strain increased by approximately 21% in the period observed. If, however, the number of beds to be taken care of per full-time equivalent on an annual average, the strain on nursing staff decreased by 5% in the same period. Here is reason for the opposite trends of the two nursing staff strain rates: In hospitals, the number of full-time equivalents was down by a total of 43,000 or some 13% between 1997 and 2007. In the same period, the number of annual treatment cases in hospitals rose by some 750,000 or just under 5%. This results in an increasing number of treatment cases per full-time equivalent per year. The number of beds to be taken care of depends not only on the number of treatment cases but also on the length of stay in hospital. Between 1997 and 2007 the average length of stay of patients in hospital decreased from 10.4 to 8.3 days. As a consequence, the number of beds to be taken care of per full-time equivalent per year decreases despite increasing numbers of patients and a marked decline in full-time equivalents.

However, nursing staff strain rates alone are insufficient when not considering the effects of demographic change. In 2007 a good 43% of the treatment cases in hospitals were aged 65 years and over, while in 1997 the percentage was about 32%. As older people are ever less able to take care of themselves, while multimorbidity – i.e. several diseases occurring at the same time – increases, the nursing staff in hospitals probably is under additional strain through the increasing share of older patients.

Saturday, sunday and/or holiday, evening and night work, 2007



Information given by respondents refers to the last three months preceding the survey.

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Shift, weekend and night work

Based on the 2007 microcensus data, the working conditions, work-related health problems and strain factors regarding the work of nurses are analysed and compared with the relevant factors for persons working in health service occupations and in the overall economy. Results for the latter two groups are shown exclusive of nurses. The analysis covers all self-employed and employees.

Out-patient and (partial) in-patient medical care of the population must be ensured at all times, day and night. Therefore, nurses are required to show great flexibility in working

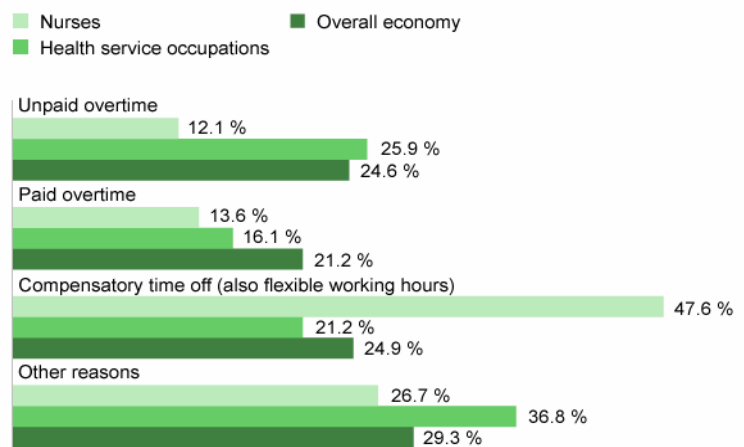
hours. About 69% of them did shift work on a permanent, regular or occasional basis in 2007. The comparative figures for employees in health service occupations and in the overall economy were markedly lower (17% and 14%, respectively). Also, nurses are more strongly affected by permanent, regular or occasional Saturday work (85%), Sunday or holiday work (84%), evening work (82%) and night work (58%).

Overtime and weekly working hours

Another aspect to be taken into account when assessing the working conditions of nurses is overtime and the weekly hours worked. In 2007 just under 22% of that occupational group worked more hours in the reference week than usual. The shares were similar for employees in health service occupations and in the overall economy (21% and 20%, respectively). As regards the main reason, however, paid and unpaid overtime played a much smaller role for nurses than for the comparative groups; instead, what dominated is compensatory time off (also flexible working hours).

In 2007 the average weekly working hours were 32.0 hours for nurses, 37.0 hours for employees in health service occupations and 35.7 hours for employees in the overall economy. Nurses and employees in health service occupations had much more often a part-time job than employees in the overall economy. For nurses working full time, the average weekly working hours are 38.4 hours. This means that they work an average 6.1 hours less than full-time employees in health service occupations and 3.1 hours less than full-time employees in the overall economy. With an average 22.8 hours, nurses working part-time work an average 1.1 hours more per week than part-time employees in health service occupations and in the overall economy. Weekly working hours of persons in minor employment hardly differ at all between the three groups examined.

Main reason for overtime, 2007



Information given by respondents refers to the reference week.
Source: Microcensus.

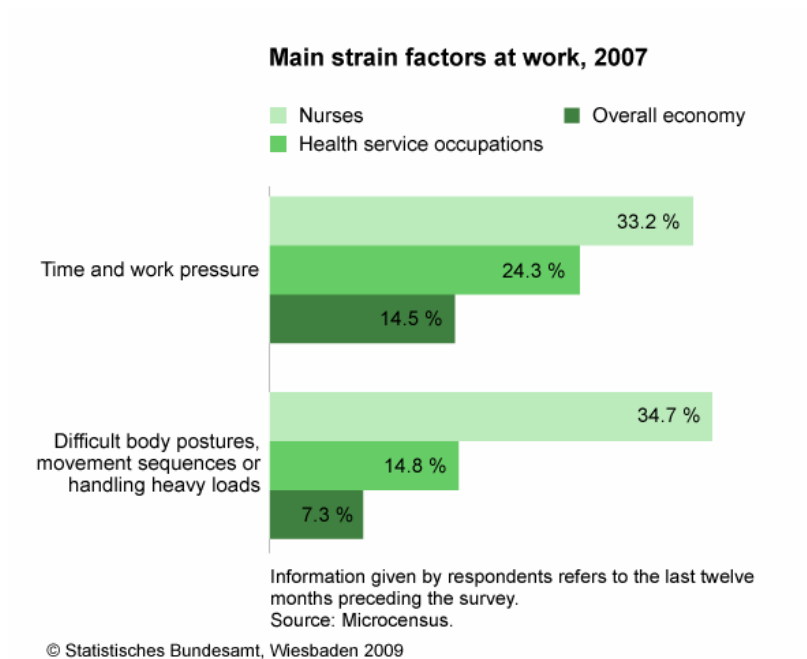
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Stress and work-related health problems

In an ad-hoc-module of the 2007 microcensus, data were collected, among other things, on work-related health problems and strain factors at work. 16% of the nurses that were questioned indicated to have had at least one work-related health problem in the last 12 months. As opposed to that, the share of employees in health service occupations and in the overall economy who had at least one work-related health problem in the last 12 months was markedly smaller (6.4% and 6.5%, respectively). Joint, bone or muscle problems, especially of the back, were indicated as the main symptoms by all comparative groups. Here again, the share of nurses affected (87%) was higher than that of employees in health service occupations (76%) and in the overall economy (77%).

An analysis of the working days lost through the main work-related health problem indicated shows that the affected nurses were absent much more often (an average 38.1 days of absence) in the last 12 months than were employees with work-related health problems in health service occupations and in the overall economy (28.3 and 21.8 days of absence, respectively). The numbers of working days lost are based on self-assessment given by the respondents.

The main strain factors at work mentioned by all three comparative groups are "difficult body postures, movement sequences or handling heavy loads" and "time and work pressure". It was striking here, too, that nurses suffered much more often from "difficult body postures, movement sequences or handling heavy loads" (35%) and "time and work pressure" (33%) than employees in health service occupations (15% and 24%, respectively) and in the overall economy (7% and 15%, respectively).



Conclusion

Our study shows that nurses are subject to particular strain. The results of the analysis can be summarised as follows: Rising numbers of patients and shorter lengths of stay in hospital, accompanied by a reduction of nursing staff, lead to an intensification of work. According to the results of the 2007 microcensus, nurses are strongly affected by shift, weekend and holiday work as well as night work. Also, it became obvious that this occupational group suffers particularly often from work-related health problems. In addition, their work is characterised to a particular extent by difficult body postures, movement sequences or handling heavy loads as well as by time and work pressure