Characteristics of Subjects Self-reporting Arthritis in a Population Health Survey: Distinguishing Between Types of Arthritis

Genevieve Gariepy, BSc, Michel Rossignol, MD, MSc, Abby Lippman, PhD

ABSTRACT

Objectives: Arthritis is a broad term covering disparate diseases with varying prognoses. Epidemiological surveys are important tools for arthritis research, but they either fail to specify arthritis subtypes or they provide self-reported arthritis data that are potentially misclassified. This limits their use for research about arthritis subgroups. This study describes and compares characteristics of subjects self-reporting subtypes of arthritis in a Canadian epidemiological survey. We also consider the feasibility of developing methods for distinguishing subtypes of arthritis in such population surveys.

Methods: Using data from 119,904 adult participants in the Canadian Community Health Survey (CCHS) cycle 3.1, we identified those self-reporting one of four subtypes of arthritis and compared the four groups with regard to socio-demographic status, lifestyle and health characteristics, medication use, health care utilization and functional outcomes. Cross-tabulations of weighted prevalence were estimated and tested for statistical significance using the chi-square test.

Results: Descriptive results showed very few distinguishing characteristics across self-reported arthritis subtypes on 34 investigated variables. Participants with osteoarthritis were more likely to be older and female than other groups. Statistical testing showed no difference between rheumatoid arthritis, osteoarthritis and "other" type of arthritis for physical activity level, health conditions, medication use, health care utilization and functional limitations.

Discussion: Characteristics of subjects who self-report different types of arthritis in a typical population health survey (CCHS) are not sufficiently dissimilar to justify valid data analyses and interpretation by arthritis subgroup. Future studies might focus on identifying and implementing supplemental questionnaire items in epidemiological population surveys.

Key words: Arthritis; arthritis, rheumatoid; osteoarthritis; epidemiologic methods; cluster analysis; health surveys

La traduction du résumé se trouve à la fin de l'article.

Can J Public Health 2009;100(6):467-71.

Arthritis is the blanket term for a range of illnesses with widely varying prognoses, osteoarthritis (OA) and rheumatoid arthritis (RA) being the most common.¹ Arthritis is one of the most prevalent chronic health conditions in North America and a leading cause of morbidity, functional disability and health care utilization.^{2,3} According to the 2002-2003 Canadian Community Health Survey (CCHS), 17.6% of Canadians report having arthritis, and its projected prevalence for 2021 is expected to reach between 21% and 26%.^{2,4} There is an urgent need to qualify, quantify and clarify many facets of arthritis and its subtypes.

Researchers often use self-reported arthritis data from epidemiological surveys to address questions about the disease. However, not all surveys ask respondents to specify their type of arthritis.⁵ This is problematic, because arthritis subtypes have a distinct pathogenesis, as well as functional, health and economic impacts. For example, those with RA have been shown to have higher risks of major vascular events, to experience more daily pain and to be more likely to suffer from depression than those with OA.⁶⁻⁸ By bundling all joint problems under the same term, researchers risk misinterpretations of their findings that may induce public health decisions not applicable to all arthritis subgroups.

In some investigations, participants are asked to self-report the specific type of arthritis they have. In this research, misclassification is likely to exist. OA and RA are often considered by lay people to be synonymous with each other and with other types of joint diseases. Previous research has highlighted the low positive predictive

value of self-reported RA and OA.⁹⁻¹⁴ Because relying on subjects to identify their type of arthritis may lead to inaccuracies, finding ways to corroborate responses with other collected data may be a strategy to increase their predictive validity.

To date, no study has evaluated methods to discriminate between arthritis subtypes from self-reported data in large population health surveys. Such methods would allow for more focused research in prevention and treatment efforts aimed at arthritis subgroups. The objectives of our study were to describe characteristics of subjects reporting arthritis in a large epidemiological survey, to compare types of self-reported arthritic participants according to their characteristics, and to assess whether we could use these characteristics to distinguish subtypes of arthritis patients.

METHODS

Data source

The CCHS cycle 3.1 provides cross-sectional information related to health status, health care utilization and health determinants for

Authors' Affiliation

Department of Epidemiology, Biostatistics, and Occupational Health, McGill University, Montreal, QC

Correspondence and reprint requests: Dr Michel Rossignol, Department of Public Health, 1301 Sherbrooke Street East, Montreal, QC H2L 1M3, Tel: 514-528 2400, ext. 3261, Fax: 514-528 2453, E-mail: rossignol@santepub-mtl.qc.ca

Disclaimer: Analyses were based on Statistics Canada's Canadian Community Health Survey, cycle 3.1, public use microdata file, which contains anonymized collected data. All computations on these microdata were prepared by the authors, and the responsibility for the use and interpretation of these data is entirely that of the authors.

the Canadian population. More details about this survey can be found elsewhere.¹⁵ Briefly, the CCHS covers approximately 98% of the Canadian population. The questionnaire consists of both a common component and an optional content section on particular health topics chosen by each health region or province. Cycle 3.1 data were collected between January and December 2005 from a random sample of 132,947 household residents aged 12 and older. The national response rate was 79%.

The target study sample comprised all adults (18 years or older) who answered yes to the following: "Remember, we're interested in conditions diagnosed by a health professional. Do you have arthritis or rheumatism, excluding fibromyalgia?" The questionnaire then asked: "What kind of arthritis do you have?" and participants were given four choices: rheumatoid arthritis, osteoarthritis, rheumatism, other. We used the same four response categories to divide respondents into four groups.*

Characteristics of individuals with arthritis

We extracted from the CCHS cycle 3.1 socio-demographic and health factor data on age, sex, educational attainment and income, as well as information about physical activity level, smoking status and alcohol consumption. Physical activity levels were estimated from total daily energy (daily kcal/kg) expended during leisure time activities and were categorized as inactive (<1.5), moderately active (1.5-2.9) and active (≥ 3.0).¹⁶ Self-rated health, weight status and number of chronic conditions were also used for our analyses. Chronic conditions were current conditions diagnosed by a health professional and expected to last six months or longer. We included the most prevalent diseases and those associated with arthritis.¹⁷

Information on medication use during the previous month was obtained in an optional content component of the interview. We used medication categories defined by the CCHS that were relevant to arthritis and arthritis-related conditions: pain relievers (including arthritis medicine and anti-inflammatories), anti-depressants, painkillers, and hormones for menopause or ageing symptoms. Pain relievers are typically used to alleviate milder pain symptoms, and pain killers are prescribed for severe pain control. Health care utilization was determined in the CCHS on the basis of the following: having a regular medical doctor, number of past-year consultations with a medical doctor, any past-year consultation with an alternative or complementary medicine professional, and utilization of publicly and privately funded home care.

Functional health state was assessed using information on daily restrictions of activities and need for help with activities of daily living (ADL). We also calculated the mean number of disability days in the previous two weeks and the prevalence of one or more disability days. For a subsample of participants in the CCHS, we extracted information on mobility and dexterity troubles.

Statistical analysis

We examined cross-tables of prevalence comparing adults with different types of arthritis. In addition, the Rao-Scott chi-square test was used to statistically evaluate the significance of differences across arthritis groups. To account for the complex sampling strategy of the survey, we applied sampling weights to prevalence esti-

* Throughout this text, "rheumatism" (and "rheumatic") refers to a subtype of self-reported arthritis; we do not use it as a synonym of arthritis.

Table 1. Socio-demographic and Lifestyle Characteristics of Respondents, by Arthritis Type

Characteristic	Self-reported Type of Arthritis			
	Rheumatoid arthritis n=3,777	Osteoarthritis n=10,778	Rheumatism n=1,713	Other 1,831
Age category (years)				
55-64	23.1	27.0	24.5	22.4
65+	37.5	43.3	42.3	30.8
Sex				
Male	42.1	32.0	44.1	41.7
Female	57.9	68.0	55.9	58.3
Education				
<Secondary school	29.4	27.9	41.7	25.3
Secondary school	22.7	22.5	19.1	24.0
Post-secondary school	48.0	49.7	39.2	50.7
Income category				
\$0 to \$14,999	8.5	8.1	9.3	7.8
\$15,000 to \$29,999	18.3	18.9	19.8	14.7
\$30,000 to \$49,999	18.5	19.7	18.6	19.2
\$50,000 to \$79,999	19.3	19.0	19.7	20.3
\$80,000+	20.0	17.9	15.4	21.7
No response	15.4	16.5	17.2	16.3
Physical activity				
Inactive	58.0	56.7	59.8	55.9
Moderately active	23.5	24.6	23.1	23.1
Active	18.5	18.6	17.2	21.0
Smoking status†				
Non-smoker	27.7	30.4	29.7	28.7
Former smoker	47.1	51.0	46.4	48.0
Occasional smoker	4.5	3.1	3.2	4.3
Daily smoker	20.8	15.6	20.7	19.0
Alcohol consumption‡				
Never drank	7.5	6.5	10.3	5.0
Former drinker	19.7	19.3	21.7	17.8
Occasional drinker	19.9	20.4	18.0	18.5
Regular drinker	52.9	53.8	50.0	58.7

* All values expressed as percentages.

† Occasional smokers included never daily smokers, former daily smokers who still smoked, and those who smoked less than 100 cigarettes during their lifetime.

‡ Occasional drinkers consumed <1 drink a month; regular drinkers consumed ≥ 1 drink a month.

mations and testing of significance. We used the statistical software SAS (version 9.1) for our analyses.

Preliminary analysis

We found no socio-demographic or functional health differences between respondents with arthritis who participated in the optional medication use component of the questionnaire and the full arthritic sample, except that the latter respondents were somewhat older (40.8% vs. 35.8% over the age of 65) and had slightly better education (69.6% vs. 62.5% had graduated from secondary school). We also did not detect any differences between the subsample selected for dexterity and mobility assessment and those in the full sample, except that the latter were less active than the former (57.2% vs. 45.6% inactive).

RESULTS

A total of 119,904 adults participated in the CCHS, of whom 18.0% reported a medical diagnosis of arthritis. Specifically, more than half (59.6%) classified their arthritis as OA, 20.9% as RA, 10.1% as other type of arthritis, and 9.5% as rheumatism.

Socio-demographic and lifestyle characteristics are presented in Table 1. Those reporting OA were more likely to be older and female than other arthritis groups. Those reporting rheumatism were less likely to be educated and drinkers, in contrast to those with "other" type of arthritis, who were more likely to be educated and regular drinkers than other groups. There were few differences in physical activity level, smoking status or income among arthritic groups.

Table 2. Health Characteristics of Respondents, by Arthritis Type

Characteristic	Self-reported Type of Arthritis*			
	Rheumatoid arthritis n=3777	Osteoarthritis n=10,778	Rheumatism n=1713	Other n=1831
General self-perceived health				
Poor-fair	33.3	28.1	29.5	26.8
Good-very good-Excellent	66.7	71.9	70.5	73.2
BMI category†				
Underweight	4.2	4.5	3.6	5.1
Normal weight	34.7	36.3	35.1	37.9
Overweight	37.1	35.8	39.5	35.2
Obese I	16.2	16.6	17.1	15.1
Obese II-III	7.7	6.8	4.8	6.8
Asthma				
No	88.9	88.5	91.0	87.7
Yes	11.1	11.5	9.0	12.3
High blood pressure				
No	66.1	64.0	67.4	69.3
Yes	33.9	36.0	32.6	30.7
Migraine				
No	85.9	86.3	87.4	86.3
Yes	14.1	13.7	12.6	13.7
Chronic bronchitis				
No	93.6	93.6	93.7	95.2
Yes	6.4	6.4	6.3	4.8
Emphysema				
No	97.8	98.2	97.7	98.2
Yes	2.2	1.8	2.3	1.8
Diabetes				
No	88.3	88.4	87.3	90.4
Yes	11.7	11.7	12.7	9.6
Heart disease				
No	87.3	86.2	85.2	88.5
Yes	12.7	13.8	14.8	11.5
Ulcers				
No	91.8	93.1	92.3	92.6
Yes	8.2	6.9	7.7	7.4
Mood disorder				
No	89.3	89.7	92.3	90.2
Yes	10.7	10.3	7.7	9.8
Repetitive injuries				
No	87.2	85.4	89.0	84.8
Yes	12.8	14.6	11.0	15.2
Acute injuries				
No	87.5	87.1	88.0	86.3
Yes	12.5	12.9	12.0	13.7

* All values expressed as percentages.

† BMI=body mass index.

Health conditions reported by participants are shown in Table 2. Those with RA were most likely to rate their health as fair or poor, but the prevalence of comorbidities was comparable across arthritis types. No statistically significant differences were detected among arthritis subgroups, except for high blood pressure ($p=0.003$) (not shown).

Medication use also showed little variation among arthritis groups, except for the low use of pain medications and hormones by those reporting rheumatism (Table 3).^{*} Formal statistical testing found no significant differences (not shown). In a separate analysis (not shown), we found that respondents with rheumatism had approximately the same prevalence of pain medication use as those without arthritis.

Finally, there was no difference in health care utilization among arthritis subgroups (Table 4) with the exception of those with rheumatism, who were lighter health care users. Functional outcomes and disability days (Table 5) were similar across arthritis categories, although those reporting rheumatism reported significantly less need for help with ADL and fewer disability days.

^{*} Medication use was part of an optional content component of the CCHS questionnaire.

Table 3. Medication Use by the Subsample of Respondents Participating in the Optional Content Portion of the CCHS, by Arthritis Type

Part of Optional Content	Self-reported Type of Arthritis*			
	Rheumatoid arthritis n=268	Osteoarthritis n=574	Rheumatism n=66	Other n=98
Pain reliever				
No	25.5	23.5	34.5	20.3
Yes	74.6	76.5	65.5	79.7
Anti-depressant				
No	86.9	88.1	87.6	92.4
Yes	13.1	12.0	12.4	7.6
Pain killer				
No	88.9	90.5	96.0	86.8
Yes	11.1	9.5	4.0	13.2
Hormones for menopause and aging				
No	90.0	90.1	99.1	90.7
Yes	10.0	9.9	0.9	9.3

* All values expressed as percentages

Table 4. Health Care Utilization by Respondents, by Arthritis Type

	Self-reported Type of Arthritis*			
	Rheumatoid arthritis n=3777	Osteoarthritis n=10,778	Rheumatism n=1713	Other n=1831
Has regular medical doctor				
No	6.9	5.1	8.5	8.4
Yes	93.1	94.9	91.5	91.6
Number of consultations with medical doctor				
0	7.6	6.5	10.1	11.0
1-6	59.4	62.7	65.5	60.5
7-12	19.0	18.4	15.2	15.4
≥13	14.0	12.3	9.2	13.1
Consultation with CAM† professional				
No	86.7	84.3	90.0	85.6
Yes	13.3	15.7	10.0	14.4
Received homecare				
No	87.4	87.0	90.1	89.7
Yes	12.6	13.0	9.9	10.4

* All values expressed as percentages.

† Complementary or alternative medicine

DISCUSSION

Responses from participants in this large survey did not reveal many characteristics among the 34 examined variables that would be useful to distinguish between those with different self-reported arthritis types. The rheumatism subgroup was the only one in which participants seemed to differ from other arthritis subgroups on some variables. However, "rheumatism" is a colloquial synonym for arthritis and is likely of limited research value for arthritis subtypes.

Our analyses were restricted to cross tabulations, and it is possible that a cluster analysis might identify subgroups by assembling several small, statistically significant differences. However, our data suggest that the magnitude of these differences might not be clinically meaningful. If clusters (subgroups) were to emerge, interpreting their meaning is unlikely to be straightforward and, in fact, may actually not be useful.

Consistent with prior findings, the prevalence of arthritis and its subtypes was higher among older participants and greatest among women.^{2,18-20} Like others with arthritis, a majority of those in the CCHS with arthritis were inactive and overweight or obese.^{2,20,21} As well, the

Table 5. Functional Limitations and Disability Days of Respondents, by Arthritis Type

	Self-reported Type of Arthritis			
	Rheumatoid arthritis n=3777	Osteoarthritis n=10,778	Rheumatism n=1713	Other n=1831
Need for help for ADL, %				
No	61.9	59.8	69.7	65.3
Yes	38.1	40.2	30.3	34.7
Number of disability days (0-14) in last 2 weeks				
Mean (SD)	1.7 (6.3)	1.8 (3.4)	1.4 (3.2)	1.7 (3.4)
1 day or more,%	26.2	26.7	19.3	26.1
Activity limitation, %				
Never	34.1	34.5	44.0	35.9
Sometimes	37.2	38.8	28.8	34.2
Often	28.7	26.7	27.2	29.9
Cause of chronic condition leading to activity limitation,* %	n=2,462	n=6,997	n=947	n=1,166
Injury	14.7	15.0	15.0	18.6
Disease or illness	42.2	38.7	31.9	37.8
Ageing	19.8	26.4	27.3	19.7
From birth or genetics	5.4	5.5	7.1	7.1
Work conditions	8.8	6.3	9.7	5.6
Other	9.0	8.2	9.0	11.3
Subsample†	n=463	n=1,364	n=134	n=233
Mobility problems, %				
No problem	84.1	82.9	89.7	86.3
Problem – no aid required	2.9	1.9	1.3	2.8
Problem – requires mechanical aid or wheelchair	9.2	12.4	7.2	7.4
Problem – requires help from people or cannot walk	3.8	2.8	1.8	3.4
Dexterity problems, %				
No problem	96.0	97.3	97.4	95.9
Problem – no aid required	2.0	1.2	0.6	3.0
Problem – aid required with some or all tasks	2.0	1.6	2.1	1.1

* Subsample of subjects with activity limitations

† Mobility and Dexterity variables part of subsample

prevalence of comorbid conditions, activity limitation and two-week disability, and the prevalence of medication use among respondents with arthritis paralleled rates found in other surveys.^{2,20,22,23}

An interesting finding was the similar distribution of comorbidity across arthritis subgroups. The autoimmune nature of RA involves extra-articular systems, and this has been associated with illnesses ranging from cardiovascular to gastrointestinal disorders.^{6,17,24} Greater rates of depression among RA compared with OA sufferers have also been reported.^{7,8} However, our results do not show more comorbidities among those self-reporting RA than those with OA. One explanation could be differences in age distribution: in our sample, OA subjects were on average older than RA subjects. Consequently, comorbidities associated with OA could be caused by ageing whereas comorbidities associated with RA could be due to the rheumatoid arthritic process.

Another possible explanation for the similarities among arthritis subgroups is the misclassification induced by the self-reported nature of the type of arthritis. "Arthritis" is a general term that is sometimes understood to mean articular or muscular pain even with acute, self-limited injuries.²⁵ Low to moderate specificity for self-declared doctor-diagnosed arthritis has been reported.^{25,26} Similarly, misclassification of the type of self-reported arthritis can also occur.⁹⁻¹⁴ For example, 10.7% of our sample reported OA whereas a previous report based on clinically defined OA reported a prevalence of 12.1%, and another study based on radiographic findings estimated prevalences of hand and knee OA of 27.2% and 13.8%, respectively.^{27,28} This might suggest some potential biases in self-reported arthritis, but it could also reflect how estimates may vary across studies, depending on the case definition.¹⁹

Misclassification is not only a concern when patients describe their conditions; it can also arise from physicians' misdiagnosis. Numerous studies have emphasized the difficulties in identifying certain types of arthritis, particularly OA.^{29,30} A case definition for

OA is still evolving, and diagnosis often relies on the patient's history. Moreover, survey participants with more severe or disabling arthritis could be more likely to be investigated and diagnosed with a type of arthritis. As a result, subjects self-reporting a doctor-diagnosed type of arthritis may be similar in terms of disease severity and functional outcome.

The validity and reliability of the arthritis-related variables should be considered. For instance, self-reporting could have been affected by poor recall. Furthermore, the variables investigated in this study may have been insufficiently specific to allow us to distinguish arthritis types even if there were no misclassification of the diagnoses. The lack of association of specific symptoms with arthritis has been previously documented.^{14,18} For example, Szoek et al. investigated a number of survey questions to detect subjects with radiological OA and found that self-reported joint symptoms were poorly specific for OA.¹⁴

Our study used data from a population-based survey and boasted a large sample with information available on over 30 factors related to arthritis. Our analysis investigated a method of discriminating patterns of types of arthritis for population health surveys which, to our knowledge, has not been done before.

CONCLUSION

Our study shows that characteristics from subjects with self-reported medically diagnosed arthritis in a typical population health survey (CCHS) are not sufficiently specific to appropriately explore and interpret information by arthritis subgroups. Previous studies have found that the addition of frequency and duration of joint pain or stiffness³¹ and of depression score¹⁴ improves the validity of self-reported OA, and future studies might include questions about these. Similarly, future studies might develop other supplemental questionnaire items that could assist in validating self-reported arthritis subgroups in epidemiological surveys.

REFERENCES

1. Ensworth S. Rheumatology: 1. Is it arthritis? *Can Med Assoc J* 2000;162(7):1011-16.
2. Lagacé C, Perruccio A, DesMeules M, Badley E. The impact of arthritis on Canadians. In: Arthritis in Canada: An Ongoing Challenge. Ottawa, ON: Health Canada, 2003. Available at: <http://www.phac-aspc.gc.ca/publicat/ac/index.html> (Accessed January 15, 2009).
3. Stokes J, Desjardins S, Perruccio A. Economic burden. In: Arthritis in Canada: An Ongoing Challenge. Ottawa, ON: Health Canada, 2003. Available at: <http://www.phac-aspc.gc.ca/publicat/ac/index.html> (Accessed January 15, 2009).
4. Perruccio AV, Power JD, Badley EM. Revisiting arthritis prevalence projections—it's more than just the aging of the population. *J Rheumatol* 2006;33(9):1856-62.
5. Picavet HSJ, Hazes JMW. Prevalence of self reported musculoskeletal diseases is high. *Ann Rheum Dis* 2003;62(7):644-50.
6. Watson DJ, Rhodes T, Guess HA. All-cause mortality and vascular events among patients with rheumatoid arthritis, osteoarthritis, or no arthritis in the UK General Practice Research Database. *J Rheumatol* 2003;30(6):1196-202.
7. Keefe FJ, Smith SJ, Buffington AL, Gibson J, Studts JL, Caldwell DS. Recent advances and future directions in the biopsychosocial assessment and treatment of arthritis. *J Consult Clin Psychol* 2002;70(3):640-55.
8. Dickens C, McGowan L, Clark-Carter D, Creed F. Depression in rheumatoid arthritis: A systematic review of the literature with meta-analysis. *Psychosom Med* 2002;64(1):52-60.
9. Ling SM, Fried LP, Garrett E, Hirsch R, Guralnik JM, Hochberg MC. The accuracy of self-report of physician diagnosed rheumatoid arthritis in moderately to severely disabled older women. Women's Health and Aging Collaborative Research Group. *J Rheumatol* 2000;27(6):1390-94.
10. Cooper GS, Wither J, McKenzie T, Claudio JO, Bernatsky S, Fortin PR. The prevalence and accuracy of self-reported history of 11 autoimmune diseases. *J Rheumatol* 2008;35(10):2001-4.
11. Karlson EW, Mandl LA, Aweh GN, Grodstein F. Coffee consumption and risk of rheumatoid arthritis. *Arthritis Rheum* 2003;48(11):3055-60.
12. Gram IT, Riise T, Honda Y. Rheumatoid arthritis: A commonly misused diagnosis by the general population. *Clin Rheumatol* 1997;16(3):264-66.
13. Kvien TK, Glennas A, Knudsen OG, Smedstad LM. The validity of self-reported diagnosis of rheumatoid arthritis: Results from a population survey followed by clinical examinations. *J Rheumatol* 1996;23:1866-71.
14. Szoek CEI, Dennerstein L, Wluka AE, Guthrie JR, Taffe J, Clark MS, et al. Physician diagnosed arthritis, reported arthritis and radiological non-axial osteoarthritis. *Osteoarthritis Cartilage* 2008;16(7):846-50.
15. Statistics Canada. Canadian Community Health Survey Cycle 3.1. Master file documentation. Ottawa, ON: Statistics Canada, 2005.
16. Statistics Canada. Canadian Community Health Survey 2003. Non-medical Determinants of Health. Ottawa, ON: Statistics Canada, 2006.
17. Young A, Koduri G. Extra-articular manifestations and complications of rheumatoid arthritis. *Best Pract Res Clin Rheumatol* 2007;21(5):907-27.
18. Felson DT, Lawrence RC, Dieppe PA, Hirsch R, Helmick CG, Jordan JM, et al. Osteoarthritis: New insights. Part 1: The disease and its risk factors. *Ann Intern Med* 2000;133(8):635-46.
19. Kopec JA, Rahman MM, Berthelot JM, Le Petit C, Aghajanian J, Sayre EC, et al. Descriptive epidemiology of osteoarthritis in British Columbia, Canada. *J Rheumatol* 2007;34(2):386-93.
20. Mili F, Helmick CG, Moriarty DG. Health related quality of life among adults reporting arthritis: Analysis of data from the Behavioral Risk Factor Surveillance System, US, 1996-99. *J Rheumatol* 2003;30(1):160-66.
21. Kaplan MS, Hugué N, Newsom JT, McFarland BH. Characteristics of physically inactive older adults with arthritis: Results of a population-based study. *Prev Med* 2003;37(1):61-67.
22. Machado G. Health status indicators among community-dwelling elders with arthritis: The Bambui Health and Aging Study. *J Rheumatol* 2006;33(2):342-47.
23. Berard A, Solomon DH, Avorn J. Patterns of drug use in rheumatoid arthritis. *J Rheumatol* 2000;27(7):1648-55.
24. Michaud K, Wolfe F. Comorbidities in rheumatoid arthritis. *Best Pract Res Clin Rheumatol* 2007;21(5):885-906.
25. Sacks JJ, Harrold LR, Helmick CG, Gurwitz JH, Emani S, Yood RA. Validation of a surveillance case definition for arthritis. *J Rheumatol* 2005;32(2):340-47.
26. Bombard JM, Powell KE, Martin LM, Helmick CG, Wilson WH. Validity and reliability of self-reported arthritis: Georgia Senior Centers, 2000-2001. *Am J Prev Med* 2005;28(3):251-58.
27. Lawrence RC, Felson DT, Helmick CG, Arnold LM, Choi H, Deyo RA, et al.; National Arthritis Data Workgroup. Estimates of the prevalence of arthritis and other rheumatic conditions in the United States: Part II. *Arthritis Rheum* 2008;58(1):26-35.
28. Cunningham LS, Kelsey JL. Epidemiology of musculoskeletal impairments and associated disability. *Am J Public Health* 1984;74(6):574-79.
29. Peat G, Thomas E, Duncan R, Wood L, Hay E, Croft P. Clinical classification criteria for knee osteoarthritis: Performance in the general population and primary care. *Ann Rheum Dis* 2006;65(10):1363-67.
30. O'Reilly SC, Muir KR, Doherty M. Screening for pain in knee osteoarthritis: Which question? *Ann Rheum Dis* 1996;55(12):931-33.
31. March LM, Schwarz JM, Carfrae BH, Bagge E. Clinical validation of self-reported osteoarthritis. *Osteoarthritis Cartilage* 1998;6(2):87-93.

Received: May 5, 2009

Accepted: August 24, 2009

RÉSUMÉ

Objectifs : L'arthrite est un terme large qui englobe différentes maladies ayant des pronostics variés. Les enquêtes épidémiologiques sont des outils importants pour la recherche sur l'arthrite. Toutefois, ces enquêtes ne permettent pas distinguer les sous-types d'arthrite. Ce problème limite l'utilisation des enquêtes populationnelles pour la recherche sur des sous-types d'arthrite. Notre étude vise à décrire et à comparer les différentes caractéristiques des sujets ayant déclaré différents sous-types d'arthrite dans l'Enquête sur la santé dans les collectivités canadiennes (ESCC), dans le but de développer une méthode permettant de distinguer les sous-types d'arthrite dans les enquêtes populationnelles.

Méthodes : Nous avons analysé les données de 119 904 adultes ayant participé à l'ESCC (cycle 3.1). Les sujets ayant auto-rapporté un de quatre sous-types d'arthrite ont été comparés relativement à leur statut sociodémographique, leur style de vie, leur état de santé, leur utilisation de médicaments, leur utilisation du système de santé et leur statut fonctionnel. La construction de tableaux croisés des fréquences pondérées a permis d'estimer la signification statistique des associations à l'aide du chi-carré.

Résultats : Les résultats descriptifs ont démontré que les sous-groupes de l'arthrite se distinguaient très peu relativement aux 34 variables à l'étude. Les participants ayant auto-déclaré un diagnostic d'arthrose étaient en moyenne plus âgés et plus fréquemment des femmes par rapport aux autres sous-groupes d'arthrite. Il n'y avait aucune différence statistiquement significative entre les catégories arthrite rhumatoïde, arthrose et autre type d'arthrite, en ce qui concerne le niveau d'activité physique, l'état de santé, l'usage de médicaments, l'utilisation du système de santé et les limitations fonctionnelles des individus.

Discussion : Les caractéristiques des sujets auto-rapportant différents types d'arthrite lors d'une enquête typique sur la santé populationnelle (ESCC) ne sont pas suffisamment différentes pour justifier l'analyse valide et l'interprétation des données selon le sous-groupe d'arthrite. Les études à venir devront mettre l'accent sur l'identification et la validation de questions supplémentaires afin de distinguer les plus importants sous-groupes d'arthrite dans les enquêtes épidémiologiques de la population.

Mots clés : arthrite; arthrite rhumatoïde; arthrose; méthode épidémiologique; analyse en grappe