Soc Psychiatry Psychiatr Epidemiol (1995) 30: 39–43

ORIGINAL PAPER

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Sick-leave due to minor psychiatric morbidity: role of sex integration

Accepted: 23 June 1994

Abstract During the years 1985–1987 all sick-leave spells exceeding 7 days, together with a number of demographic variables, were registered in a Swedish county. Using this register, the 3,100 employed persons with at least one sick-leave per year due to minor psychiatric morbidity were analysed with regard to age, occupation and sex. The annual cumulative incidence was 1.7 % of the employed population. In 1985 the female incidence was 2.1 % and the male incidence was 1.3 %. Incidence was highest in the middle-aged. The mean number of absence days per sick-listed person was 73 in 1985. For women, the corresponding figure was 63 and for men, 82. Industrial occupations had the highest incidence and with few exceptions, women had a higher incidence than men in each occupation. Occupations were categorized into five groups according to the number of women and men employed. Women in extremely male-dominated occupations had the highest incidence of all groups, 4.6 %. Men in extremely female-dominated occupations had the highest incidence of all men, 2.9 %. Occupations with an equal sex distribution had the lowest sick-leave incidence, 1.2 %. Further studies on the influence of sex integration on sickness absence need to be done.

Introduction

Mental health problems are a common reason for sickness absence [1, 2]. This reflects not only individual suffering and the risk of being permanently outside the labour market, but also the cost to society [3]. In 1985 mental disorders were the second largest diagnostic group among disability pensions in Sweden, representing 16 % of such pensions. Among young disabled persons (including mentally retarded people) aged 20–44 years, the corresponding figure was 43 % [4]. It is thus important to gain more knowledge of background factors of sickness absence due to mental illness. Few previous studies have specifically analysed this problem. In a study of sickness absence in the Swedish county of Östergötland [5], diagnoses related to minor psychiatric morbidity constituted the fourth most common diagnostic group, accounting for approximately 7 % of the c. 61,000 sick-leave spells registered each year, as well as 7 % of the c. 45,000 persons who had at least one sick-leave spell exceeding 7 days. A Norwegian study has reported an annual incidence rate of sickness certification per 1,000 employed persons of 35.8 for mental disorders, and this diagnostic group was also the fifth largest [6]. An association between increased rates of sickness absence (especially in certified sickness absence) for any diagnosis and minor psychiatric morbidity has been found among young civil servants in Great Britain [7]. Furthermore, the risk of having a longer sick-leave spell has been found to be higher if the disorder is related to mental health problems rather than to other morbidity [8, 9].

Sick-leave has a multifactorial background. Medical, social and cultural factors, as well as the sickness insurance system, effect sick-leave. The diagnostic label is a reflection of medical aspects (the "true" diagnosis can always be debated) and has to be considered in the wider context of all factors determining a sickness spell.

Sick-leave in general is unequally distributed in the population, with a higher absence rate in lower socioeconomic groups and among women [10]. Since mental ill-health in different epidemiological studies has been shown to be more frequent in these groups [11, 12], a similar pattern could be expected for sick-leave due to minor psychiatric morbidity. In an earlier study, we have found a higher general sick-leave rate among women in male-dominated jobs [13]. This could partly be explained by the fact that most of those are industrial jobs involving physically heavy work. However, minor psychiatric morbidity might not be directly influenced by the physical strain in the work situation. In order to further analyse how sick-leave varies with the de-

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Table 1 Incidence of sick-leave due to minor psychiatric morbidity in different age groups, 1985 (*C. I.* confidence interval)

Age (years)	No. of women	Female incidence (%) (95 % C.I.)	No. of men	Male incidence (%) (95 % C.I.)
16–24	12776	1.3 (1.1–1.5)	13567	0.9 (0.7–1.0)
25–34	19692	2.1 (1.9–2.3)	22669	1.4 (1.3–1.6)
35–44	23919	2.3 (2.1–2.5)	27145	1.5 (1.4–1.7)
45–54	17002	2.4 (2.2–2.6)	18644	1.4 (1.2–1.6)
55–64	11880	1.9 (1.7–2.2)	15369	1.2 (1.1–1.4)
Total	85269	2.1 (2.0–2.2)	97394	1.3 (1.3–1.4)

Table 2 Mean no. of absence days per sick-listed person with minor psychiatric morbidity, 1985 (C. I. confidence interval)

Age-groups (years)	Women mean (95 % *C. I.*)	Men mean (95 % C.I.)
16–24	43 (31–54)	63 (41–84)
25–34	62 (53–72)	68 (57–79)
35–44	61 (53–68)	73 (62–83)
45–54	76 (64–87)	89 (73–104)
55–64	69 (55–83)	126 (103–150)
Total	63 (58–67)	82 (75–88)

gree of sex integration in an occupation, this diagnostic group is of particular interest.

The aim of the present study was to describe and analyse sick-leave due to minor psychiatric morbidity and its relation to age and occupation, with a special focus on sex differences.

Methods

The study was based on the registration of all new sick-leave spells exceeding 7 days in the county of Östergötland. The population of Östergötland in 1985 was approximately 400,000, which represented 5 % of the Swedish population. The region is characterized by both rural and urban areas, including two of the larger Swedish cities. The employment situation is diverse, comprising industries of varied dimensions, trades, administrations, hospitals, university and farming. Östergötland can be considered as representative of at least the southern part of Sweden where 85 % of the population lives [14].

Every employed Swedish resident from the age of 16 years with an income above 6,000 SEK (in 1985: 697 US dollars) is covered by a national sickness insurance. The sickness benefit in 1985 was at least 90 % of lost income. Absence due to work incapacity related to disease, illness and injury was covered by the insurance. For the first 7 days of a sick-leave spell, self-certification was accepted. Sick-leave exceeding 7 days had to be certified by a doctor. There was no maximum duration of a sick-leave spell during the period studied [13].

Registration was carried out on an individual basis at the local National Health Insurance Office and included diagnosis and a number of demographic variables. All new spells during 1985, 1986 and 1987 were registered. Each spell was followed until its end or, at the longest, until 1 September the year after the sick-leave began [13]. Medical diagnoses were coded according to the *Code-list for diagnosis used in ambulatory care* [15]. An earlier study of the validity of the diagnoses has shown that there are few cover-up diagnoses for psychiatric problems [16]. Occupations were registered according to the *Nordic occupational classification* on a two-digit level and categorized into 31 groups [17]. This classification is based upon occupations and not upon branches. For example, secretaries working in metal industry or in hospitals are all categorized as secretaries. A non-systematic drop-out estimated to have been 14.8 % in 1985, 11.8 % in 1986 and 15.1 % in 1987 was due to the fact that some staff members did not report all spells (For further details; see Alexandersson et al. 1994). Moreover, a control analysis revealed an unintentional deviation from the research plan since 4.1–4.4 % of recorded persons had spells lasting less than 8 days. All those spells were certified by physicians.

The present study was based upon employed individuals aged 16–64 years with at least one sick-leave spell exceeding 7 days in 1 year due to minor psychiatric morbidity. This diagnostic group includes the following diagnoses; psychoneurosis (including anxiety reaction, depressive reaction, 300), physical disorders of presumably psychogenic origin (including cardiovascular neurosis and globus hystericus, 305), transient situational disturbances (acute stress, grief, psychic shock, 307), other specified, non-psychotic disorders (316R), tension headache (3068), palpitation (7821) and headache of unknown origin (791) [15]. Sickness absence due to psychosis, dementia or drug abuse was not included.

Standardization for age and sex was made through direct standardization with the total employed population of Östergötland as standard [18]. Cumulative incidence of minor psychiatric morbidity (from here on referred to as incidence) was defined as the number of persons with at least one sick-leave spell due to minor psychiatric morbidity exceeding 7 days divided by the total number of employed persons in the category. Another measure of sick-leave presented in the study is the mean number of absence days per person and per year. Standardized rate ratio (SRR) was computed for comparison of incidences among women and men. For the purpose of analysing the relation between the level of sex integration (the number of women and men employed in an occupation) and sick-leave, occupations were categorized into the following five groups: extremely male dominated (0–10 % women), male dominated (10–40 % women), sex integrated (40–60 % women), female dominated (60–90 % women) and extremely female dominated (90–100 % women).

Results

Each year, around 3,100 persons had at least one sick-leave spell due to minor psychiatric morbidity. This means an incidence of 1.7 % of the employed population. There was a difference in incidence between men and women throughout the 3 years. In 1985 the incidence [95 % confidence interval (C.I.) in brackets] among women was 2.1 % (2.0 %–2.2 %) and among men, 1.3 % (1.3 %–1.4 %). The corresponding figures for 1986 were 2.1 % (2.0 %–2.2 %) and 1.3 % (1.3 %–1.4 %) and for 1987, 2.2 % (2.1 %–2.3 %) and 1.2 % (1.2 %–1.3 %). The mean number of absence days per sick-listed person (95 % C.I. in brackets) was 73 (69–77) in 1985, 76 (72–81) in 1986 and 79 (74–83) in 1987. The corresponding figures for women were 63 (58–67) in 1985, 70 (65–75) in 1986 and 77 (72–82) in 1987 and for men, 82 (75–88) in 1985, 82 (75–89) in 1986 and 81 (74–88) in 1987.

Table 3 Incidence of sick-leave due to minor psychiatric morbidity in different occupations, 1985 (*SRR* standardized rate ratio)

Occupational group	No. employed		Incidence (%)			
	All	Women (%)	All C.I. (95%)	Women C.I. (95%)	Men C.I. (95%)	SRR: women/men C.I. (95%)
All employed	182663	47	1.7 (1.6–1.7)	2.1 (2.0–2.2)	1.3 (1.3–1.4)	1.6 (1.4–1.7)
Saw mills/carpenters	1634	10	4.7 (3.1–6.4)	5.2 (1.8–8.7)	4.4 (3.3–5.5)	1.2 (0.6–2.4)
Painting	1788	3	4.2 (0–8.7)	7.5 (0–17.8)	1.7 (1.1–2.3)	4.4 (1.1–18.6)
Metal industry	16019	9	4.0 (3.4–4.6)	6.3 (5.1–7.6)	2.0 (1.8–2.2)	3.2 (2.5–4.0)
Textile industry	1180	72	3.8 (2.5–5.0)	4.0 (2.6–5.4)	3.5 (1.5–5.5)	1.1 (0.6–2.2)
Various	1614	21	3.6 (2.4–4.8)	4.9 (1.6–3.4)	2.5 (1.7–3.4)	1.9 (1.1–3.5)
Paper industry	1482	16	3.5 (2.2–4.8)	4.5 (1.8–7.1)	2.6 (1.7–3.6)	1.7 (0.8–3.3)
Social work	12149	92	3.3 (2.5–4.0)	2.8 (2.5–3.2)	3.6 (2.2–5.0)	0.8 (0.5–1.2)
Food industry	1688	31	3.2 (2.1–4.2)	4.4 (2.4–6.3)	2.2 (1.3–3.1)	2.0 (1.1–3.7)
Chemical process work	2061	31	2.6 (1.8–3.4)	3.0 (1.5–4.5)	2.3 (1.5–3.2)	1.3 (0.5–3.4)
Hotel, restaurant	5822	84	2.5 (1.9–3.2)	2.4 (2.0–2.9)	2.6 (1.4–3.8)	0.9 (0.6–1.5)
Crane/excavator	2328	6	2.3 (1.9–4.5)	3.9 (0–8.7)	1.1 (0.7–1.6)	3.4 (0.9–12.6)
Printing, graphics	1891	33	2.2 (1.5–2.9)	3.1 (1.8–4.5)	1.4 (0.7–2.0)	2.3 (1.2–4.4)
Post- and telephone office	3817	59	2.2 (1.6–2.7)	1.3 (0.8–1.7)	2.9 (2.0–3.8)	0.4 (0.3–0.7)
Secreterial/clerical	10693	93	2.1 (1.5–2.6)	2.1 (1.8–2.4)	2.0 (1.0–3.1)	1.0 (0.6–1.7)
Cleaning	7966	68	2.1 (1.8–2.5)	2.4 (1.9–2.8)	1.9 (1.4–2.5)	1.2 (0.9–1.8)
Health worker	16120	86	1.8 (1.5–2.1)	2.1 (1.8–2.3)	1.6 (0–2.1)	1.3 (0.9–1.9)
Clergymen/legal profession	3236	46	1.7 (1.3–2.2)	2.2 (1.5–3.0)	1.3 (0.7–1.8)	1.8 (1.0–3.0)
Electrical work	7595	34	1.7 (1.3–2.0)	2.4 (1.8–3.0)	1.0 (0.7–1.3)	2.5 (2.0–3.0)
Advertisement/purchasing	1722	25	1.5 (0.7–2.2)	1.9 (0.6–3.2)	1.1 (0.3–1.9)	1.7 (1.0–2.8)
Hairdresser/laundry	1365	82	1.4 (0.8–2.1)	2.5 (1.6–3.4)	0.5 (0–1.3)	5.6 (0.7–39.1)
Storemen	4109	32	1.3 (0.9–1.7)	1.2 (0.6–1.8)	1.4 (0.9–1.8)	0.9 (0.5–1.6)
Salesmen	12575	53	1.2 (1.0–1.4)	1.5 (1.2–1.8)	0.9 (0.6–1.1)	1.8 (1.2–2.5)
Farming/forestry	8645	18	1.1 (0.8–1.4)	1.0 (0.4–1.5)	1.3 (1.1–1.5)	0.8 (0.4–1.4)
Engineer/technician	14856	12	1.1 (1.0–1.4)	1.5 (0.9–2.1)	0.8 (0.6–0.9)	2.0 (1.2–3.1)
Teacher	12151	66	1.0 (0.8–1.2)	1.1 (0.9–1.4)	0.9 (0.6–1.2)	1.3 (0.9–1.8)
Bank/insurance	7458	45	1.0 (0.8–1.3)	1.3 (0.9–1.7)	0.8 (0.5–1.0)	1.8 (1.1–2.8)
Firemen/police	1997	9	1.0 (0.2–1.8)	1.5 (0–3.1)	0.6 (0.2–1.0)	2.5 (0.7–8.8)
Administration	7142	49	0.9 (0.6–1.2)	1.1 (0.8–1.5)	0.7 (0.3–1.1)	1.5 (0.8–2.8)
Transport/communication	5654	7	0.8 (0.5–1.2)	0.6 (0–1.3)	1.0 (0.7–1.2)	0.6 (0.2–2.0)
Construction	4877	< 1	0.5 (0.3–0.6)	0	0.9 (0.6–1.1)	–
Military work	1029	2	0.2 (0–4.3)	0	0.4 (0–0.8)	–

Age

Incidence in different age groups in 1985 is shown in Table 1. (The results were similar throughout the 3 years and from now on only the results from 1985 are presented.) The highest incidence for both women and men was found between the ages of 25 and 54 years. The differences in those age groups were very small and not possible to separate statistically. The youngest age group differed most significantly from the others.

The mean number of absence days per sick-listed person also differed between women and men, and with age (Table 2). Men had more absence days than women. The mean number of absence days increased with increasing age among men but not among women.

Occupation

All industrial occupations were found among the ten groups with the highest incidences of sick-leave (Table 3). Social work and painting were occupations with high incidences. Low incidence groups were, for example, engineering, farming and fire- and policemen. The incidence of sick-leave due to minor psychiatric morbidity in different occupational groups corresponded well with the incidence of sick-leave irrespective of diagnosis [13]. The ten groups with the highest incidences were the same, with some minor differences in the order.

Sex differences were also found in different occupational groups (Table 3). Among women, painters had the highest incidence, but this group consisted of very few individuals. Overall, the pattern was similar among women and men in high- and low-incidence groups. There were some exceptions such as hairdressers and printing among women, and post- and telephone office among men. Post/tele etc., social work, hotel/restaurant, storemen, farming/forestry and transport/communication were the few occupational groups where men had a higher incidence than women.

The ratio (SRR) between women and men was highest in painting, metal industry, crane/excavator and hairdressers. However, those groups, apart from metal industry, were numerically small groups with few individuals being sick-listed.

Table 4 Incidence of sick-leave due to minor psychiatric morbidity in relation to sex integration in each group

Occupational groups	Women (%)	Incidence (%)			
		All (95 % C.I.)	Women (95 % C.I.)	Men (95 % C.I.)	SRR (95 % C.I.)
Extremely male dominated	0–10	3.0 (2.6–3.4)	4.6 (3.8–5.4)	1.6 (1.4–1.7)	2.98 (2.42–3.64)
Male dominated	10–40	1.6 (1.5–1.7)	2.1 (1.8–2.4)	1.2 (1.1–1.3)	1.77 (1.50–2.09)
Sex integrated	40–60	1.2 (1.1–1.3)	1.4 (1.2–1.6)	1.0 (0.9–1.2)	1.38 (1.13–1.68)
Female dominated	60–90	1.7 (1.5–1.8)	1.9 (1.8–2.1)	1.9 (1.8–2.1)	1.31 (1.10–1.56)
Extremely female dominated	90–100	2.7 (2.3–3.2)	2.5 (2.3–2.7)	2.9 (2.1–3.8)	0.85 (0.46–1.55)

Sex integration

Occupational groups were also categorized according to the level of sex integration (Table 4). Women in extremely male-dominated occupational groups had the highest incidence of all; it was almost three times as high as the incidence among men in that group. The lowest incidence was found in the sex-integrated groups. Men in the extremely female-dominated group had the highest male incidence. The ratio (SRR) showed a falling order in relation to the level of sex integration, which means that the sex differences were most pronounced in the extremely male-dominated and the extremely female-dominated occupational groups.

Discussion

The main findings in the study were that sick-leave due to minor psychiatric morbidity was stable over the years and corresponded remarkably well with sick-leave irrespective of diagnosis, that women had a higher incidence and men had longer sick-leave spells, and, finally, that sick-leave varied with the level of sex integration in an occupational group.

Differences in socio-economic groups

It has been repeatedly shown that industrial occupational groups have a higher sick-leave rate and this was also true in the present study for sick-leave due to minor psychiatric morbidity. Recently, a British study of socio-economic differences in sick-leave among civil servants has shown that the risk factors identified (health-related behaviour, work characteristics, job satisfaction and social situation outside work) could only explain one-third of the differences uncovered [10]. Another approach for explaining socio-economic differences is to study the medical practice of sickness certification. Communication between the patient and the physician has been shown to be less effective when the patient is of lower socio-economic status [19]. Apart from communication problems, there might be differences in what actions the physician takes in the treatment and rehabilitation of patients from different socio-economic groups. A Dutch study of male industrial workers has shown that long sick-leaves for minor psychiatric illness are often related to working problems, but few actions are taken by the general practitioners to deal with those problems [20]. An educational programme among general practitioners in a Swedish county has led to a decrease in the frequency of sick-leave due to depression [21]. The duration of the sick-leave spells showed an increase that was interpreted in the study as being due to a more stringent certification practice for this diagnosis. Those results show the importance of developing treatment and rehabilitation programmes in the psychiatric field whether the patients are seen in general or specialized care.

Sex differences

The higher female incidence corresponds well to earlier studies both of sick-leave and of mental health problems [13, 22–24]. On the other hand, the mean number of days absent per person and per year was significantly higher among men. It has been shown that women use the health services more frequently than men, more easily express their symptoms in emotional terms and that doctors more often interpret female symptoms as related to emotional problems [25–28]. This would explain the higher female incidence. A corresponding tendency among men to deny emotional symptoms means that they come to the doctor in a poorer state of health, requiring a longer period of sick-leave [28]. This would explain the higher mean number of days absent among men. However, the difference between women and men in the oldest age group, where men had significantly more days absent, needs to be analysed further. This might reflect a tendency to put women on disability pension earlier in a period of sick-leave. It could also be due to differences in the amount and quality of resources spent on the treatment and rehabilitation of women and men.

Level of sex integration

The level of sex integration in the workforce has been shown to vary with the level of work control (control over work process) [29] and with sick-leave irrespective of diagnosis [13]. However, the results in this study differed from earlier findings in that men in extremely female-dominated groups had a higher incidence than other groups – except for women in extremely male-dominated groups. Further studies need to be done to explain this difference, but the results might be influenced by a selection bias in the male workforce in female-dominated occupations, and an acceptance in female-dominated groups of men with psychiatric problems. The higher female sick-leave incidence in male-dominated occupational groups relates well to the findings that women have lower work control than men (especially in male-dominated areas), even within the same occupations [29]. Low work control has also been shown to be associated with depression, especially among women [30]. Sex differences expressed as the ratio (SRR) between male and female incidences in sick-leave were higher in occupational groups where there was an extreme dominance of either sex. The female-dominated social work area and the male-dominated firemen/police force are both characterized by close contacts with emotional problems and human suffering. The higher incidence of sick-leave for the minority sex might reflect a lesser ability to cope with the demands of work. A lot of this coping takes place in informal settings to which the minority sex has no access. A preventive strategy could be to create formal situations for coping or supervision. The lowest sick-leave incidence was found in the sex-integrated group. There is a need for further analysis of the impact of an equal sex integration on sick-leave.

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