

# Chronic pain and health status: how do those not using healthcare services fare?

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## SUMMARY

*Relatively little is known about the clinical importance of symptoms not presented to healthcare services. Using data from a community survey we examined the health status among those with chronic pain who reported using or not using healthcare services. Individuals with chronic pain who had used healthcare services in the previous year had poorer health than symptomatic responders who had not used services, irrespective of the severity of chronic pain. The findings suggest that there is little point in trying to detect and treat individuals not currently presenting to healthcare services with their pain.*

**Keywords:** health services; health services research; health status indicators; pain; signs and symptoms.

## Introduction

NUMEROUS studies have shown that a variable proportion of individuals do not consult healthcare services for their symptoms.<sup>1-3</sup> If non-presented symptoms have important adverse clinical outcomes (for example, poor prognosis or quality of life), attempts should be made to detect and treat these symptoms, provided, of course, that treatments improve outcome and that adequate resources exist. On the other hand, if non-presented symptoms have little or no adverse impact, there may be little point in trying to treat them. Current evidence on the clinical importance of symptoms hidden in the community is sparse.<sup>4,5</sup>

Chronic pain is a common symptom with substantial impact on wellbeing.<sup>6</sup> However, the health status of individuals with chronic pain who do not consult is not known. Using data from a community study of individuals living in Grampian, Scotland, we examined the chances of having poor health status among participants with chronic pain who reported using or not using healthcare services for their pain.

## Method

The data were derived from a follow-up survey<sup>7</sup> sent in 2000 to all responders to an earlier survey<sup>8</sup> who were willing to participate in further research and whose general practitioner (GP) deemed further enquiry to be appropriate. Some 1608 individuals returned completed questionnaires (corrected response rate of 83.0%). The survey asked about: the presence of chronic pain (constant or intermittent pain or discomfort present for more than 3 months<sup>9</sup>); its severity (measured by the chronic pain grade questionnaire<sup>10</sup>); health status (measured by the 36-item short-form survey [SF-36] general health questionnaire<sup>11</sup>); sociodemographic characteristics of the responder; and consultation with a GP, hospital specialist, physical therapist or alternative therapist in the previous year for pain.

The characteristics of those with chronic pain who reported using or not using healthcare services were examined. Our data were not normally distributed and so medians and interquartile ranges for scores in each SF-36 domain were calculated for users and non-users. The chances (measured as odds ratios and 95% confidence intervals) of having poor health status in each SF-36 domain among those with chronic pain using healthcare services compared with those not using the services, were estimated. A binary categorisation of SF-36 scores, using the lowest quartiles in the study sample for each health domain, was used to identify a group with poor health, and has been used in previously published studies.<sup>7,12,13</sup> The dichotomising of the SF-36 was based on our sample rather than the general population because United

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**HOW THIS FITS IN***What do we know?*

A number of studies have shown that a variable proportion of individuals do not consult healthcare services for their symptoms. However, relatively little is known about the clinical importance of symptoms hidden in the community.

*What does this paper add?*

Individuals with chronic pain who used healthcare services in the previous year had poorer health than symptomatic responders not using services, irrespective of the severity of chronic pain. The findings suggest that there is little point in trying to detect and treat individuals not currently presenting to healthcare services with their chronic pain.

**Results**

Nearly 30% ( $n = 245$ ) of the 840 individuals with chronic pain reported that they had not used any of the listed healthcare services in the preceding year. There were no significant differences in the sociodemographic characteristics of users and non-users of services (Table 1). There was a significant difference between groups in the severity of pain, with more users of healthcare services having severe pain than non-users.

Examination of health status between the two groups showed that individuals with chronic pain who had used healthcare services in the previous year had lower median scores in each of the SF-36 domains (except emotional role) than non-users of services, indicating poorer health status (Table 2). The unadjusted and adjusted odds ratios for poor health status in each SF-36 domain are also shown in Table 2. Unadjusted odds ratios indicated that users of healthcare services were significantly more likely than non-users to have poor health status in all domains, except mental health. After adjusting for pain severity, users of services were still found to be significantly more

Kingdom population norms of medians have not been published. Odds ratios were adjusted for factors significantly associated with use of services on  $\chi^2$  testing ( $P < 0.01$ ).

Table 1. Characteristics of individuals with chronic pain using and not using listed healthcare services in the previous year.

	Total <i>n</i>	Percentage not using services <sup>a</sup> ( $n = 245$ )	Percentage using services <sup>a</sup> ( $n = 595$ )
Sex			
Male	383	48.2	44.5
Female	457	51.8	55.5
Age in 1996 (years)			
25–34	88	9.4	10.9
35–44	142	21.2	15.1
45–54	182	22.4	21.3
55–64	191	22.0	23.0
65–74	167	18.0	20.7
≥75	70	6.9	8.9
Housing tenure			
Owned or mortgaged	613	76.3	72.6
Council rented	117	12.1	14.9
Privately rented and other	102	11.7	12.5
Level of education			
Higher education	268	38.6	36.2
Secondary school	275	36.2	38.5
No qualifications	183	25.1	25.2
Marital status			
Single	67	10.8	6.9
Married or cohabiting	620	74.3	74.4
Divorced, widowed or separated	147	14.9	18.7
Employment status			
Employed	391	53.1	45.1
Retired	311	33.9	39.3
Unable to work due to illness	55	3.3	8.0
Others not employed	67	9.6	7.5
Chronic pain grade <sup>b</sup>			
I (low disability — low intensity)	352	64.1	39.6
II (low disability — high intensity)	232	27.2	32.2
III (high disability — moderately limiting)	78	6.0	12.1
IV (high disability — severely limiting)	93	2.8	16.2

<sup>a</sup>Percentages do not always add up to 100% due to rounding. <sup>b</sup>Significant difference at the 1% level on  $\chi^2$  testing.

Table 2. Median SF-36 scores and interquartile ranges (IQR) of those with chronic pain using and not using listed healthcare services in the previous year, and comparison of the chances of having poor health in each of the SF-36 domains.

SF-36 domains	Not using services median (IQR)	Using services median (IQR)	Odds Ratios (OR) <sup>a</sup>	
			Unadjusted OR (95% CI)	Adjusted OR <sup>b</sup> (95% CI)
Physical functioning	85.00 (65.00–94.05)	70.00 (39.17–88.89)	2.42 (1.74 to 3.38)	1.43 (0.97 to 2.12)
Social functioning	87.50 (75.00–100)	75.00 (50.00–100)	2.42 (1.72 to 3.41)	1.34 (0.90 to 1.98)
Role				
Physical	100 (33.33–100)	50.00 (0–100)	2.81 (2.00 to 3.95)	1.69 (1.13 to 2.52)
Emotional	100 (66.67–100)	100 (33.33–100)	1.74 (1.26 to 2.40)	1.22 (0.86 to 1.74)
Mental health	80.00 (60.00–88.00)	76.00 (60.00–84.00)	1.34 (0.96 to 1.85)	1.00 (0.70 to 1.43)
Energy and vitality	60.00 (45.00–70.00)	50.00 (35.00–65.00)	1.76 (1.27 to 2.43)	1.12 (0.77 to 1.62)
Bodily pain	62.00 (51.00–80.00)	51.00 (41.00–62.00)	2.91 (2.11 to 4.00)	2.05 (1.38 to 3.03)
General health	72.00 (57.00–82.00)	59.38 (42.00–77.00)	2.33 (1.68 to 3.23)	1.54 (1.07 to 2.22)

<sup>a</sup>Odds ratios compare the odds of having SF-36 (36-item short-form survey) scores in the sample's lowest quartile for those using healthcare services compared with those not using services. <sup>b</sup>Adjusted for chronic pain severity (measured by the chronic pain grade<sup>10</sup>).

likely than non-users to have poor health status in physical role, bodily pain and general health domains.

## Discussion

In this study, individuals with chronic pain who had used healthcare services in the previous year had poorer health than symptomatic responders who had not used services, even after adjusting for pain severity. Since non-presentation of symptoms had no adverse impact on health status, there appears to be little point in trying to detect and treat individuals not currently presenting to healthcare services with their chronic pain, particularly given the current scarce resources for chronic pain management. Few previous studies have investigated the clinical importance of symptoms hidden in the community. Coyne *et al* found that the short-term outcome for undetected patients with depression in primary care was better than that for detected patients, concluding that increasing the detection of depression in primary care was unlikely to improve outcomes.<sup>4</sup> In a study of Rose angina and ischaemic heart disease (IHD), women whose IHD was documented by GPs didn't appear to do any better than those whose IHD was not documented.<sup>5</sup> It has also been suggested that many patients with symptoms of minor illness obtain little benefit from their encounter with the healthcare system.<sup>14</sup>

We were able to use data from a large-scale study in the community, with a good response rate. This is one of the few studies to look at the clinical significance of symptoms hidden in the community, rather than simply describing the proportion of symptoms not presented to healthcare services. We have, however, only been able to assess the clinical significance of non-presented symptoms in terms of self-reported health status as measured by the SF-36. Other aspects of the clinical impact; for example, mortality and the incidence of comorbidity such as depression, need to be examined. Similar research is also needed to determine the clinical significance of other symptoms that commonly

occur in the community, in order to inform decisions about the relevance of treatment and screening programmes.

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