

Widespread Musculoskeletal Pain and the Progression of Disability in Older Disabled Women

Suzanne G. Leveille, PhD; Shari Ling, MD, MPH; Marc C. Hochberg, MD, MPH; Helaine E. Resnick, PhD; Karen J. Bandeen-Roche, PhD; Aida Won, MD; and Jack M. Guralnik, MD, PhD

Background: Widespread musculoskeletal pain is a poorly understood but common problem in older adults. Little is known about the progression of disability related to this condition.

Objective: To determine whether widespread musculoskeletal pain increases the risk for worsening disability in older women with disabilities.

Design: Prospective cohort study.

Setting: The Women's Health and Aging Study.

Participants: 1002 community-dwelling women 65 years of age or older with disability.

Measurements: Widespread musculoskeletal pain was defined as pain in the upper and lower extremities and axial pain with moderate or severe pain in at least one of the three regions. Worsening disability was defined as progression from no or mild difficulty to severe difficulty or inability to perform activities of daily living (ADLs), walk one-quarter mile, or lift 10 lbs.

Results: At baseline, 24% of participants had widespread pain and 25% had no pain or only mild pain in a single site. Women with widespread pain were 2.5 to 3.5 times more likely to have severe difficulty with ADLs, walking, or lifting at baseline compared with women who had no or mild pain. In women without severe difficulty initially, widespread pain nearly doubled the risk for progression to severe difficulty in each of the tasks, after adjustment for age, body mass index, comorbid illness, and other confounders.

Conclusion: Widespread musculoskeletal pain is frequent among community-dwelling older women with disability and appears to predict the progression of disability. Efforts to better understand the cause of this pain and its treatment might reduce the overall burden of disability.

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For author affiliations, current addresses, and contributions, see end of text.

Musculoskeletal pain is a common cause of disability in older adults (1–4). Recent attempts to understand the impact of pain on daily function in older persons have demonstrated the complexity of the problem in the elderly (2, 3). Often, musculoskeletal pain affects more than one or two joint areas, and the cause is unknown. In fact, although musculoskeletal pain is often attributed to arthritis, joint pain is associated with an increased risk for functional difficulties, even in the absence of radiographic evidence of arthritis (5). In epidemiologic studies, many aspects of pain have been associated with disability, including frequency, intensity, and location (2, 3).

The lack of specificity of musculoskeletal symptoms reported in the older population belies the serious effects of this chronic problem on quality of life and health care costs. How often do clinicians hear their older patients and, most often, women, say “I hurt all over”? Population-based surveys have found that the prevalence of widespread pain is highest in persons 60 to 80 years of age (6, 7). These studies raise important questions about the causes and the scope and effect of widespread-pain

syndromes in the older population. The role of widespread pain as a disabling condition in the older population is poorly understood. Investigators have reported that most persons with pain at several sites have at least some disability (4). We examined whether widespread pain increased the risk for worsening disability in older women with disability living in the community.

METHODS

Study Design

The Women's Health and Aging Study, which began in 1992, is a population-based longitudinal study of the one third of women 65 years of age or older living at home with at least mild disability in the eastern region of the city and county of Baltimore, Maryland. Of 32 538 women identified by searching Medicare enrollment files, 6521 were sampled by using an age-stratified random-sampling approach. Of this sampled group, 5316 women were alive and living at home, and 4137 participated in the home-based screening. Eligible women were those who reported having any difficulty in

at least two of four domains of functioning: upper extremity (raising arms over head, lifting or carrying 10 lbs, using fingers to grasp or handle), lower extremity (walking two to three blocks, climbing stairs, transferring from a bed or chair, doing heavy housework), higher functioning (using the telephone, performing light housework, shopping, preparing meals), and self-care activities (bathing, dressing, eating, using the toilet). Women were excluded if they had severe cognitive impairment according to the Mini-Mental State Examination (score < 18) (8). Of the 1409 eligible women, 1002 agreed to participate and provided written, informed consent. Study procedures were approved by the Institutional Review Board of the Johns Hopkins Medical Institutions, Baltimore, Maryland. Baseline assessment included a comprehensive interview and a physical examination by a trained nurse. Further details of the study methods are described elsewhere (9, 10).

Data Collection

All physical examinations were performed in the home; follow-up evaluations were conducted every 6 months for 3 years. If participants were incapacitated or resided in a nursing home at the time of a follow-up visit, a proxy respondent, such as a family member or caregiver, was interviewed. The response rate for each of the six follow-up interviews, including proxy responses, was approximately 93%. Proxy response rates ranged from 3% in the first follow-up interview to 16% in the final follow-up interview.

Pain Measurement

At the baseline interview, participants were asked two questions each about hand or wrist pain, foot pain, and back pain. Women who reported having pain on most days for at least 1 month in the past year were asked to rate the severity of their pain according to a numeric rating scale. The scale was shown on a card with numbers from 0 to 10 on a line, with 0 indicating no pain and 10 indicating severe or excruciating pain. Women who reported having hip or knee pain on most days for at least 1 month in the past year and in the past month were asked five additional questions from the Western Ontario McMaster Osteoarthritis Index (WOMAC). These participants rated their pain by using the numeric rating scale for each of the following activ-

ities: walking on a flat surface, going up and down stairs, lying in bed at night, sitting or lying down, and standing upright (11). The pain ratings for the five activities were averaged to create a summary pain severity measure for the hip or knee.

Nonanginal chest pain was determined from participant reports of having chest pain in the past 2 weeks. Chest pain in women who had possible or definite angina on the basis of antianginal medication use, physician report of angina, or positive findings on the Rose questionnaire (assessing exertional chest pain) was not included. The detailed algorithm used in determining the presence of anginal chest pain has been shown previously (12). Severity of chest pain was not assessed; for this study, we considered all chest pain as at least mild pain (rating >0).

Pain Categorization

We categorized musculoskeletal pain into four groups according to location and severity. In 1990, the American College of Rheumatology had defined widespread pain as pain above and below the waist, pain on the right and left sides of the body, or axial skeletal pain (13). For our first category of pain, widespread pain, we used modified American College of Rheumatology criteria classifying widespread pain as pain in three regions (upper and lower extremity and axial region) with at least moderate pain (rating > 3) in one or more regions. We could not include the American College of Rheumatology criteria for contralateral pain because the Women's Health and Aging Study data did not include this characteristic. To exclude participants with only mild pain from the widespread pain category, we used information on pain severity (in addition to pain location) in our definition of widespread pain that was not part of the original American College of Rheumatology criteria. The second pain category comprised women with mild pain (rating of 1, 2, or 3) in three regions and women who did not meet the criteria for widespread pain but who reported having at least moderate pain (rating > 3) in at least one site. The third pain category comprised women with mild pain in two sites, and the final pain category was for women who reported having no pain or mild pain at only one site.

Disability Measurement

We studied three measures of self-reported disability: activities of daily living (ADLs), upper-extremity function, and lower-extremity mobility. Disability in ADLs was measured according to the participants' self-reported difficulty in performing each of five activities: bathing, dressing, eating, transferring from a bed or chair, and using the toilet (14). A summary ADL measure for each participant was created on the basis of the greatest level of difficulty reported in any one ADL; for example, if a woman reported an inability to bathe, then she would be considered unable in ADLs. Upper-extremity disability was assessed by self-reported difficulty lifting or carrying a 10-lb item, such as a bag of groceries (15). Lower-extremity disability was determined on the basis of participants' reported difficulty in walking one-quarter mile or two to three blocks (16). The levels of difficulty for each measure were 1) no difficulty, 2) little or some difficulty, 3) a lot of difficulty, or 4) inability to do the activity.

Measures of Health and Chronic Disease

We examined sociodemographic, health, and behavioral characteristics as potential confounders of the pain–disability relationship. Body mass index (BMI) was calculated in kg/m^2 by using weight and height measurements taken at baseline. Physical activity was categorized by using a three-level variable that was based on a summary score of the participants' self-reported amount of walking, stair climbing, heavy housework, regular exercise, dancing, bowling, and outdoor chores (17). Moderate or severe depression was based on a score of 14 or higher on the Geriatric Depression Scale (18). Self-rated health was measured by asking participants to rate their health as excellent, very good, good, fair, or poor.

Major chronic conditions at baseline were ascertained by using complex algorithms that incorporated information from in-home interviews, physical examinations, medication inventories, radiographs, hand photos to determine bony prominence or deformity, hospital records, physician questionnaires, and blood tests (12). Comorbidity was measured as the number of prevalent conditions ascertained by using the disease algorithms (for angina, myocardial infarction, congestive heart failure, hip fracture, osteoporosis, rheumatoid arthritis, de-

generative disc disease, spinal stenosis, stroke, Parkinson disease, pulmonary disease, peripheral arterial disease, cancer, and diabetes mellitus). Osteoarthritis was not included in the count of comorbid conditions; because presence of pain was part of the definition of osteoarthritis in the disease algorithm, this condition could not be included as a potential confounder in the analyses. However, we did examine prevalence of osteoarthritis according to pain category. Symptomatic hip, knee, and hand osteoarthritis were assessed 1) by using the American College of Rheumatology criteria for osteoarthritis (19) and 2) according to inter-rater agreement among three epidemiologist–clinicians based on the algorithm for symptomatic hip, knee, and hand osteoarthritis (range for inter-rater agreement, $\kappa = 0.93$ to 1.0) (12). Current use (in the previous 2 weeks) of analgesic medications (including nonsteroidal anti-inflammatory agents, opioid analgesics, and all other analgesics) was ascertained from the medication review data from the baseline visit and was coded by using methods described elsewhere (20).

Statistical Analysis

Baseline frequencies were weighted to reflect the age distribution of the general population of older women in East Baltimore. In cross-sectional analyses, polychotomous logistic regression models were used to derive the odds ratios and 95% CIs for each pain category in relationship to each level of difficulty by using a single model for each type of disability (ADLs, lower-extremity mobility, and upper-extremity function). This method does not assume a linear relationship between pain and level of difficulty but rather allowed us to separately determine the relationship between pain and each level of difficulty or inability with each disability end point. Polychotomous models were performed by using the CATMOD procedure in SAS software, version 6.12 (SAS Institute, Inc., Cary, North Carolina). Potential confounders were included in the models only if they were associated with pain and disability and if their removal from the model altered the parameter estimates for the pain categories as predictors of disability. Depression and report of feeling unusually weak were not included in the models because they were on the causal pathway between pain and disability.

In longitudinal analyses, we calculated progression to

severe difficulty and inability for each outcome in each pain category as the number of new events divided by the total number of years of follow-up among the participants without a lot of difficulty or inability in the outcome of interest at baseline. We conducted failure-time analyses to examine pain categories as predictors of onset of severe difficulty or inability to perform mobility and ADL tasks. Changes in disability status were observed only at each study evaluation, which occurred approximately every 6 months. Therefore, we performed discrete time survival analyses by using logistic regression to determine the odds ratios and 95% CIs for each level of pain compared with the category of no or mild pain (21). This method of analysis calculates the odds of progression to severe difficulty or inability in performing tasks at each evaluation among women with no previously reported severe difficulty or inability in the disability outcome of interest. In addition to the confounders included in the cross-sectional analyses, we also adjusted for the round of follow-up, use of proxy respondents, and presence of any difficulty in the disability end point as measured at baseline. In the models used for examining outcomes of difficulty, we censored women who became unable to perform the outcome task during follow-up. When pain categories were updated to the most recent follow-up interview before worsening disability (as time-dependent covariates), the results (data not shown) were generally consistent with those of the baseline models.

For each task, we evaluated the relationship between baseline pain and time to onset of severe difficulty or inability to perform the task by using Cox proportional hazards models. The results generated by using the Cox method were essentially unchanged from those obtained by using discrete time-survival analyses. Thus, we present only the latter findings.

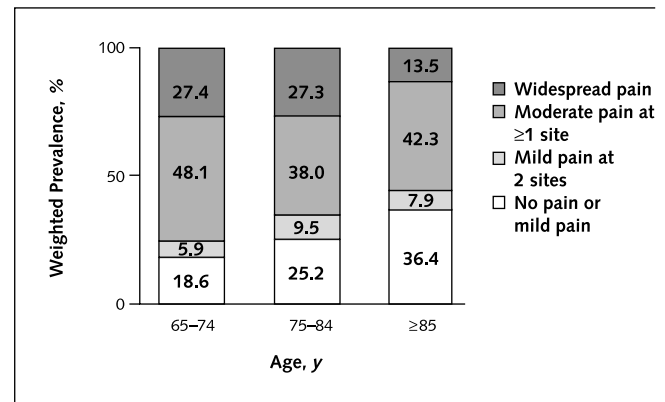
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RESULTS

Musculoskeletal pain was very common in this group of older women with disability. Of 998 women

Figure. Prevalence of musculoskeletal pain, according to age, in older women with disability.



with complete pain information, 235 had widespread pain (24%) and nearly half (43%) had moderate pain in at least one site or mild pain at two or more sites at baseline. One quarter of the participants reported having no pain or mild pain at only one site. The **Figure** shows that widespread pain was most common in women 65 to 74 years of age and those 75 to 84 years of age (27% in each age group) and was less prevalent in women older than 85 years of age (13%).

Characteristics associated with musculoskeletal pain included nonwhite race and education less than 4 years of high school or a General Educational Development degree (**Table 1**). Nearly half of the women with widespread pain were obese (BMI > 30.18 kg/m²) compared with 23% of the women with no or mild pain. Level of physical activity did not vary with level of pain. Women with widespread pain were much more likely than other women to have symptomatic knee or hand osteoarthritis, depression, or weakness (**Table 1**). The proportion of participants who reported using analgesic medications in the previous 2 weeks increased across pain categories, from 64% of the women with the least pain to nearly 90% of the women with widespread pain.

At baseline, women with widespread pain had a nearly threefold higher risk for having a lot of difficulty with ADLs compared with women who had no or mild pain (**Table 2**). Widespread pain was associated with similar increases in the risk for having a lot of difficulty with walking or lifting. Likelihood estimates were independent of age, race, education, BMI, comorbid conditions, and self-rated health. Risk for having a lot of dif-

Table 1. Baseline Characteristics of Participants, according to Pain Category*

| Characteristic | Participants with No Pain or Mild Pain at 1 Site (n = 254) | Participants with Mild Pain at 2 Sites (n = 78) | Participants with Moderate Pain at ≥1 Site (n = 431) | Participants with Widespread Pain (3 Regions) (n = 235) |
|-------------------------------------|--|---|--|---|
| | ←—————weighted %—————→ | | | |
| Age | | | | |
| 65–74 y | 34.3 | 33.9 | 49.4 | 48.0 |
| 75–84 y | 42.9 | 50.6 | 35.9 | 44.0 |
| ≥85 y | 22.8 | 15.5 | 14.7 | 8.0† |
| Race | | | | |
| Black | 23.2 | 21.8 | 32.5 | 27.8 |
| White | 76.8 | 78.2 | 66.6 | 71.2 |
| Other | 0.0 | 0.0 | 0.9 | 1.0‡ |
| Body mass index | | | | |
| <25.14 kg/m ² | 41.3 | 32.5 | 30.8 | 21.9 |
| 25.14–30.18 kg/m ² | 35.5 | 42.8 | 30.2 | 30.9 |
| >30.18 kg/m ² | 23.2 | 24.7 | 39.0 | 47.2† |
| Education ≥ 12 y | 42.8 | 49.7 | 32.7 | 32.5§ |
| Lives alone | 48.4 | 49.7 | 45.6 | 43.0 |
| Activity level | | | | |
| Inactive | 35.7 | 28.9 | 32.3 | 28.6 |
| Minimal | 47.6 | 55.0 | 47.3 | 54.7 |
| Moderate to high | 16.7 | 16.1 | 20.4 | 16.7 |
| Fair or poor self-rated health | 39.2 | 42.4 | 58.9 | 64.1† |
| Moderate or severe depression | 9.9 | 10.3 | 17.7 | 26.6† |
| Unusually weak (in the past month) | 14.0 | 20.8 | 25.4 | 36.4† |
| Knee osteoarthritis | 12.9 | 43.3 | 42.9 | 51.3† |
| Hip osteoarthritis | 1.0 | 4.2 | 10.7 | 11.7† |
| Hand osteoarthritis | 2.9 | 11.8 | 21.3 | 48.0† |
| Analgesic use (in the past 2 weeks) | 64.4 | 79.4 | 80.6 | 88.8† |

* The pain categories were 1) no pain or mild pain at one site (hand, back, chest, hip, knee, foot); 2) mild pain at only two sites; 3) at least moderate pain in at least one site (score ≥ 4 on an 11-point numeric rating scale) but no pain in 3 regions (upper extremity, axial, lower extremity) or only mild pain in 3 regions; and 4) widespread pain: pain in 3 regions with at least moderate pain in one region. Data are presented as frequencies that are weighted to represent the original population sampled.

† P < 0.001, chi-square test for between-group differences using unweighted data.

‡ P < 0.01, chi-square test for between-group differences. For this test, the “Other” category was grouped with the “Black” category.

§ P < 0.05, chi-square test for between-group differences.

|| Level of physical activity based on a summary score of exercise, leisure time activities, and housework.

Table 2. Adjusted Odds Ratios for Each Level of Difficulty or Inability To Perform Daily Activities at Baseline, according to Pain Category

| Functional Outcome | Odds Ratio (95% CI)* | | | |
|-------------------------------------|--|--|--|-----------------------------------|
| | Participants with No Pain or Mild Pain at 1 Site | Participants with Mild Pain at 2 Sites | Participants with Moderate Pain at ≥1 Site | Participants with Widespread Pain |
| Activities of daily living | | | | |
| Little or some difficulty (n = 348) | 1.00 | 1.90 (1.02–3.52) | 1.58 (1.06–2.35) | 1.65 (1.02–2.67) |
| A lot of difficulty (n = 154) | 1.00 | 2.21 (0.91–5.34) | 1.80 (0.999–3.23) | 2.77 (1.45–5.29) |
| Unable (n = 166) | 1.00 | 1.07 (0.43–2.65) | 0.96 (0.56–1.64) | 1.67 (0.90–3.10) |
| Walking 2 to 3 blocks | | | | |
| Little or some difficulty (n = 278) | 1.00 | 1.06 (0.54–2.08) | 0.74 (0.47–1.15) | 1.10 (0.64–1.90) |
| A lot of difficulty (n = 187) | 1.00 | 1.36 (0.56–3.31) | 1.45 (0.82–2.56) | 2.58 (1.35–4.91) |
| Unable (n = 283) | 1.00 | 0.96 (0.45–2.07) | 0.76 (0.47–1.23) | 0.92 (0.51–1.67) |
| Lifting or carrying 10 lbs | | | | |
| Little or some difficulty (n = 320) | 1.00 | 1.12 (0.62–2.04) | 1.02 (0.68–1.53) | 1.13 (0.70–1.82) |
| A lot of difficulty (n = 114) | 1.00 | 1.27 (0.41–3.94) | 2.57 (1.28–5.18) | 3.60 (1.69–7.66) |
| Unable (n = 217) | 1.00 | 0.77 (0.36–1.68) | 1.03 (0.64–1.66) | 1.04 (0.59–1.83) |

* Adjusted odds ratios and 95% CIs were derived from polychotomous logistic regression models that included covariates for age, race, education, body mass index, number of confirmed diseases, and self-rated health.

difficulty in performing each task was generally lower for women in the intermediate pain categories; however, these women had more difficulty than women with no or mild pain. We found no relationship between pain level and inability to perform ADLs, walk, or perform lifting tasks.

Among participants who did not have severe difficulty with performing or inability to perform each of the tasks at baseline, the women with widespread pain had nearly twice the risk for developing a lot of difficulty in performing ADLs, walking, and lifting during the 3-year follow-up period compared with women who had no or mild pain (Table 3). The relationship between pain and difficulty in the three types of activities was independent of demographic or health characteristics or baseline difficulty level. Similar to the baseline prevalence findings, there was little or no evidence of a relationship between pain level and incidence of inability to perform any of the activities studied. Use of analgesics did not alter the risk for onset of severe difficulty in any task.

DISCUSSION

Widespread musculoskeletal pain in older women probably represents a mixed category of pathologies that includes single-site and polyarticular osteoarthritis (22–24), other arthritic conditions, spine diseases, and chronic pain syndromes (7, 25). Our findings show that widespread pain is common and persistent among older women with disability, thus placing them at risk for worsening difficulty in ADLs, walking, and lifting. However, widespread pain was not associated with an inability to perform these activities. The high prevalence of pain in this population is consistent with previous reports showing that most older women have chronic pain and that many older women report having pain in several joint groups (6, 7, 26, 27). The categorization that we used for widespread pain, which was a modification of the American College of Rheumatology classification, distinguished women with pain in three body regions from those with other musculoskeletal pain. Many of the women who had moderate to severe pain that did not meet the definition for widespread pain (women classified as having moderate pain) also had pain in several musculoskeletal sites but did not have the same risk for severe difficulty with routine tasks as those with widespread pain.

The baseline health and behavioral characteristics

Table 3. Incidence of Severe Disability and Odds Ratios for Incident Severe Disability, according to Baseline Pain Category*

| Functional Outcome | Disability Incidence† | Odds Ratio (95% CI)‡ |
|--|-----------------------|----------------------|
| A lot of difficulty with ≥1 ADL | | |
| No pain or mild pain at 1 site | 9.7 | 1.00 (referent) |
| Mild pain at 2 sites | 14.4 | 1.62 (0.84–3.12) |
| Moderate pain or other pain | 15.6 | 1.71 (1.13–2.58) |
| Widespread pain | 17.4 | 1.95 (1.20–3.17) |
| Unable to do ≥1 ADL | | |
| No pain or mild pain at 1 site | 20.2 | 1.00 (referent) |
| Mild pain at 2 sites | 24.8 | 1.52 (0.95–2.44) |
| Moderate pain or other pain | 19.8 | 1.12 (0.82–1.53) |
| Widespread pain | 21.3 | 1.32 (0.91–1.92) |
| A lot of difficulty walking | | |
| No pain or mild pain at 1 site | 10.3 | 1.00 (referent) |
| Mild pain at 2 sites | 11.4 | 1.04 (0.47–2.30) |
| Moderate pain or other pain | 10.6 | 1.06 (0.64–1.75) |
| Widespread pain | 19.5 | 1.85 (1.08–3.19) |
| Unable to walk one-quarter mile | | |
| No pain or mild pain at 1 site | 25.7 | 1.00 (referent) |
| Mild pain at 2 sites | 32.0 | 1.43 (0.86–2.38) |
| Moderate pain or other pain | 23.4 | 1.02 (0.73–1.43) |
| Widespread pain | 21.9 | 1.03 (0.68–1.56) |
| A lot of difficulty to lift or carry 10 lbs | | |
| No pain or mild pain at 1 site | 8.2 | 1.00 (referent) |
| Mild pain at 2 sites | 9.7 | 0.92 (0.45–1.90) |
| Moderate pain or other pain | 14.6 | 1.52 (0.96–2.40) |
| Widespread pain | 17.4 | 1.94 (1.17–3.23) |
| Unable to lift or carry 10 lbs | | |
| No pain or mild pain at 1 site | 20.1 | 1.00 (referent) |
| Mild pain at 2 sites | 23.5 | 1.04 (0.65–1.65) |
| Moderate pain or other pain | 22.5 | 1.04 (0.76–1.43) |
| Widespread pain | 21.7 | 1.17 (0.81–1.69) |

* Only persons who did not have a lot of difficulty or inability in the outcome were included in the analysis (ADL, $n = 651$; walking model, $n = 510$; lifting model, $n = 639$). ADL = activities of daily living.

† Number of new cases of a lot of difficulty or inability per 100 persons per year during 3-year follow-up.

‡ Adjusted odds ratios for incident disability according to baseline pain category. Adjusted odds ratios and 95% CIs were derived from discrete time–survival analysis (by using logistic regression). Covariates included age, race, education, body mass index, number of confirmed diseases, self-rated health, use of proxy respondent, baseline difficulty level, and follow-up round.

associated with widespread pain (Table 1) indicate issues for further study. Age was inversely related to pain levels, consistent with other reports (27, 28); however, it is unclear whether this relationship represents an age-related reporting bias or, less likely, reduced pain perception with increasing age. Another explanation might be that women with pain die at younger ages than their peers without pain. This was not observed in the Women's Health and Aging Study (data not shown), but musculoskeletal pain is generally caused by nonfatal diseases and selective survival of disabled women without pain is unlikely to explain the lower prevalence of pain

in the oldest age group. The strong association between pain and obesity may partly explain the lower prevalence of pain in women at least 85 years of age, who were much less likely to be obese. Several studies have shown that obesity is a risk factor for the onset and progression of osteoarthritis (29–31), but no report has identified a relationship between obesity and the chronic pain syndrome or fibromyalgia (32). Perhaps given the high rates of confirmed, site-specific osteoarthritis in our study, the role of arthritis in widespread pain may be more substantial in older women than in younger populations with chronic pain. Depression and weakness were most common among women with widespread pain and, although further research is needed, these symptoms may be important targets for an overall treatment plan for older persons with widespread pain.

Our findings identify an important distinction for understanding the relationship between pain and disability—that of *difficulty* versus *inability* in performing tasks of ADLs, walking, or lifting. Our results, similar to our findings in an earlier report on back pain and disability (33), show cross-sectional and longitudinal relationships between widespread pain and difficulty but not between widespread pain and inability in the performance of these routine tasks. Clinicians know that pain can cause difficulty in performing usual activities. In some older persons, pain may be so severe as to cause the patient to limit or cease performance of some activities, such as walking outside the home. However, we have found no evidence suggesting an increased risk for becoming incapacitated (unable to perform an activity) because of widespread pain. This information raises new questions about the pattern and process of disablement due to chronic pain. Worsening difficulty in performing routine tasks may develop from gradual weakness or reduced mobility related to avoidance of more challenging activities that produce pain, such as stair climbing or walking several blocks. Other factors associated with pain, such as obesity and depression, also may contribute to reduced mobility and worsening difficulty. Further research is needed to understand what is probably a multidimensional pathway from pain to disability in older adults.

The difference between difficulty and inability in performing basic tasks may relate to the capacity for improvement among persons with pain. Because the segment of the disabled population that has pain is gen-

erally younger than the rest of the disabled population, persons with pain may have fewer disabling comorbid illnesses—such as stroke, lung disease, and impaired vision—that can complicate rehabilitation. It is possible that if difficulty with basic tasks were better understood by clinicians and researchers as an end point rather than considered as an intermediate level of disability, the daily burden experienced by persons with chronic pain would become more evident, and targeted rehabilitation programs could be developed.

Our findings are generalizable only to similar populations of city-dwelling older women. Participants in this study were representative of the one third of older women who already had at least some limitations in their daily functioning, consistent with national data (34). Perhaps the pathology contributing to their widespread pain may have been more severe and thus more disabling than in the broader population. However, because women in the reference category (the group with no or mild pain) had other disabling conditions, the findings may have been more modest than in the general population of older women. Alternatively, by including only women at highest risk for severe disability, we may have had more statistical power to observe functional changes within 3 years than in a general population sample of the same size. Because our classification of widespread pain was generally limited to musculoskeletal joint areas and did not include all possible pain sites, the prevalence of widespread pain may have been underestimated. Inclusion of additional sites in our classification of widespread pain could have altered the relative-risk estimates in either direction. Finally, our observed relationship between pain and functioning in women cannot be generalized to men.

In conclusion, this study has two important messages. First, widespread pain is a very common and burdensome problem for older disabled women living in the community. Second, the presence of widespread musculoskeletal pain in older disabled women poses an increased risk for the progression of disability. Further research on the causes of widespread musculoskeletal pain and its contribution to disablement in older persons will lead to better assessment and management of this all-too-common, disabling condition.

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Requests for Single Reprints: Suzanne Leveille, PhD, Research and Training Institute, Hebrew Rehabilitation Center for Aged, 1200 Centre Street, Boston, MA 02131-1097; e-mail, leveille@mail.hrca.harvard.edu.

Current Author Addresses: Drs. Leveille and Won: Research and Training Institute, Hebrew Rehabilitation Center for Aged, 1200 Centre Street, Boston, MA 02131-1097.

Dr. Ling: Gerontology Research Center, National Institute on Aging, 5600 Nathan Shock Drive, Box 29, Baltimore, MD 21224.

Dr. Hochberg: University of Maryland, 10 South Pine Street, Medical School Teaching Faculty 8-24, Baltimore, MD 21201.

Dr. Resnick: MedStar Research Institute, 108 Irving Street, Northwest Annex 5, Washington, DC 20010.

Dr. Bandeen-Roche: Johns Hopkins University, 615 North Wolfe Street, Baltimore, MD 21205.

Dr. Guralnik: Laboratory of Epidemiology, Demography, and Biometry, National Institute on Aging, 7201 Wisconsin Avenue, Suite 3C309, Bethesda, MD 20814.

Author Contributions: Conception and design: S.G. Leveille, M. Hochberg, K. Bandeen-Roche, A. Won, J.M. Guralnik.

Analysis and interpretation of the data: S.G. Leveille, M. Hochberg, H.E. Resnick, K. Bandeen-Roche, J.M. Guralnik.

Drafting of the article: S.G. Leveille, J.M. Guralnik.

Critical revision of the article for important intellectual content: S.G. Leveille, M. Hochberg, H.E. Resnick, K. Bandeen-Roche, J.M. Guralnik.

Final approval of the article: S.G. Leveille, S. Ling, M. Hochberg, H.E. Resnick, K. Bandeen-Roche, A. Won, J.M. Guralnik.

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Statistical expertise: S.G. Leveille, K. Bandeen-Roche, J.M. Guralnik.

Administrative, technical, or logistic support: J.M. Guralnik.

Collection and assembly of data: M. Hochberg, J.M. Guralnik.

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