International Journal of Behavioral Medicine
2004, Vol. 11, No. 2, 122–125

Are Subjective Health Complaints a Result of Modern Civilization?

Hege R. Eriksen, Brit Hellesnes, Peer Staff, Holger Ursin

*Subjective health complaints without or with minimal somatic findings (pain, fatigue) are common and frequent reasons for encounter with the general practitioner and for long-term sickness leave and disability. The complaints are often attributed to the stressors of modern life. Is this true? We interviewed 120 Aborigine Mangyans (native population, M age = 33.5 years, 72.5% women) living under primitive conditions in the jungle of Mindoro, an island in the Philippines, and 101 persons living in a small coastal town on the same island (coastal population, M age = 33.8 years, 60.4% women). Both groups had more musculoskeletal complaints, fatigue, mood changes, and gastrointestinal complaints than a representative sample from the Norwegian population (*N = *1,243). Our common subjective health complaints, therefore, are not specific for industrialized societies.*

Key words: subjective health complaints, cultural, unexplained medical symptoms, illness, disease, health

The most frequent reasons for encounters with a general practitioner are "unexplained medical symptoms" (Croft, Rigby, Boswell, Schollum, & Silman, 1993; Nimnuan, Hotopf, & Wessely, 2000), subjective health complaints (SHC) without any somatic findings or in excess of what is reasonable from objective findings (Ihlebæk, Eriksen, & Ursin, 2002). The most common complaints are muscle pain and fatigue. Muscle pain, in particular low back pain, is the most frequent source of sickness absence and permanent disability in Norway (Norwegian National Insurance Administration, 1998). Muscle pain and fatigue are also very frequent in the general population. In our own epidemiological studies in Norway (N = 1,243; Ihlebæk et al., 2002) and the Nordic European countries (N = 4,000; Eriksen, Svendsrød, Ursin, & Ursin, 1998) the 30-day prevalence is about 50% for fatigue and 50% for muscle pain. The 30-day prevalence of any SHC is as high as 90% (Ihlebæk et al., 2002).

In extreme degrees these complaints qualify for somatization. Most never reach these levels, but the complaints are often attributed to the stressors of modern life. The human organism is assumed to be genetically designed for a tough hunter-gatherer life, and, therefore, not fit for the psychosocial climate of modern society (Folkow, 2000; Sapolsky, 1998). Folkow and Sapolsky addressed somatic diseases like hypertension and diabetes, but similar attributions are found for SHCs—low back pain: urbanization, industrialization (Volinn, 1997) and chemical sensitivity: allergic to the 20th century (Radetsky, 1997). Such attributions are not new. Similar complaints and attributions to urban stressors existed at the end of the 18th century (Shorter, 1992).

We examined the prevalence of SHCs in Mangyans, aborigines living in a rain forest in Mindoro, a Philippine island. Are these common complaints a consequence of industrialization and urbanization, or are common complaints common also in traditional or developing cultures?

Methods

Participants

Participants were selected from the Puerto Galera area at the Mindoro Island, about 5 hr from Manila by bus and boat. Mindoro is still rather isolated; it acquired fame when a Japanese soldier staggered out of the jungle in 1975 asking whether the war was over. The earliest inhabitants of the island are referred to as Mangyan, a generic name for diverse groups inhabiting the mountains and foothills of Mindoro. Their predominant language is Tagalog, but other dialects exist. There are now about 50,000 Mangyans living in Oriental Mindoro. They possess a pre-Spanish writing system, considered to be of Indic origin, with characters expressing the open syllables of the language. The existence of a writing system accounts for a wealth of literature, written down most frequently on bamboo tubes or slats (*ambahan*; Postma, 1981).

Hege R. Eriksen and Holger Ursin, Department of Biological and Medical Psychology, University of Bergen, Norway; Brit Hellesnes, Ullevål University Hospital, Oslo, Norway; Peer Staff, Vesta Insurance, Oslo, Norway.

Correspondence concerning this article should be addressed to Hege R. Eriksen, HALOS, University of Bergen, Christies gt 13, N–5000, Norway. E-mail: hege.eriksen@psych.uib.no

Two populations were tested. The native population (n = 120, M age = 33.5 years, SD = 14.7, 72.5% women) consisted of Mangyans living in Mount Baclayan, a rain forest located about 700 to 800 m above sea level. They lived in isolated small units that resemble small villages. There were about 20 to 30 Mangyans living in each unit. They have subsistence barter economy.

The coastal population (n = 101, M age = 33.8 years, SD = 13.8, 60.4 % women) lived by the coast in small lagoons, with very little communication between lagoons. We did not include any persons from the city Puerto Galera itself. The population is Catholic. The main income comes from the boat-men taking people from island to island in boats and sale of T-shirts, soft drinks, massage, manicure, and so forth. Most try to live on income derived from tourists and from selling services to each other (doing laundry, housecleaning, and so forth). The estimated income minimum in the Philippines is €2 per day per person. However, none of our participants had income even close to this. The main health concerns are tuberculosis, diabetes, and alcoholism. The children eat a lot of inexpensive candies. Cigarettes and alcohol are also inexpensive commodities; gin is less expensive than tonic. Both populations live in a hot climate, reducing the possibilities of activity. The average temperature is about 32 to 35°C (89–95°F), with very high humidity.

The prevalence of SHCs in these two samples were compared with data from a representative sample of the Norwegian population (N = 1,243, M age = 40.9 years, SD = 15.2, 53.2% women; Ihlebæk et al., 2002). These prevalence data correspond closely to data from all Nordic countries (N = 4,000; Eriksen et al., 1998).

Instruments

The SHC inventory (Eriksen, Ihlebæk, & Ursin, 1999; http://www.uib.no/insuhc/) was used to measure 29 different SHCs during the past 30 days. Severity of complaints were scored on a scale from 0 *(no complaints)* to 3 *(severe complaints).* The number of days for each complaint was also recorded. These complaints cluster into five subscales, musculoskeletal, pseudoneurological (*Diagnostic and Statistical Manual of Mental Disorders,* 4th ed. [*DSM–IV*]; American Psychiatric Association, 1994; tiredness, mood, dizziness), gastrointestinal, allergic, and flu-like complaints.

Procedure

The data from the representative sample of the Norwegian population (660 women, 580 men, 15 years and older) were collected as interviews based on the SHC forms in spring 1996 (Ihlebæk et al., 2002).

The data from the native and the coastal populations were collected by interviews based on the SHC forms, translated to local dialects via the English version of the SHC. The interviews were performed in the time period from March 25 until May 30, 2002. Two local women were instructed in how to do the interview by one of the authors (B.H.). Language and the understanding of the content and meaning of the different items were checked and discussed. For all there appeared to be a mutual understanding of the meaning, except for heartburn, wind (bloating, gas), flushes, and dizziness, which required explanation.

The two women doing the interviews were paid NOK 10 (about 1.5 Euro) per fulfilled interview, and all their expenses were paid. In addition they were paid another NOK 10 after B.H. had controlled that the forms were filled out correctly. In particular, all items should be scored, including a zero for "no such complaint." The two interviewers also signed a statement that the interviews had been performed correctly. To be able to interview the Mangyans the interviewer gave them food and personal gifts (rice, nonprescription drug: mild painkiller, and medication to one child for tuberculosis). In addition the leaders of the different Mangyan groups was given a fee, which was either rice or NKr 10 to 20. B.H. participated in most of the interviews among the Mangyans and participated in the first few interviews of the coastal population. She kept a low profile during the interviews and collected the forms immediately after each interview. The two women asked everyone they met, except their own family members, to participate in the interview. No one refused to participate. Except for the Mangyan leaders, no participants received any money or other benefits.

Statistics

The statistical analyses were performed using SPSS 11.0 for Windows®.

There were few missing data from the Philippine sample, actually less than in the Norwegian population. After explanation, wind (bloating), flushes, and dizziness gave an acceptable response rate, only heartburn gave a high number of missing observations. To simplify comparisons of scores, all variables were included. Percentages reported are given as percentage of responding individuals. Odds ratio (OR) and 95% confidence intervals (CI) were calculated using logistic regression, controlling for age and gender. One-way analysis of variance (ANOVA) was used to compare severity of complaints (sum score of items within each cluster) between the groups.

Results

The people from Mindoro had more, not fewer, SHCs than the Norwegian sample. All individuals in the native and the coastal populations reported at least

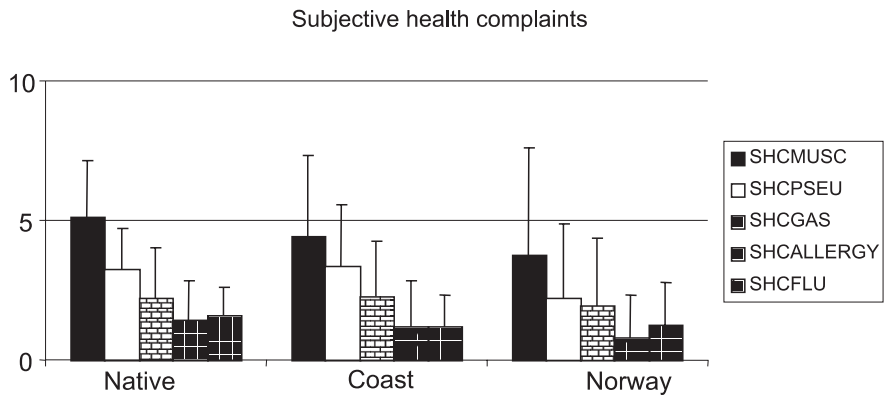

Figure 1. Mean values and standard deviation (*SD*) for the SHC subscales (sumscore for items in cluster) in the native (*n* = 120) and coastal (*n* = 101) Philippine population, and the Norwegian population (*n* = 1,243).

one SHCs during the past 30 days, compared with 96% in the Norwegian sample.

The *prevalence* of complaints was high in all three populations. For all five clusters the Norwegian sample had the lowest level of complaints. All the natives, 97% of the coastal, and 82.1% of the Norwegian population reported musculoskeletal complaints during the past 30 days. Pseudoneurological complaints during the past 30 days were reported by 97.5% of the natives, 94% of the coastal, and 65.1% of the Norwegian population; 80.8% of the natives, 87% of the coastal, and 59.8% of the Norwegian population reported gastrointestinal complaints during the last 30 days.

There were also significant group differences for the *severity* of musculoskeletal complaints, $F(2, 1463) = 8.34$, $p < .001$; pseudoneurology, $F(2, 1318) = 16.78$, $p < .001$; and allergies, $F(2, 1264) = 11.4$, $p < .001$ (see Figure 1).

The native population scored significantly higher on severity of musculoskeletal complaints ($p < .001$), pseudoneurology ($p < .001$), and allergies ($p < .001$) compared to the Norwegian population. The coastal population scored significantly higher on pseudoneurology ($p < .001$) and allergies ($p = .014$) compared to the Norwegian population. There were no significant differences between the groups on severity of gastrointestinal problems, $F(2, 1256) = 1.85$, $p = .157$, or flu, $F(2, 1256) = 2.80$, $p = .061$.

For the specific items, the prevalence differences are pronounced and significant for most items (see Table 1). Tiredness, low back pain, and headache were the most common complaints. These were all highest in the native population, slightly less in the coastal, and much less in the Norwegian sample. There were also significantly higher levels in the Philippine populations for most of the other complaints except for migraine, eczema, and allergies. Also, the native population had significantly lower frequencies of extra heartbeats and wind (bloating) and about the same frequencies of sleep problems as the Norwegian population.

Discussion

Contradictory to our expectations, the prevalence, intensity, and duration of most of the SHCs was higher in the native and coastal populations compared to the Norwegian population. This means that the levels are also higher than in the other Nordic European countries, which have about the same level as Norway (Eriksen et al., 1998). The native and coastal populations had higher frequencies of the majority of single complaints and longer duration and generally reported more severe musculoskeletal, pseudoneurological, and allergies compared to the Norwegian and Nordic populations. All three populations had tiredness, low back pain, headache, and cold or flu among their five most common complaints. For all five main complaints the prevalence was highest in the native population, and both Philippine populations were much higher than the Norwegian sample.

Some of the differences may be due to the coastal and the native populations actually having more somatic disease than the Norwegian populations. The prevalence of tuberculosis, malnutrition, and gastrointestinal disease is higher than in the Nordic countries. Still, the prevalence of SHCs is so high, and the profile so similar, that we interpret these findings as indicating that SHCs are frequent and normal in all populations.

Our findings make it unlikely that common health complaints and unexplained medical symptoms are specific to the stress of contemporary industrialized societies. It seems more likely that sensations and discomfort from muscles, joints, guts, and mood are inherent in human nature and part and parcel of everyday life. Inability to cope with the stress of difficult life situations may aggravate or sensitize us to these complaints (Eriksen & Ursin, 2002). Whenever these complaints get intolerable, we seek help and comfort. This constitutes the majority of patients in general practice (Croft et al., 1993). Only a minority has any serious medical condition. When the medical examination

Table 1. *The Number of Individuals With Subjective Health Complaints and Native and Coastal Odds Ratios*

	Native[a]		Coastal[b]		Norway[c]		Native		Coastal	
	n	%	*n*	%	*n*	%	OR	95% CI	OR	95% CI
Cold, flu	88	73.3	70	69.3	499	49.3	2.6	1.67–3.96	2.1	1.33–3.25
Cough, bronchitis	80	67.2	21	20.8	213	23.7	6.8	4.47–10.39	0.9	0.53–1.48
Asthma	44	36.7	11	11.3	52	5.0	12.5	7.60–20.44	2.8	1.37–5.59
Headache	95	79.2	79	79.0	628	50.6	2.9	1.80–4.64	3.0	1.78–4.94
Neck pain	70	58.3	45	45.0	470	37.8	2.1	1.42–3.08	1.3	0.83–1.93
Pain upper back	90	75.0	51	50.5	228	18.3	12.9	8.29–20.3	4.8	3.10–7.33
Pain lower back	99	82.5	70	69.3	494	39.7	6.7	4.08–10.64	3.2	2.07–5.02
Pains in arms	54	45.0	37	37.0	291	23.4	2.9	1.93–4.26	2.1	1.35–3.29
Pains in shoulders	72	60.0	34	34.0	395	38.4	2.6	1.76–3.94	0.9	0.56–1.39
Migraine	17	14.2	9	9.0	94	7.6	1.7	0.95–2.97	1.1	0.54–2.30
Extra heart beats	7	5.9	25	25.0	134	13.2	0.4	0.2–0.98	2.5	1.53–4.21
Chest pain	59	49.2	33	33.0	124	12.6	8.3	5.40–12.72	4.1	2.57–6.60
Breathing difficulties	45	37.8	29	29.0	83	8.3	8.0	5.05–12.70	5.5	3.31–9.13
Pain in the feet during exercise	78	65.0	21	21.0	215	21.9	7.2	4.75–10.97	1.0	0.63–1.75
Heartburn[d]	0		1		257					
Stomach discomfort	47	39.5	24	24.0	165	16.5	3.7	2.43–5.59	1.7	1.03–2.80
Gastritis, ulcus-ulceration	62	52.1	28	28.0	43	4.2	26.9	16.42–44.17	9.2	5.34–16.01
Stomach pains	48	40.3	35	35.0	207	19.6	2.4	1.59–3.58	2.0	1.31–3.18
Wind (bloating)	5	5.4	55	60.4	358	34.5	0.1	0.05–0.28	3.1	1.98–4.86
Diarrhea	36	30.0	19	19.0	242	21.1	1.6	1.03–2.41	0.9	0.51–1.46
Constipation	40	33.6	21	21.0	92	8.3	5.8	3.68–9.18	3.2	1.87–5.55
Eczema	4	3.3	5	5.0	152	13.8	0.2	0.07–0.50	0.3	0.12–0.74
Allergic skin problems	6	5.0	11	11.1	131	11.6	0.3	0.14–0.75	0.9	0.44–1.67
Flushes, heat sensations	18	16.8	9	9.7	93	8.5	2.1	1.20–3.80	1.2	0.59–2.59
Sleep problems	39	33.3	50	50.5	317	27.9	1.3	0.84–1.92	2.8	1.82–4.25
Tiredness	104	88.1	86	86.9	556	50.5	6.2	3.50–11.08	5.6	3.09–10.27
Dizziness	69	71.9	31	33.0	195	17.3	11.5	7.13–18.62	2.4	1.48–3.76
Anxiety	67	55.8	31	31.0	108	9.8	11.0	7.18–16.74	4.15	2.57–6.70
Sad, depressed	64	53.3	46	46.0	279	24.5	3.1	2.11–4.62	2.53	1.65–3.87

Note. The Norwegian Population is used as the reference category (OR = 1.0). All ORs are controlled for age and gender. OR = odds ratio; CI = confidence interval.
[a]*n* = 120. [b]*n* = 101. [c]*n* = 1,234. [d]ORs and 95% CIs not calculated due to missing data.

fails to demonstrate any serious somatic disease, many patients still have complaints beyond what they can endure. They keep asking for medical explanations and medical help. The aborigine population does not. For these complaints they do not seek medical doctors; they try local wisdom and healers. Only serious somatic concerns are referred to the Western medical science, if available.

References

Croft, P., Rigby, A. S., Boswell, R., Schollum, J., & Silman, A. (1993). The prevalence of chronic widespread pain in the general population. *Journal of Rheumatology, 20,* 710–713.

Eriksen, H. R., Ihlebæk, C., & Ursin, H. (1999). A scoring system for subjective health complaints (SHC). *Scandinavian Journal of Public Health, 1,* 63–72.

Eriksen, H. R., Svendsrød, R., Ursin, G., & Ursin, H. (1998). Prevalence of subjective health complaints in the Nordic European countries in 1993. *European Journal of Public Health, 8,* 294–298.

Eriksen, H. R., & Ursin, H. (2002). Sensitization and subjective health complaints. *Scandinavian Journal of Psychology, 43,* 189–196.

Folkow, B. (2000). Man's two environments and disorders of civilization: Aspects on prevention. *Blood Pressure, 9,* 182–191.

Ihlebæk, C., Eriksen, H. R., & Ursin, H. (2002). Prevalence of subjective health complaints (SHC) in Norway. *Scandinavian Journal of Public Health, 30,* 20–29.

Nimnuan, C., Hotopf, M., & Wessely, S. (2000). Medically unexplained symptoms: How often and why are they missed? *Quarterly Journal of Medicine, 93,* 21–28.

Norwegian National Insurance Administration. (1998). *Social Security Statistical Yearbook.* Oslo, Norway: National Insurance Administration.

Postma, A. (1981). *Treasure of a minority.* Manila, Phillipines: Arnoldus.

Radetsky, P. (1997) *Allergic to the twentieth century.* Boston, Little, Brown.

Sapolsky, R. M. (1998). *Why zebras don't get ulcers.* New York: Freeman.

Shorter, E. (1992). *From paralysis to fatigue. A history of psychosomatic illness in the modern era.* New York: Free Press.

Volinn, E. (1997). The epidemiology of low back pain in the rest of the world. A review of surveys in low- and middle-income countries. *Spine, 22,* 1747–1754.