

Prevalence of somatoform pain complaints in the German population

Häufigkeit somatoformer Schmerzbeschwerden in der deutschen Bevölkerung

Abstract

The prevalence of somatoform pain complaints was assessed in a representative sample of 2050 persons in Germany in the age range from 18 to 92 years by the Screening for Somatoform Symptoms questionnaire [57]. A high percentage of the study participants turned out to complain of serious somatoform pains. Most frequently, back pain (30.5%), joint pain, pain in the arms and/or legs (19.9%) and headache or facial pain (19.5%) were reported. Women complained of more somatoform pain symptoms than men. Pain was higher with an increasing age, lower education, lower income, rural residency, and residency in Eastern Germany. While the prevalence of somatoform pain is high, the majority of patients does not receive adequate psychotherapeutic care but is inadequately treated by somatic treatments.

Keywords: somatoform complaints, pain, community survey

Zusammenfassung

Im Rahmen einer bevölkerungsrepräsentativen Befragung wurden 2050 in Deutschland lebende Personen im Alter von 18 bis 92 Jahren mittels des Fragebogens „Screening für Somatoforme Störungen“ [57] zur Prävalenz somatoformer Schmerzbeschwerden befragt. Es zeigte sich, dass ein hoher Prozentsatz der Befragten das Bestehen somatoformer Schmerzbeschwerden äußert. Am häufigsten werden Rückenschmerzen (30,2% der Untersuchungspersonen), Gelenkschmerzen (25,1%), Schmerzen in den Armen oder Beinen (19,9%) und Kopf- oder Gesichtsschmerzen (19,5%) angegeben. Dabei berichten Frauen mehr somatoforme Schmerzbeschwerden als Männer, mit steigendem Alter werden mehr somatoforme Schmerzen geäußert, und mit geringerem Bildungsgrad, geringerem Haushaltseinkommen, ländlichem Wohnsitz und Wohnsitz in Ostdeutschland erhöht sich die Häufigkeit von Schmerzbeschwerden. Die ermittelte hohe Prävalenz somatoformer Schmerzen steht im deutlichen Widerspruch zur Versorgungsrealität, in der der überwiegende Teil dieser Patienten keine adäquate psychotherapeutische Behandlung erhält, sondern störungsinadäquat im somatischen Gesundheitssystem gebunden ist.

Schlüsselwörter: somatoforme Beschwerden, Schmerzen, Bevölkerungsbefragung

Introduction

Somatic complaints have a high prevalence in the population. Between 80% [34], [35] and 95% [59] of the population reported bodily sensations at least once per week, and during a period of two weeks an average of

four different body complaints was reported [18]. Only 5% to 14% of the adults had no symptoms during this time period [65]. Schumacher and Brähler [60] studied a representative sample of the German population by a short form of the Giessen Complaint List (2182 persons aged 18 to 60 years). Most frequently headaches (67.4%), back pain (61.9%), neck pain (57.2%), tiredness (54%) and exhaustion (50.8%) were reported.

Aike Hessel¹
 Manfred Beutel²
 Michael Geyer¹
 Jörg Schumacher³
 Elmar Brähler⁴

1 Universität Leipzig, Klinik und Poliklinik für Psychotherapie und Psychosomatische Medizin, Leipzig, Germany

2 Klinik für Psychosomatik und Psychotherapie, Justus-Liebig Universität Giessen, Giessen, Germany

3 Friedrich-Schiller-Universität Jena, Institut für Medizinische Psychologie, Leipzig, Germany

4 Universität Leipzig, Selbständige Abteilung für Medizinische Psychologie und Medizinische Soziologie, Leipzig, Germany

Pain symptoms constitute the most significant cluster among physical complaints. Thus in Sweden, 66% of the persons studied between 18 and 84 years reported current or recent pain symptoms [8] while other Swedish studies reported a prevalence for persistent pain of 55% (three months period), or of 49% (six months period), respectively [3], [2]. In a representative American study, a six month prevalence of about 45% was determined for recurrent and persistent pains of different locations [40] and 16% of the subjects in a Canadian study reported that they had suffered from pain in the last two weeks [13]. In a recent Spanish telephone survey 43.2% out of a community telephone sample of 5000 reported having had pain in the previous week [11]. A multinational WHO-study reported an average prevalence of persistent pain (at least six months duration) of 22% (5.5% to 35%) [24]. Back pain, head and facial pain, muscle and joint pain as well as neck and shoulder pain are among the most frequent chronic pain symptoms [2], [8], [13], [31], [67], [39].

A series of epidemiological studies has dealt with the prevalence of back pain ("lower back pain"). In North America, a point prevalence of 5.6% was reported [47], while two German studies found considerably higher point prevalences of 37% to 40% or more [14], [38], [55]. The one year prevalence in the German studies was 73% to 75%. In the general population and for patients in primary medical care in England, prevalence rates of about 36% (referring to an interval of one month to one year) were reported [51], [68]. In a Canadian study with 2000 representative inhabitants of a province, 28.4% of participants reported suffering from back pain at the time of the survey, and 84.1% had already suffered from back pain in the course of their lives [10]. Comparatively stable one month prevalence rates for back pain between 46% and 51% were assessed in large scale studies in Finland which were conducted between 1972 and 1992 with an interval of 5 years [26]. As in other Scandinavian studies, a comparable prevalence of about 50% was shown, however, referring to a one-year period [45], [46]. Further epidemiological studies deal with the prevalence of headaches. Thus Goebel et al. [22] investigated 4061 representative persons and found that 71.4% of participants suffered from headaches at least occasionally. In a representative Norwegian study, 6% of the men and 30.1% of the women reported at least weekly occurring headaches [4].

Neck and shoulder pain are also frequent; however, due to limited space findings cannot be reported in detail [4], [12], [25], [47], [53].

Frequently, no physical causes could be found for the physical complaints. In the literature, some major studies examined persons with frequent physical complaints (including numerous pain symptoms) in order to determine if a physical cause underlies these symptoms. Thus Kroenke and Price [44] could only find physical causes of serious physical symptoms in 31% of 13,538 adults. Myrtek and Fahrenberg [49] found no coronary stenosis in one fourth of those undergoing angiography. Kroenke

and Mangelsdorf [43] studied 1000 internal medicine patients with frequent general symptoms and could only determine a significant organic pathology in 16% of the cases. Only in 11% of patients with chest pain an organic cause was found. The same was true in 10% of back pain and abdominal pain cases, respectively. Based on a literature review, Kellner [33] concluded that 20% to 84% of the patients who consulted a physician reported physical complaints without an organic basis. While an unrecognised organic disorder cannot be excluded, these patients were more likely suffering from somatoform disorders. They are treated, however, by somatic treatments, which is known to contribute to chronicity of the somatoform symptoms and cause enormous costs to the health systems [58]. Studies showed that more than six times more money was spent for inpatient treatments of patients with physical complaints without adequate organic explanation than for the average patient; for ambulatory care even 14 times more was spent than for the average patient [62]. According to studies of Escobar et al. [17] these patients utilised medical services three times more frequently than others and in severe cases up to ten times more frequently. Zielke [69] reported 140.3 average work disability days in the last three years for these patients, and a mean of 70.4 hospital days and 32.4 ambulatory physician consultations. Fink [19], [20], [21] found no organic cause among 19% of the "high utilizers" of the Danish health care system. Katon et al. [32] came to similar conclusions in their study of two American hospitals.

Meanwhile, there have been some studies on the epidemiology of pain (e.g. [11]). However, usually they did not differentiate if the pain symptoms were based on an organic cause or not and if they were of a somatoform nature. This discrimination is highly relevant considering the reported frequency of somatoform complaints and the resulting health costs. In order to contribute to empirical knowledge, this paper therefore presents data on the prevalence of explicit somatoform pain complaints.

Methods

Sample and data collection

In November/December 1998, 2050 persons were surveyed who were representative for the German population according to age, sex and education. The population of the survey comprised the German speaking inhabitants living in private households with an age of 14 years and higher. Data collection was done as a survey by trained interviewers of a survey institute. The survey was based on the ADM sample system (ADM=Arbeitskreis Deutscher Marktforschungsinstitute) which assured the representativity of the survey. The system was based on the register of the Federal Elections in 1994 from which 96 Eastern and 105 Western German sample points were chosen. Based on these 201 sample points, according to a specific scheme, a street, a house, a floor, an apartment and

Table 1: Sociodemographic characteristics of the sample

		Total (n=2005)	Men (n=883)	Women (n=1122)
Age	Mean (SD) Range	50.0 (16.8) 18-92	50.2 (16.3) 18-90	49.9 (17.2) 184-92
Age groups	18 to 30 years	299 (14.9%)	129 (14.6%)	170 (15.2%)
	31 to 40 years	376 (18.8%)	149 (16.9%)	227 (20.2%)
	41 to 50 years	341 (17.0%)	154 (17.4%)	187 (16.7%)
	51 to 60 years	359 (17.9%)	172 (19.5%)	187 (16.7%)
	61 to 70 years	382 (19.1%)	190 (21.5%)	192 (17.1%)
	Older than 70 years	248 (12.4%)	89 (10.1%)	159 (14.2%)
Part of Germany	West	997 (49.7%)	447 (50.6%)	550 (49.0%)
	East	1008 (50.3%)	436 (49.4%)	572 (51.0%)
Municipal/rural	<20,000 inhabitants	888 (44.3%)	374 (42.4%)	514 (45.8%)
	>20,000 inhabitants	1117 (55.7%)	509 (57.6%)	608 (54.2%)
Marital status	Married	1128 (56.3%)	556 (63.0%)	572 (51.0%)
	Married, but separated	30 (1.5%)	15 (1.7%)	15 (1.3%)
	Unmarried	376 (18.8%)	197 (22.3%)	179 (16.0%)
	Divorced	193 (9.6%)	55 (6.2%)	138 (12.3%)
	Widowed	278 (13.9%)	60 (6.8%)	218 (19.4%)
Partnership	Yes	1264 (63.0%)	624 (70.7%)	640 (57.0%)
	No	741 (37.0%)	259 (29.3%)	482 (43.0%)
Education	Primary education	981 (48.9%)	431 (48.9%)	550 (49.0%)
	High school	855 (42.6%)	365 (41.4%)	490 (43.7%)
	University	169 (8.4%)	87 (9.9%)	82 (7.3%)
Employment	Full-time >35h/week	758 (37.8%)	453 (51.3%)	305 (27.2%)
	Part time	147 (7.3%)	14 (1.6%)	133 (11.8%)
	Service or maternity leave	15 (0.7%)	3 (0.3%)	12 (1.1%)
	Unemployed	176 (8.8%)	65 (7.4%)	111 (9.9%)
	Retired	663 (33.1%)	313 (35.4%)	350 (31.2%)
	No employment	179 (8.9%)	3 (0.3%)	176 (15.7%)
	School	67 (3.3%)	32 (3.6%)	35 (3.1%)
Household income	<2500 DEM*/month	672 (36.0%)	230 (28.0%)	442 (42.3%)
	2500 – 5000 DEM/month	994 (53.3%)	481 (58.7%)	513 (49.0%)
	>5000 DEM/month	200 (10.7%)	109 (13.3%)	91 (8.7%)

*1 DEM = 0.511292 EUR

finally the target person were selected (random-root-procedure). Two call-backs were done before one address was considered a failure. Quality neutral failures (e.g. apartment not inhabited) amounted to 3.8%, systematic failure (target persons refused interview) was 30.6% (total number of addresses=3125). Table 1 shows the sample of the participants of 18 years and above according to various sociodemographic parameters.

Measures

The SOMS 2 (Screening for Somatoform Symptoms, [57]) was used. This questionnaire is a screening instrument for identification of persons with somatoform disorders.

It is strictly based on the criteria of the classification systems DSM-IV [1] and ICD-10 [15] which specified symptom lists for the diagnosis of somatoform disorders. A certain number of symptoms is required along with various inclusion and exclusion criteria.

The questionnaire covered the following contents:

- 53 items addressed all physical symptoms which are relevant for the diagnosis of a somatization disorder according to DSM-IV (33 symptoms), and, according to ICD-10, for the diagnosis somatization disorder (14 symptoms) and for the diagnosis of somatoform autonomic disorder (12 symptoms). Symptoms are rated as applicable or not applicable for the period of the last two years. Only those complaints were to be reported for which

physicians found no causes and which strongly impaired the well-being of the respondents. Among these items were 10 items measuring the prevalence of somatoform pain symptoms: "head or facial pain", "abdominal or epigastric pain", "back pain", "joint pain", "pain in the legs and/or arms", "chest pain", "rectal pain", "painful intercourse", "pain during urination", "painful menstruation". Reports of the study participants on these items are the content of the paper presented.

- 10 additional items assessed the inclusion and exclusion criteria of somatoform disorder studied according to the classification systems.
- In addition, another five items were provided for screening of other somatoform disorders.
- The questionnaire has been shown to be psychometrically sound. Norms have been defined based on a representative community sample of 2050 persons in the age of 14 - 92 years [29].

Statistical analysis

Relative frequencies were computed as measures for the prevalence of somatoform complaints. Associations of these complaints with a number of sociodemographic parameters were tested by Kruskal-Wallis.

Results

1. Prevalence of somatoform pain complaints

Table 2 shows the frequencies of the somatoform pain complaints studied (manifested in the past two years, no organic causes found by physicians, strongly compromising well-being) for the total sample and according to sex.

Table 3 presents the frequencies of the somatoform pain complaints in relation to age.

Most frequently, study participants complained of "back pain" (30.2% of the total sample, 32.7% of the women, 27.1% of the men), "joint pain" (25.1% total, 27% of the women, 22.8% of the men), "pain in the arms and/or legs" (19.9% total, 22.2% of the women, 16.9% of the men) and "head or facial pain" (19.5% total, 22.9% of the women, 15.1% of the men).

Table 4 presents the most frequent somatoform complaints assessed by the SOMS.

Clearly, pain played a special role among somatoform complaints. Thus, among the 10 most frequent complaints, five referred to pain symptoms and the highest four ranks were also taken by pain.

Figure 1 shows the average number of somatoform pain complaints reported depending on age. The presentation discards the item "painful menstruation", as this pain quality is not relevant for all age groups.

The figure shows that even younger adults reported an average of one somatoform pain symptom, and those aged over 70 years reported an average of two somato-

form pain symptoms, i.e. somatoform pain is a ubiquitous common every-day phenomenon.

2. Somatoform pain complaints determined by sociodemographic parameters

As Table 5 shows, the sociodemographic parameters "age", "sex", "partnership", "education", "household income", "rural/municipal" and East/West" had an impact on the prevalence of somatoform pain complaints (Kruskal-Wallis test).

The close relationship between an increasing age and the increase of "back pain", "joint pain" and "pain in the legs and/or arms" was very impressive. Only "painful menstruation" decreased with an increasing age according to expectations.

Women reported "head or facial pain", "back pain", "joint pain", "pain in the legs and/or arms" and "painful intercourse" significantly more frequently than men. "Abdominal or epigastric pain" was also more frequent in women than in men.

More "back pain", "joint pain" and "pain in the legs and/or arms" were associated with a lower degree of education, and a lower degree of household income was associated with more "head or facial pain", "back pain", "joint pain", "pain in the legs and/or arms" and "pain during urination". Inhabitants of small towns (size <20,000) complained more frequently of "back pain", "joint pain" and "pain in the legs and/or arms" than inhabitants of larger cities, and East Germans more frequently reported "pain in the abdomen", "joint pain" and "pain in the legs and/or arms" than West Germans.

The presence of a partnership, according to this survey, showed no relationship to the intensity of pain complaints.

Table 2: Percentage of somatoform pain symptoms in the German population (%)

Pain symptoms	Total	Women	Men
Back pain	30.2	32.7	27.1
Joint pain	25.1	27.0	22.8
Pain in legs and/or arms	19.9	22.2	16.9
Head or face pain	19.5	22.9	15.1
Abdominal and/or gastric pain	10.7	12.1	9.0
Chest pain	5.0	4.3	5.9
Pain during urination	2.9	2.3	3.6
Rectal pain	1.6	1.8	1.4
Pain during sexual contact	1.2	1.8	0.3
Painful menstruation		8.4	

Table 3: Percentage of somatoform pain symptoms in the German population according to age and sex (%)

		18-30 years	31-40 years	41-50 years	51-60 years	61-70 years	Over 70 years
Head or facial pain	Total	19.7	17.9	21.0	16.5	20.7	22.0
	Men	12.4	12.1	18.4	15.7	17.4	12.4
	Women	25.3	21.8	23.1	17.2	24.0	27.4
Abdominal and/or gastric pain	Total	11.4	10.7	10.4	12.3	7.6	13.0
	Men	3.9	5.4	10.5	14.5	8.9	9.0
	Women	17.1	14.2	10.2	10.2	6.3	15.3
Back pain	Total	17.7	21.7	29.6	32.1	39.8	41.9
	Men	14.7	15.4	30.3	28.5	37.9	33.7
	Women	20.0	25.8	29.0	35.5	41.7	46.5
Joint pain	Total	8.0	12.0	19.8	24.6	40.3	50.4
	Men	9.3	8.7	19.7	19.2	37.9	46.1
	Women	7.1	14.2	19.9	29.6	42.7	52.9
Pain in legs and/or arms	Total	5.7	11.0	13.9	17.9	32.7	41.9
	Men	7.0	8.7	11.2	12.8	31.1	32.6
	Women	4.7	12.4	16.1	22.6	34.4	47.1
Chest pain	Total	2.0	3.7	5.9	5.9	5.5	7.3
	Men	1.6	1.3	5.9	6.4	8.9	12.4
	Women	2.4	5.3	5.9	5.4	2.1	4.5
Rectal pain	Total	1.7	1.3	0.3	1.4	1.6	4.1
	Men	0.8	1.3	0	0.6	2.6	3.4
	Women	2.4	1.3	0.5	2.2	0.5	4.5
Painful intercourse	Total	1.7	1.6	0.6	0.8	1.6	0.4
	Men	0.8	0	0	0	1.1	0
	Women	2.4	2.7	1.1	1.6	2.1	0.6
Pain during urination	Total	1.3	1.3	0.9	2.2	5.5	6.9
	Men	0	0.7	1.3	3.5	7.4	10.1
	Women	2.4	1.8	0.5	1.1	3.6	5.1
Painful menstruation	Women	17.1	15.6	14.0	1.6	0.5	0

Table 4: The 10 most frequent somatoform complaints in persons of 18 years and above in Germany 1998 (SOMS, [57])

	Total	Men	Women
Back pain	30.2 %	27.1 %	32.7 %
Joint pain	25.1 %	22.8 %	27.0 %
Pain in legs and/or arms	19.9 %	16.9 %	22.2 %
Head or facial pain	19.5 %	15.1 %	22.9 %
Blotting	12.8 %	12.6 %	12.9 %
Intolerance of food	12.6 %	11.8 %	13.3 %
Sexual indifference	11.6 %	9.8 %	13.1 %
Discomfort around the precordium	11.2 %	9.9 %	12.2%
Palpitation	11.1 %	8.7%	13.0 %
Abdominal and/or gastric pain	10.7 %	9.0 %	12.2 %
Frequent urination	8.8%	9.9 %	7.9%
Flushing or blushing	8.8%	4.2%	12.4 %

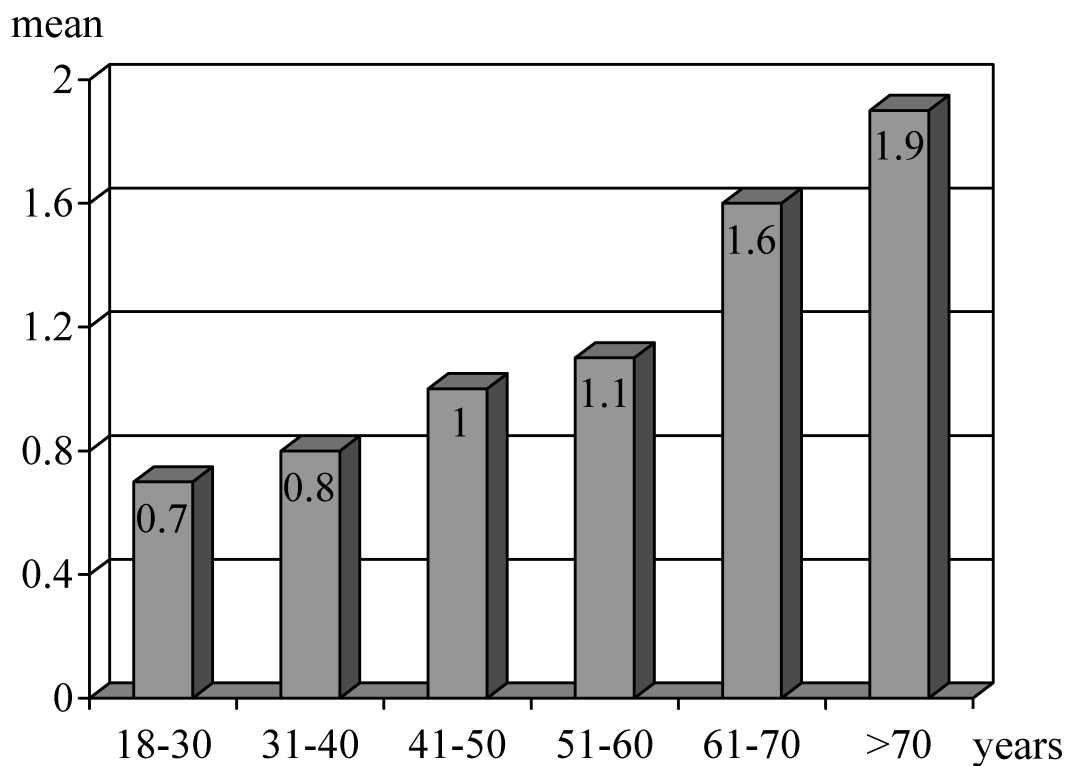


Fig. 1: Average somatoform pain symptoms according to age groups (maximum score possible = 9)

Table 5: Impact of sociodemographic characteristics on somatoform pain symptoms (Kruskal-Wallis-Tests χ^2)

	Age ^{a)}	Sex ^{b)}	Partner-ship ^{c)}	Educa-tion ^{d)}	Municipal/rural ^{e)}	East/West ^{f)}	Income ^{g)}
Head or face pain		19.297***					4.206*
Abdominal or gastric pain		5.038*				5.109*	
Back pain	68.174***	7.257**		5.663*	9.858**		6.654**
Joint pain	215.9***	4.517*		12.289***	5.84*	6.713**	28.24***
Pain in legs and/or arms	179.12***	8.710**		4.994*	5.542*	10.429**	28.063***
Chest pain							
Rectal pain	13.39*						
Painful intercourse		9.108**					
Pain during urination	34.397***						10.044**
Painful menstruation	79.814***						

The table presents significant χ^2 -values (Kruskal-Wallis H) only; asymptotic significance: * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

^{a)} six categories (18-30, 31-40, 41-50, 51-60, 61-70, >70 years)

^{b)} two categories (male/female)

^{c)} two categories (partner/no partnership)

^{d)} two categories (less than high school/qualified high school)

^{e)} two categories (municipal/rural)

^{f)} two categories (East/West)

^{g)} two categories (<2500 DEM/month/ \geq 2500 DEM/month)

Discussion

Somatoform pain complaints are very frequent in the general population. Thus 30.2% of the participants reported "back pain" which occurred in the last two years, significantly compromised well-being and lead to ambulatory physician consultations without resulting in the specification of an organic cause. 25.1% of the population reported "joint pain", 19.9% "pain in the legs and/or arms" and 19.5% "headaches".

These findings are very impressive as they only came from persons who reported that their pain had no organic correlate. It is to be conjectured, however, that another significant proportion of persons with somatoform pain did not report the symptoms as fixation on an organic symptom is characteristic for somatoform disorders. The neglect of this organic fixation in somatoform disorders is a significant criticism of the SOMS-2 questionnaire [29], because the insistence on the organogenesis of complaints represents an obligatory diagnostic criterion of somatoform disorders. Careful clinical interviews are therefore necessary for the diagnosis of somatoform disorders in the clinical sector. However, such a procedure

is not practicable within a frame representative for the whole population and thus an approach towards diagnostic findings is aimed, using the described questionnaire. Further, these reports are descriptive and do not allow conclusions regarding etiologic or pathogenic mechanisms of somatization. In its descriptive orientation the SOMS-2 follows the classification systems DSM-IV and ICD-10 which both defined somatoform complaints by counting symptoms based on symptom lists taking inclusion and exclusion criteria (particularly the demand for a lack of the defined physical disorder) into account. These diagnostic algorithms by the classification systems have been questioned repeatedly. Particularly the disregard of significant etiologic and pathogenic aspects of somatoform disorders (e.g. parameters regarding psychopathology, prognosis and cause, relations to psychosocial conditions, integration of emotional aspects) were criticised [30], [42]. The diagnostic procedures of the diagnosis systems imply that somatoform disorders are not diagnosed according to positive characteristics, but rather by negative characteristics (lack of an organic finding). In addition, this procedure subsumes a heterogeneous, only superficially similar collection of disorders [42].

In spite of these critical aspects, the SOMS-2 has been proved as a suitable screening procedure for assessing prevalence data. The etiologic and pathogenic aspects of somatoform disorders, however, can only be determined by more detailed inquiry (interviews).

The high prevalence of somatoform pain disorders is known to be reflected in the high prevalence of the consumption of pain medication. Thus in the federal health survey in 1998, 0.6% to 2.1% (depending on residency and sex) of the 18 to 45 year olds and 2.6% to 7.7% of the 46 to 79 year old reported the daily intake of "medication against rheumatic and vertebral disk complaints" [37]. Analgesics/antirheumatics were the most frequently prescribed medications with a total of 116,000,000 prescriptions (in the year 1995) in Germany [9]. In the East German medication survey, in the state of Sachsen (1991/1992) 10.4% of the women reported having taken analgesics in the previous week [41]. It can be assumed that there is a direct relationship between the high prevalence of somatoform pain disorders in the general population and a high utilisation of somatic treatments [27] as well as a strong consumption of pain medication. The treatment of patients with a somatoform pain disorder in a somatically oriented health system is clearly inadequate. It becomes a major cause for the chronic course of this disease and results in a strong financial demand on the health system. Still psychotherapeutic procedures are only utilised in a small proportion of the general population, which has a high proportion of persons with somatoform pains. According to our representative survey of 2179 persons in 2000 [27], psychosocial professionals (psychiatrists, psychotherapists, psychologists) have only been consulted by a small segment of the population, with about the same frequency as non-medical (naturopathic) practitioners, community nurses and clergy. Only 1.2% of the survey participants reported having utilised a psychotherapeutic treatment of at least 10 sessions.

Women reported more somatoform pain than men. This corresponds to estimates from the literature showing a clearly higher prevalence for women, particularly for back and head pains than for men. In addition, women complained about stronger and more enduring pain [7]. This sex difference also corresponded to other studies showing that women reported more psychological and body complaints than men and described themselves as sicker [6], [28], [36], [48], [56], [63]. The sex difference we found also corresponded to studies on the prevalence of somatoform complaints. Thus, Kroenke and Price [44] using the diagnostic interview schedules with 13,538 persons showed that 20 out of 32 somatoform complaints (without gynaecological symptoms) were stronger in women than in men. Neumer et al. [50] in their analysis of the literature also confirmed the higher prevalence of somatization disorders in women for the American population.

With an increasing age there was a strong increase of somatoform pain symptoms. The high frequency of somatoform pain complaints in the ageing population has been supported by other studies on the prevalence of pains of

different aetiologies. Thus, Gunzelmann et al. [23] studied 593 representative persons over the age of 60 years with the short form of the Giessen complaint list (GGB-24, [5]). Of those, 23% reported strong back pain, 23% strong joint pain, and 18% strong neck pain. Other authors also reported prevalence rates, which differed considerably, however, depending on the assessment instrument and the pain quality (e.g. [16]: more than 22% back pain over 67 years; [54]: in 44% of the participants over 65 years tension headaches, in 11% migraine; [61]: in 63% of the males and 37% of the females over 57% muscle pain; [64]: in 71% of the over 65 year olds joint pain). The high prevalence of somatoform pain symptoms in the ageing population corresponds to the high utilisation of tranquilisers and analgesics in this age group. Thus, Stuck et al. [66] in Swiss citizens aged over 75 years reported an extreme frequency of consumption of benzodiazepines and non-steroidal analgesics. 29% of these aged 75 to 80 years olds and 33% over 80 years olds took benzodiazepines (women 36%, men 21%), and 70% of the participants 74 to 80 year old and 24% of the over 80 year olds consumed non-steroidal analgesics (women 24%, men 15%). The studies of Perrig and Stähelin [52] also showed a high frequency of the consumption of tranquillisers and analgesics in a community sample over 65 years. According to this study, one in ten consumed these medications. The high prevalence of somatoform pain disorders in higher age demonstrates the often underestimated significance of somatization in higher age and points to the importance of biopsychosocial perspective of ageing.

The significance of social and structural parameters for the somatoform pain complaints is underscored by a surplus of pain with low education, low household income, rural residency and residency in Eastern Germany.

To summarise, somatoform pain complaints are very frequent in the German population. The prevalence depends strongly on the age and the sex of the persons afflicted and on the pain localisation. Considering the strong utilisation of the somatic health system, due to the pathological illness behaviour ("doctor shopping") and the inadequate treatment of patients with somatization disorders, the high frequency of somatoform pain disorders has an enormous health, economic and political significance [29].

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Corresponding author:

PD Dr. med. habil. Aike Hessel
 Universität Leipzig, Klinik und Poliklinik für Psychotherapie
 und Psychosomatische Medizin, K.-Tauchnitz-Str. 25,
 04107 Leipzig, Deutschland
 aikeh@web.de

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