Medical Care Perceptions in Elderly Patients with Musculoskeletal Complaints

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Abstract

Background: Musculoskeletal complaints represent the second most common reason for visits to a physician, second only to the common cold. The limited capability of medical treatment for musculoskeletal disease requires modification of communication with patients by attending to their perception of the disease.

Objectives: To assess patients' satisfaction with care provided by their primary physicians, and the relationship of patients' satisfaction to their expectations of that care, perceptions of physician performance, and perceived severity of musculoskeletal disease.

Methods: Questionnaires were administered to 90 community-dwelling elderly patients (mean age 76 ± 8 years) presenting for follow-up appointments with their primary care physicians. Patients were asked to report on their satisfaction with the medical care provided by the primary physicians for musculoskeletal symptoms, their expectations of that care, their perceptions of their primary physicians' interaction (regarding competence, performance, and communication), and their perceptions of disease severity (based on the number of areas involved, pain frequency and intensity, and impact on daily activity). The effects on the degree of satisfaction were assessed with regard to demographic variables, co-morbidity, site involved, and response to recommended treatment.

Results: Most patients ($> 85\%$) expressed overall satisfaction with their doctor's interpersonal skills. Fewer (76.9%) were satisfied with the amount of effort their doctors spend evaluating their musculoskeletal symptoms, the information received regarding their musculoskeletal symptoms (75%), the degree of pain relief (75%), and the degree of functional improvement (61.8%). Level of education and response to recommended treatment for musculoskeletal disease were the only parameters associated with degree of satisfaction (higher education $P = 0.005$, lower education $P = 0.059$, medication $P = 0.008$, rehabilitation $P = 0.076$). A high level of expectations (regarding physician's care and musculoskeletal disease treatment) was noted.

Conclusions: The high level of patient satisfaction with their primary physicians' care for musculoskeletal symptoms may reflect the overall tendency of the elderly population to be satisfied with its primary care physicians. However, their high level of expectations (related to perceived efficacy of medical treatment) and their unrealistic perceptions of disease may lead to disappointment and non-compliance with their doctor's recommendations. Management of musculoskeletal disease in the elderly should address the patients' disease perceptions, as well as their therapeutic and functional needs.

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Musculoskeletal complaints represent the second most common reason for physician office visits, second only to the common cold [1]. Osteoarthritis is the most common of joint disorders. Approximately 12.1% of the population aged 25–74 have signs and symptoms of this disorder. The prevalence of osteoarthritis correlates with age, and elderly women are more often affected than men and usually have more generalized disease [2,3]. Pain from osteoarthritis is usually provoked by joint use, but may occur even at rest as the disease progresses. Other musculoskeletal pain is multifactorial in origin and may emanate from bone, joint capsule and peri-articular tissues such as tendons or bursae. Psychological factors such as depression and anxiety are associated with chronic pain and occasionally may influence pain perception by elderly patients with osteoarthritis [4,5]. No known medical treatment has been documented to definitively influence the progression of this disease [3,6]. The therapeutic goals are pain relief, increased mobility, and improved function.

The importance of evaluating the perception of elderly patients with musculoskeletal complaints regarding their needs, expectations, and satisfaction with the medical care has been discussed in several studies [7–11]. Vetter et al. [7] found that many elderly people with arthritic symptoms do not believe that any therapy will be effective and therefore fail to report their symptoms to their primary physician. Jette [8] discussed the incongruity between patients' and provider's attitudes, and the importance of improving communication in order to increase compliance and better achieve therapeutic goals. It has been

suggested that patients' satisfaction, an important element affecting patient compliance, depends on the degree to which the physician fulfills the patient's expectations [9,10]. Patients' education may also improve their compliance [8]. However, studies relating patient education to improved treatment outcomes are controversial. Lorig and coworkers [11,12] found only a weak association between changes in health status and education and behavior modification. They suggested that other mediating factors were probably involved. Indeed, the value of psychological support for patients with musculoskeletal complaints has been demonstrated, e.g., patients who received repeated phone calls from their healthcare providers had fewer musculoskeletal complaints and less physical disability [13,14].

The limited capability of medical treatment for musculoskeletal disease requires that physicians modify their communication with patients by attending to the latter's perception of the disease. The aim of this study was to assess patients' satisfaction with care provided by their primary physicians, the relationship of patients' satisfaction to their expectations of that care, perceptions of physician performance and perceived severity of musculoskeletal disease.

Materials and Methods

Subjects

Ninety consecutive patients with musculoskeletal complaints (excluding inflammatory arthritis or autoimmune disease) who were followed (with continuity) for at least 6 months in a geriatric ambulatory clinic of a large urban teaching hospital were requested to participate in the study. Subjects were screened and included if their score on the Mini Mental State Exam (MMSE) was above 20 and if they were able to complete the questionnaire. Verbal informed consent was obtained from each subject. A 20 minute standardized interview was conducted by one of the investigators (A.H.). Musculoskeletal complaints were sought with respect to the neck, back, hip, knee, shoulder, foot and hand. For the purposes of this study, only groin pain was considered a positive response to the query on "hip pain."

Variables

Four parameters of interest were evaluated: a) patients' satisfaction with medical care for musculoskeletal symptoms, b) patients' expectations regarding physician-directed medical care for musculoskeletal symptoms, c) perceptions of primary physician's performance regarding treatment of musculoskeletal symptoms, and d) severity of disease. Evaluation of the first three parameters involved questions about patient-physician interaction (one on physician's competence, two on physician's performance, and five on communication).

Individual satisfaction with medical care was evaluated from a set of 10 "fixed-choice" questions addressing aspects of medical care as described, with the addition of two questions on the impact of treatment on musculoskeletal symptom control (SS = strongly satisfied, S = satisfied, U = uncertain, D = dissatisfied, SD = strongly dissatisfied, N/A = not applicable).

An individual "satisfaction index" was calculated for each respondent, averaging his/her answers on the 10 items of satisfaction (SS = 5, S = 4, U = 3, D = 2, SD = 1, N/A = 0). Individuals responding N/A to more than half of the items were excluded. Furthermore, satisfaction with the care provided by the physician for musculoskeletal symptoms was measured by means of a single-item global self-rating of satisfaction. Correlation between this measurement and the "satisfaction index" was calculated using non-parametric tests.

Individual expectations of musculoskeletal care provided by the primary care physicians were evaluated using a set of eight "fixed-choice" questions (SA = strongly agree, A = agree, U = uncertain, D = disagree, SD = strongly disagree). An individual index of expectation was calculated, averaging patients' responses (SA = 5, A = 4, U = 3, D = 2, SD = 1).

An individual index of perceived physician's performance was calculated, averaging each individual's response to a set of eight questions (Yes = 5, Unsure = 3, No = 1, N/A = not applicable). Again, individuals responding N/A to more than half the items were excluded.

An index of severity of musculoskeletal symptoms was calculated for each patient based on the number of areas involved, the frequency of pain during the day (rarely = 1, occasionally = 2, sometimes = 3, often = 4, most of the time = 5), the impact on daily activity (not at all = 0, mild = 1, moderate = 2, severe = 3, very severe = 4), and pain intensity (using the Visual Analogue Scale) – all as perceived by the patient. Correlation between severity index and pain intensity was calculated (Kendall correlation).

The questionnaire also explored demographic variables, co-morbidity, data estimates of mental function (MMSE), and pain scale: Visual Analogue Scale and the Simple Descriptive Scale [15]. The functional level of the subjects was evaluated using the Older American Resources and Services (OARS) measure [16].

Cross-tabulation frequency distributions, t-test and (non-parametric) statistical tests (Kendall rank correlation coefficient) were carried out to evaluate the relationship between the four parameters of interest. All the data collected were processed in a Power Mac 7300/200 computer, using StatView. (v. 5) and Systat (v. 5.2.1) [17].

Groups

The back, neck, knee, hip and hand complaints were categorized into two "musculoskeletal diagnosis groups," based upon preconceived notions of the etiology of specific regional musculoskeletal complaints [1]. The most common non-inflammatory (a prerequisite for study acceptance) cause of knee, hip and hand pain is osteoarthritis. Since back and neck pain are seldom related to osteoarthritis (more often to fibromyalgia) they were treated as a comparison group. As foot

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MMSE = Mini Mental Scale Examination

pain is usually biomechanic in origin and the etiology of shoulder pain more complex, they were not included in either comparison group.

The sample was also divided into groups according to demographic parameters (gender, race, marital status, education, living arrangement, co-morbidity), and according to patients' response to intervention (very well + well, little + not at all). The degree of satisfaction was compared (*t*-test) between the groups.

Results

The demographic characteristics, co-morbidity and functional level of the subjects are presented in Table 1.

Satisfaction with medical care for musculoskeletal symptoms

Most patients (> 85%) expressed overall satisfaction (satisfied or strongly satisfied) with their doctor's interpersonal skills (the doctor's ability to listen to and to address their concerns about

musculoskeletal symptoms or to talk to them in an understandable language). Fewer patients (76.9%) were satisfied with the amount of effort their doctors spent evaluating their musculoskeletal symptoms, with the information received regarding their musculoskeletal symptoms (75%), degree of pain relief (75%), and degree of functional improvement (61.8%). A significant correlation was found between satisfaction measured by "satisfaction index" and single-item global self-rating of satisfaction (Tau = 0.56, $P < 0.0001$).

The degree of satisfaction did not vary significantly ($P = 0.382$) between patients with back or neck pain and patients suffering from knee, hip or hand pain.

Patients responding well to medications for musculoskeletal symptoms were significantly more satisfied than patients who did not respond well ($P = 0.008$). The same trend ($P = 0.076$) was found for rehabilitation.

Finally, the degree of satisfaction was independent of all demographic variables [Table 1], except for education: People with more (college and up) and less (elementary school) education were significantly more satisfied than those who had a high school education ($P = 0.005$, $P = 0.059$ respectively).

Table 1. Patient characteristics (n = 90)

Characteristic	No. of patients	% of patients
Age (yr)		
51–60	1	1.1
61–70	19	21.1
71–80	40	44.4
81–90	27	30
>90	3	3.3
Gender		
Female	74	82.2
Race		
Black	48	53.3
White	42	46.7
Marital status		
Married	24	26.6
Not married	66	73.4
Education level		
Elementary	16	17.8
High school*	48	53.3
College +	26	28.9
Living arrangement**		
With other	49	59.1
Alone	34	40.9
Co-morbidity***		
0	12	13.3
1–2	52	57.8
>2	26	28.9
Functional level****		
Good/excellent	73	81.1
Mildly impaired	14	15.6
Severely impaired	3	3.3

* Partial or complete
** Available data from 83 patients
*** No. of co-morbid illnesses (heart disease, lung disease, kidney problem, psychiatric disease, cancer, stroke, hypertension, diabetes)
**** Activities of Daily Living performance

Expectations regarding medical care for musculoskeletal disease

- **Physicians:** More than 90% of the patients agreed or strongly agreed that their primary care physicians should be knowledgeable about managing arthritis, should efficiently address their symptoms, and should communicate with them about their disease.
- **Treatment:** The majority of subjects (96.7%) expected treatment to relieve the pain. Over half of the subjects (58.9%) thought treatment would help them to function better, and one-third (37.7%) believed treatment would maintain their ability to function. When asked about these expectations, 34.4% of patients expressed confidence that their musculoskeletal disease would improve with time, 32.2% believed the disease would remain stable, and 33.3% of patients thought their situation would get worse with time. There was a discrepancy between patients' reports of their actual disease progression and their expectations [Figure 1].

Perceptions of primary physicians' performance

Most patients had often seen their primary care physician in the past year: one-third (37.6%) had had less than 4 appointments, 48.1% had between 4 and 7, and 14.3% between 7 and 11. In spite of the frequent contact, 13.3% of patients reported that their physicians never discussed musculoskeletal symptoms with them, 33.3% reported occasionally, 26.7% sometimes, 6.6% often, and only 20% always. Although more than 95% of patients expressed a positive response about the interpersonal skills of their doctors (e.g., ability to show empathy), only 73.3% said their physician spent enough time evaluating their musculoskeletal symptoms, 67.9% stated that he provided them with information on musculoskeletal disease, and 64.1% asserted
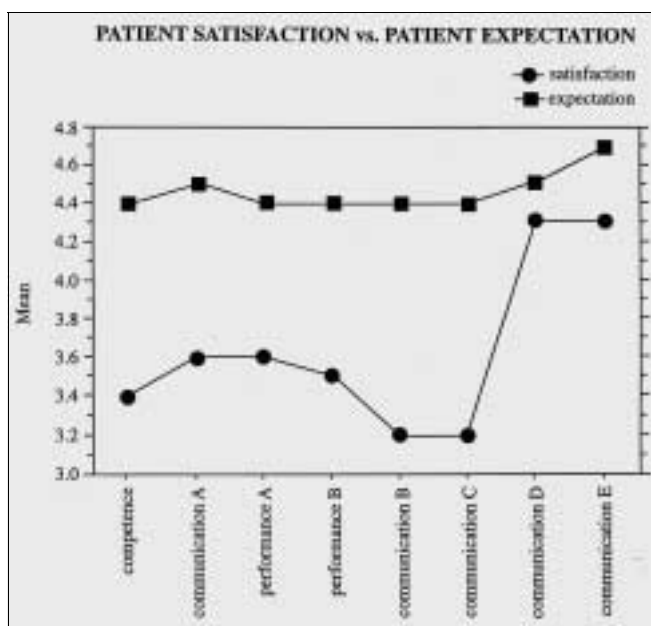
Figure 1. Patients' perception of actual and expected disease progress. Competence = primary physician's medical knowledge on managing musculoskeletal symptoms, Communication A = primary physician's ability to listen to patients' concern about the symptoms, Performance A = primary physician's ability to address patients' concerns about the symptoms, Performance B = amount of effort primary physician spends evaluating patients' musculoskeletal symptoms, Communication B = the information patients received from their primary physician on the disease, Communication C = the involvement of patients in treatment planning for the disease, Communication D = primary physician's ability to show empathy, Communication E = primary physician's ability to talk in an understandable language.

Table 2. Patient experience with treatments for musculoskeletal symptoms (%)

Treatment	Recommended*	Tried**	Work+	Stop++
Medication	64.4	80.0	52.8	18.0
Joint injection	4.4	18.9	64.7	88.2
Rehabilitation	41.1	53.3	55.3	29.2
Referral to specialist	21.1	32.2	65.5	51.7
Operation	8.9	16.7	60.0	–
Alternative medicine	1.1	3.3	33.3	66.6

*   % of patients for whom this treatment was recommended (n = 90)

** % of patients who have tried this treatment (n = 90)

\+   % of patients who tried this treatment and for whom it worked well or very well

\++ % of patients who tried this treatment and discontinued it

patients who underwent surgery were satisfied with the outcome. Steroid injection of a joint was given to 18.9% of the patients and it worked well for most of them. However, this treatment was rarely recommended by primary care physicians (4.4% of patients).

In a separate question on how often patients followed their physician's recommendations, 59% answered always, 34.4% usually, 3.3% sometimes and 3.3% occasionally.

Severity of disease as perceived by patients

Most subjects (94.4%) reported having pain for years. Very few (5.6%) had pain for less than one year. Most patients (84.4%) complained of more than one painful area (ranging from two to seven). Most often reported were the knee (73.3%), back (61.1%), shoulder and hand (58.9%), while the neck (31.1%) was the least often reported.
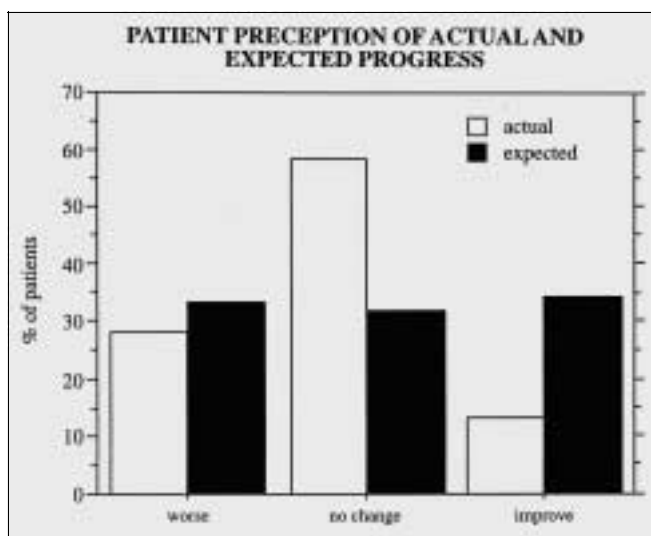
When asked to rate their average pain over the past weeks (SDS), 28.8% of the patients described their pain as severe or very severe. The mean pain intensity (VAS 1–10) was 4.5 (SD = 2.7).

Joint pain frequency varied during the day: 18.9% claimed to have pain most of the time, 17.8% often, 22.2% sometimes, 26.7% occasionally, and 14.4% rarely. In most patients (75%) the pain affected their daily activity (very severely 7.9%, severely 13.5%, moderately 25.8%, mildly 28.1%, not at all 24.7%). More than half the patients (58.9%) saw no change in their musculoskeletal symptoms during the years they received treatment, 27.8% reported worsening, and only 13.3% reported some improvement.

Relation between patient satisfaction, expectations and severity of symptoms

A discrepancy between patient satisfaction and expectations was found in items directly related to musculoskeletal symptoms, such as physician effort in evaluating the symptoms and in providing information and patient involvement in

that he involved them in the decision-making process regarding treatment. Most patients reported that their physicians listened to (89.7%) and addressed (81.5%) their concerns regarding musculoskeletal symptoms. However, about 26% of patients answered "No" or "Unsure" when asked whether their physician "seemed knowledgeable about managing musculoskeletal disease."

Medication and rehabilitation were commonly recommended by the primary care physicians [Table 2]; 32.2% of patients were referred to specialists and 16.7% had surgery for their disease. Alternative medical techniques (e.g., acupuncture, reflexology) as a treatment option were rarely recommended, and rarely tried by the patients.

More interesting were the patients' reports regarding the treatment efficacy. Medications (although the most commonly recommended treatment) seemed to be of moderate help: only 52.8% of patients said the medication worked well. The success of rehabilitation in those who tried it was only slightly higher (55.3%). Surgery was not frequently performed, yet 60% of the

VAS = Visual Analogue Scale

Figure 2. Patient satisfaction vs. patient expectation

treatment planning [Figure 2]. There was a correlation between satisfaction and expectation with only two items: the doctor's ability to show empathy and the simplicity of language used. No significant correlation was found between patients' degree of satisfaction and their expectations from primary physicians' management of symptoms (Tau = 0.232).

No significant correlation was found between patients' satisfaction and either severity index (Tau = -0.061) or pain intensity using VAS (Tau = 0.054).

A small but significant correlation was found between patient satisfaction and perceived physicians' performance (Tau = 0.495, $P < 0.0001$).

Discussion

In the present study we have characterized the complex relationship between the patient, his/her physician and musculoskeletal disease – from the patient's perspective. We identified areas of patient-physician communication problems, including information about musculoskeletal symptoms provided to patients and the patients' involvement in treatment planning as reflected by both a high level of expectations of primary physicians' care and medical treatment for the symptoms, and misperception regarding disease progress.

Musculoskeletal disease, although not life threatening, greatly impacts on the quality of life for elderly patients. In most patients in this study it was a multifocal, painful disease that affected their functional capacity. Most patients in our study were treated conservatively. Yet, only half of them reported that the treatment worked well in controlling pain and improving function. More aggressive treatments (injection, surgery) seemed to work only slightly better. These findings, at least from the patients' perspective, emphasize the limitations of the current treatment for arthritis.

Considering the above, it is not surprising that only a relatively small number of patients with musculoskeletal

complaints was referred to specialists by their primary physician. With the expected changes in the health system, this will likely become even more challenging as the primary physicians will find themselves caring for increasing numbers of patients with musculoskeletal symptoms.

During follow-up appointments with their primary physician, the patients find themselves discussing more immediate issues (e.g., cognitive decline, sensory loss), in addition to receiving care for the common diseases of this age group (e.g., hypertension, diabetes and coronary artery disease). Attention to the latter seems to compromise their addressing musculoskeletal problems. Since patients and physicians are overwhelmed by the number of issues needing to be addressed, the discussion of arthritic symptoms may be superficial or even non-existent (as reported by many patients in this study). Several factors may be responsible for this situation: limited appointment time, and patients' hesitance to "bother their physicians" with "minor" problems. Patients' expectations may also contribute to this scenario. Elderly people accept their arthritis as part of the aging process. They do not believe that any therapy will be effective and therefore do not report symptoms to their primary physicians [7].

Despite this troublesome reality, our results show that elderly patients overall are satisfied with their primary physician's care of musculoskeletal disease. It seems that many patients had difficulty distinguishing satisfaction with the care for this disease from the overall satisfaction with their physicians. Nevertheless, this finding is consistent with other studies on patient satisfaction that have shown an overall tendency of the elderly population to be satisfied with its primary physicians [18,19]. It was not surprising, therefore, to find no correlation between the degree of satisfaction and other measured variables (e.g., disease severity, level of expectations of physicians' care and medical treatment for musculoskeletal disease). Education, as has already been shown [20,21], and the response to intervention were the only parameters to affect degree of satisfaction.

Satisfaction represents only one aspect of patient-physician interaction and should be used carefully when evaluating its effectiveness [19]. Current tools for evaluating satisfaction may not accurately reflect the patients' experience with certain aspects of healthcare. This may be especially true of elderly patients. No less important is the patients' level of expectations [10]. In our study, expectations were very high, concerning both physician's care and treatment for musculoskeletal symptoms. Moreover, it seems that patients had unrealistic perceptions regarding disease progress [Figure 2], which might reflect gaps in the physician-patient communication. Education may help overcome this. In this study, 25% of the patients were uncertain or not satisfied with the degree of information provided. Other studies have shown that patients want to improve their knowledge, and physicians are not always aware of this need [22,23].

Patients' compliance is an important factor that should be analyzed with relation to treatment success [8]. In this study

only 59% of the patients reported that they always complied with the recommended treatment. Psychological support might enhance patient-physician communication and thereby improve compliance and treatment outcome [13,14].

The physician might consider two approaches for dealing with patients' symptoms. The first one, which is easy but has limited effectiveness, is to treat the disease. The second, more complicated and challenging, is to treat the disease through the patient. In this way the physician might initiate a discussion with the patient about musculoskeletal symptoms. A special appointment could be scheduled for assessing the impact of disease on daily activity, patient's beliefs regarding the disease, and patient's expectations of both the healthcare team and medical treatment. Physicians must be aware of any psychological factors (e.g., depression, anxiety) that may influence the patient's perception of pain. Team members may help provide information and support to the patients. Teaching patients self-monitoring and symptom control is another possible route to treat musculoskeletal disease through the patient. Patients could be taught to measure their symptoms using pain scales, and adjusting analgesic medications according to their pain intensity. This method has already been tried successfully with other chronic diseases such as diabetes and hypertension [24,25].

The results of the present study may reflect a gloomy picture of elderly patients with musculoskeletal symptoms, most of whom suffer continuous pain that limits their daily activity. Their high level of expectations of physicians' care and treatment efficacy and their unrealistic perception of disease may lead to disappointment and to non-compliance with their doctors' recommendations. In conclusion, management of musculoskeletal disease in the elderly should address patients' disease perceptions, as well as their therapeutic and functional needs.

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