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Qualitative Health Research

Older People's Perceptions of Remaining Physically Active While Living With Chronic Pain

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Manuscripts

Review

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3 Older People's Perceptions of Remaining Physically Active and Living With Chronic Pain
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Abstract

Active aging, using the conventional sense of activity, might be difficult to achieve for people with chronic musculoskeletal pain (CMP). Given that a large number of older people will develop CMP, it is important to consider a broader conceptualization of activity and how this might fit into discourses of aging. We report findings from a study of the experiences of chronic pain in the daily life of 60 older people. In this article we focus on the role and meanings of physical activity for those older people. We develop a typology of styles—*deliberate*, *strategic* and *natural*—to show how people approached physical activity and how its meaning differed for individuals in different contexts and across their life course. We suggest a more balanced perspective of aging in which “slowing down” might also be a desirable outcome for some older people with CMP, but is not incompatible with well-being.

Keywords: aging; arthritis; exercise / physical activity, older people; musculoskeletal disorders; pain, chronic; qualitative analysis

1
2
3 There has been a broad shift in institutional, organizational, and media discourses around aging
4
5 in recent years. Aging is no longer seen as a process of “disengagement” (Cumming & Henry,
6
7 1961) from society, but as a much more complex, lifelong, and multifaceted process based on the
8
9 roles or activities in which we engage. In “activity theory” (Havighurst, Neugarten, & Tobin,
10
11 1968) for example, the inseparability of the physical and social was established from its
12
13 inception (Lemon, Bengtson, & Peterson, 1972; Longino & Kart, 1982). There was also a greater
14
15 recognition that people in old age persist with accustomed roles and activities because they
16
17 continue to have the same needs and values (Moody, 2010). Being physically active in later life
18
19 potentially bestows the kinds of social benefits associated with team sports and leisure activities,
20
21 and more recent theories of aging (for example, “healthy aging,” “successful aging,” and “active
22
23 aging”) have also tended to emphasize physical activity.
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28

29 By contrast, studies on pain and physical activity have tended to focus on younger and
30
31 healthier populations, and generalization of their findings to older populations is inappropriate
32
33 (Schutzer & Graves, 2004). Research in this area has also tended to focus more on the social
34
35 elements and benefits of activity and formal exercise, rather than on subjective aspects (e.g.,
36
37 what people consider is exercise for them) and on mental rather than physical well-being. To an
38
39 extent, this results in less consideration of how older people with pain, such as chronic
40
41 musculoskeletal pain (CMP), fit into discourses of aging, because the meaning of activity
42
43 changes across the life course.
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47

48 For example, Rowe and Kahn’s (1997, p. 433) notion of “successful aging” is
49
50 predominantly concerned with “a low probability of disease and disease-related disability, high
51
52 cognitive and physical functional capacity, and active engagement with life.” This model of
53
54 success suggests that any other kind of aging is by default unsuccessful. It makes no concessions
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3 for subjective perceptions of what defines “success” on a personal level, or of what kind of
4
5 “interpersonal relations,” “activity,” and “productivity” is of value to the individual whose
6
7 functional capacity declines. The model is criticized for being unrealistic, because a disease-free
8
9 older age is unlikely for most people and its assertions fail to account for lay perceptions of
10
11 successful aging that incorporate more varied aspects such as learning, humor, spirituality, a
12
13 sense of purpose, and social relationships (Bowling & Dieppe, 2005).
14
15

16
17 Older adults who wish to remain physically active despite changes in their functional
18
19 ability utilize self-management processes to help them to adapt. Selective Optimization and
20
21 Compensation Theory (SOC: Baltes & Baltes, 1990) provides one way to understand this. SOC
22
23 suggests that individuals select goals and activities in an attempt to maintain or improve function
24
25 in response to lost capacity. Optimization occurs when individuals maximize their participation
26
27 in activities through spending more time practicing skills, for example, and compensation occurs
28
29 in activities through spending more time practicing skills, for example, and compensation occurs
30
31 when individuals adapt and modify activities to counteract losses in functional ability or
32
33 resources.
34
35

36
37 Research in which the SOC theory is utilized directly in relation to arthritis and activity
38
39 shows that older people adapt at least one activity to self-manage their arthritis (Gignac, Cott, &
40
41 Badley, 2002); that engagement in social and physical activities helps people to feel better and to
42
43 forget their arthritis (Stevens-Ratchford & Lookingbill, 2004); and that individuals who use SOC
44
45 strategies have more positive health outcomes (Janke, Son, & Payne, 2009). However, there are
46
47 some differences in how individuals use these strategies in relation to whether they live in
48
49 resource-rich or resource-poor environments (Janke, Jones, Payne, & Son, 2011).
50
51

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53 We know that CMP impacts on older people’s health and well-being, that it is associated
54
55 with increased use of health and social care services, and that it is the most common reason for
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1
2
3 recurrent general practitioner (GP) consultations by older people (McCormick, Fleming, &
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5
6 Charlton, 1995). Chronic pain is also the main cause of disability in later life (World Health
7
8 Organization, 2003). Its contribution to long-term disability is likely to increase relative to that of
9
10 other chronic conditions in the next twenty years (Jagger et al., 2006). Preventing the disabling
11
12 effects of chronic, painful conditions as people age is consequently a major public health
13
14
15 priority.
16

17
18 The prevalence and incidence of pain severe enough to interfere with normal daily
19
20 activities appear to increase with age (Gibson & Helme, 2001; Helme & Gibson, 2001;
21
22 Sternbach, 1986; Thomas, Mottram, Peat, Wilkie, & Croft, 2007; Urwin et al., 1998). It has been
23
24 shown, for example, that one fifth of older people will develop interfering pain over the course of
25
26 a 3-year period (Jordan, Thomas, Peat, Wilkie, & Croft, 2008). However, there are significant
27
28 groups within the older (50+ years) community-dwelling population that either remain free from
29
30 pain or report no interference from pain (Shi, Hooten, Roberts, & Warner, 2010; Thomas, Peat,
31
32 Harris, Wilkie, & Croft, 2004).
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36
37 In addition, little is known about the differences between people who report non-
38
39 interfering pain and those who report interfering pain. For example, we do not know if they share
40
41 similar characteristics that can be associated with the onset of interference (e.g., depression,
42
43 obesity) or whether the differences are because of the severity or widespread nature of the pain.
44
45 Presently there is little evidence to answer questions on whether pain status is a changing state
46
47 (moving from no pain, to pain without interference to interfering pain) or whether it can be a
48
49 long-term unchanging state and if so, what factors are associated with remaining free from
50
51 interference from pain. Accordingly, in this study we seek to explore older people's perceptions
52
53 of what helped them to remain free from the interfering effects of chronic pain.
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Methods

In phase one of this mixed-methods study we reanalyzed data from a previous self-report survey from the North Staffordshire Osteoarthritis Project (NorStOP) longitudinal cohort study conducted at the Arthritis Research UK Primary Care Centre at Keele University (Thomas, Wilkie, et al., 2004). We found that pain without interference can be a long-term state (Jordan, Sim, Moore, Bernard, & Richardson, 2012), with individuals in this group reporting high intensity pain in at least one body region, a third reporting widespread pain, and 90% having used pain medication in the previous four weeks. The physical and mental self-reported health of this group was generally stable over six years.

In phase two—which this article is based on—we used qualitative methods with the aim of examining how older people could best be helped to age well in the presence of musculoskeletal pain. The main objectives included an exploration of why some older people remain free from pain, others experience interference from pain, and others have pain but report no interference. We were also interested in which aspects of older people’s lives are linked with reduced interference from pain. In this article we explore these objectives further by focusing on physical activity. In particular we explore aspects of physical activity and movement, and the meanings given to these by older people in the context of their “painful bodies” and their own aging. Our aim is to better understand how people manage chronic musculoskeletal pain in the everyday, how life course factors influence these meanings, and how these shift and change with age. Ethical approval for this project was granted by the South Staffordshire Research Ethics Committee in 2009.

Sample

The methods for phase one of the study are detailed elsewhere (Jordan et al., 2012). Briefly, the North Staffordshire Osteoarthritis Project (NorStOP) is a UK-based general population cohort study of joint pain and general health in older people (Thomas, Wilkie, et al., 2004). At baseline all patients aged 50 and above who were registered with six general practices were sent a questionnaire containing general health, sociodemographic, and pain questions. In the UK approximately 98% of people are registered with a general practice for their health care, and hence the registered population is representative of the general population in the North Staffordshire area.

Questionnaires were sent at baseline and at 3-year and 6-year follow-up. In the first phase of this study data from these questionnaires were used to formulate three pain groups: group (a) reported no pain (np); group (b) reported pain without interference (pni); and group (c) reported pain with interference (pi) at all three time points (Jordan et al., 2012). The presence of pain was based on a pain manikin on which patients were asked to shade in the location(s) of pain that had lasted for one day or more in the past four weeks (Lacey, Lewis, Jordan, Jinks, & Sim, 2005). The presence of interfering pain was then assessed in those reporting at least one area of pain.

Interference was based on one item from the general health status measure, the SF-36: “During the past 4 weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?” (Ware & Sherbourne, 1992). Respondents answering “moderately,” “quite a bit,” or “extremely” on the five-category response scale were defined as having pain that interfered with their lives (Blyth et al., 2001; Jordan et al., 2008; Thomas, Peat, et al., 2004; Thomas et al., 2007). This item is not site-specific and might relate to any type of pain. The validity and reliability of this item in the older population has been established (Jordan

1
2
3 et al., 2008). Of 4,756 respondents at six years, 899 (19%) reported pain that interfered with their
4
5
6 lives at all three time points, 560 (12%) reported pain that did not interfere with their lives at all
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8 three time points, and 421 (9%) reported no pain at all three time points (Jordan et al., 2012).
9

10 Respondents were asked for consent to take part in additional studies and to allow review
11
12 of their medical records. For the second qualitative phase we randomly sampled from those who
13
14 consented to further follow-up, stratified by pain group and by age. We aimed to interview 60
15
16 people in this second phase. The sample was distributed as evenly as possible across the pain
17
18 groups and across the three age bands to reflect the maximum diversity of life experience (see
19
20 Table 1): preretirement (56–64 years); postretirement (65–79 years); and the oldest old (80+
21
22 years). This last group was particularly distinctive in that it included, for example, people aged
23
24 80+ who had never experienced chronic pain. All participants in our study were aged 56 or
25
26 above. Those who were taking part in other studies at the same time were excluded on the basis
27
28 of recruitment fatigue and the possibility of adverse effects from participating in simultaneous
29
30 studies.
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36 INSERT TABLE 1 ABOUT HERE
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39 When sampling for the “pain with no interference” group, those who reported in the 6-
40
41 year questionnaire a pain intensity score of 5 or more on a 0 (no pain) to 10 (pain as bad as could
42
43 be) numerical rating scale were regarded as having high intensity of pain for that location, based
44
45 on von Korff, Ormel, Keefe, and Dworkin (1992). Those with a pain intensity score below 5
46
47 were excluded. This was to account for the possibility that some people suffered no interference
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49 because they perceived their pain as not severe enough to cause a problem. This ensured that our
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51 focus was on individuals whose pain had the potential to interfere.
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Data Collection and Analysis

In-depth interviews. For the main qualitative phase reported on here, we used in-depth semistructured lifegrid interviews: a recognized tool for investigating the life course of individuals (Berney & Blane, 1997; Blane, Berney, Smith, Gunnell, & Holland, 1999). The interviews were also informed by the use of individuals' demographic and questionnaire data gathered from their original questionnaire and GP consultation data. We were granted access to these data with consent from the participants and the GPs. We developed a semistructured lifegrid interview schedule and carried out six pilot interviews to explore the suitability of the schedule. Working with a lay member of the project's advisory panel we then amended the interview schedule. The lifegrid provided an initial structure to the interview, focusing on experiences across the life course within a social context and taking into account individuals' perceptions of relevant experiences.

Depending on whether patients had pain that interfered or did not interfere, later questions focused on their experiences and beliefs about the nature of pain. The main interviews took place between September 2010 and April 2011. With participants' consent we recorded all interviews using a digital voice recorder. Interviews typically lasted between 60 and 90 minutes. All interviews were professionally transcribed and subsequently checked and anonymized by the interviewer. A large amount of data was generated by this study: sixty interview transcripts and recordings, lifegrids, and health events sheets. We used NVivo qualitative data analysis software, version 8 (QSR International, 2008) to manage the data set and to enable between- and within-case comparisons during analysis.

GP consultation and prescription information. GP consultation and prescription data provided a context for individual interviews and alerted the interviewer to anomalous or unexpected

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3 characteristics (e.g., no record of pain medication despite chronic pain) or events that might be
4
5 significant to the participant, such as surgical interventions or prescription changes. This
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7 prepared the interviewer to discuss such anomalies during the interview, where appropriate. This
8
9 information also provided a further aide-mémoire, helping participants to recall more exact dates
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11 of injuries or significant consultations, such as the first time they presented to the GP for chronic
12
13 pain, because this often proved difficult to recall.
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16
17 *Analysis.* Data were analyzed using thematic content analysis. An initial iterative case-by-case
18
19 analysis helped to identify themes within an individual's account. Subsequent cross-case analysis
20
21 revealed the extent to which the themes recurred across individual accounts. The analysis was
22
23 carried out across all individual accounts independent of which pain category they fell into, until
24
25 a broad set of themes had been developed. This was done to reduce the likelihood of any initial
26
27 bias based on assumptions and expectations about each pain group.
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32 We then reanalyzed individual cases with account taken of which pain group they
33
34 belonged to and their individual characteristics. The interviewer (Moore) conducted the analysis.
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36 Other members of the team independently analyzed selections of transcripts at regular intervals
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38 to maintain internal consistency and validity. For this article we present findings that focus on
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40 physical activity and its role and meaning in the context of managing or avoiding chronic pain
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42 and interference. We focus on the spectrum of daily activities that people use as a way to
43
44 maintain movement and/or improve physical function and health, and on the manner in which
45
46 they did this.
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51 **Findings**

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53 Here we present data that illustrate what participants said that they did in response to pain or to
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55 avoid increasing interference from pain, and their beliefs and understandings about the role of
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3 physical activity in managing pain as they age. In the quotations presented below we indicate
4
5 individual participants' gender, age group, and pain group: pi indicates "pain with interference,"
6
7 pni indicates "pain with no interference," and np indicates "no pain." From participants' data we
8
9 developed a threefold typology of the style in which people act out physical activity in their
10
11 everyday lives—deliberately, strategically, and naturally. Running through each of these are two
12
13 cross-cutting themes—"striving toward maintaining physical activity" and "slowing down"—
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15 that illustrate the complex interaction between psychological motivation and physical ability. In
16
17 the following sections we describe and illustrate this typology.
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21

22 In searching for meanings around activity we did not adhere to any a priori definition of
23
24 activity or exercise, but based our analysis on what participants said about these concepts as
25
26 meaningful to them in the context of their lives. Participants in all three groups recognized that
27
28 physical activity was important to their health and well-being and contributed to a better quality
29
30 of life. Regardless of which pain group they belonged to, participants talked about physical
31
32 activity as important in avoiding or reducing interference from pain. There were a number of
33
34 ways in which people tried to remain active in the context of their own lives.
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37
38

39 *Deliberate engagement with physical activity*

40
41 Those who engaged deliberately with physical activity were consciously aware of being active to
42
43 increase or maintain a level of physical and mental well-being, either in response to pain or to
44
45 protect against pain:
46
47

48 I'm a believer [that] if you can keep on going and you keep active that's the way, you
49
50 know. That's why with the knitting, I mean, sometimes I put it down and I think, "I don't
51
52 know whether it's done 'em any good or not because they hurt." But in my mind I feel
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3 that the more I keep them moving that, you know, they won't fasten up on me. (Female,
4
5 55–64, pni)
6
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8
9
10 I mean I will exercise to try and make sure that my knee keeps moving all the time,
11
12 etcetera, etcetera, because I don't want to be in a position where I am going to be, it's
13
14 going to restrict me from being able to do the things I want to do. (Male, 55–64, pni)
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16
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19
20 Participant (P): While I can walk and I'm able to walk, I'm going to keep doing it. While
21
22 I can dance, I shall keep doing it. Until I can't do it, or not able to do it, is that what you
23
24 mean? (Female, 65–79, np)
25
26

27 Interviewer: Yeah, I'm trying to get to the motivations behind doing it.
28

29 P: It's really mainly keeping fit, keeping myself fit, you know.
30
31
32
33

34 In the quotations above, the first participant was a retired hairdresser who still dressed her
35
36 friends' hair and knitted, despite the pain in her hands. She was conscious of the effect on her
37
38 joints, but persisted in the belief that if she kept moving them she would retain her mobility. The
39
40 second participant was also conscious of the importance of keeping his knee mobile after a knee
41
42 operation for osteoarthritis, and he deliberately exercised to maintain his functional ability and to
43
44 carry on doing the things that he enjoyed, which included his work and sports. This style was not
45
46 specific to those with pain. Despite having no pain, the third participant was conscious of
47
48 maintaining her mobility and agility as she aged, recognizing that she might not always be able
49
50 to walk and dance, but that these activities also kept her "fit."
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4 *Strategic engagement with physical activity*

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6 Those who engaged strategically in physical activity showed adaptation and innovation in the
7
8 face of increasing interference from pain and disability. Participants found ways of doing
9
10 everyday activities that were easier, but that also incorporated the additional intention of
11
12 maintaining their movement despite having a body in pain. For example, a participant talked
13
14 about how he increased his opportunity for activity by taking individual dishes over to the
15
16 cupboard to put them away rather than taking a stack in one journey. By so doing, he
17
18 incorporated additional walks into his everyday activities and maintained movement:
19
20

21
22 I usually have a walk up the road about a mile or more, and I tend to, uh, if I'm washing
23
24 up, I don't wash up a load of dishes and wait till I've got a load of dishes then take them
25
26 over to where I've got to . . . I take each one individual, so that I get me walking in as
27
28 well. (Male, 80+ pni)
29
30
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33

34 Strategies used by other participants included splitting house chores over multiple days or using
35
36 physical aids to keep stiff joints moving:
37

38
39 Well, of course, you just have to keep using it. I've got a rubber ball down there—and I
40
41 use that to try and keep these fingers going, because they are quite stiff at times. They
42
43 don't hurt, there's no pain attached. Maybe that's a bit funny but there's not pain, it's just
44
45 a bit stiff. (Female, 65–79 np)
46
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51 Even without pain, the stiffness the participant experienced in her fingers caused her to think of
52
53 ways in which to keep her joints moving. The rubber ball provided an opportunity to maintain
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3 movement, and she adapted the way she used it (squeezing it instead of throwing or rolling it) to
4
5 achieve this.
6

7
8 Another strategy to maintain movement was to take rests in between walking over long
9
10 periods:
11

12
13 There's a circular walk I can do round here and it's just two miles . . . I used to do that
14
15 every day . . . But as far as walking now is concerned this hip joint and my feet let me
16
17 down. I go, but sometimes I have to just have a rest for about three minutes just to let the
18
19 pain barrier ease off and then I carry on again . . . I'd just have a wait, a stop, for about
20
21 three minutes, twice, before I got home and I'd be glad to sit down then. (Male, 80+, pi)
22
23
24
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26

27
28 Sitting had a strategic function in this case. It was necessary to ease pain, and as a reward for
29
30 expending one's energy, when it was seen as "resting," essential to recuperation. Without this
31
32 strategy the participant would most likely not have been able to walk every day.
33

34 *Natural engagement with physical activity*

35
36
37 Those who engaged naturally in physical activity maintained aspects of life habits and personal
38
39 identity that related to physical activity and that constituted the style of life by which they
40
41 defined themselves. Often, activity was presented as part of the individual's natural mode of
42
43 being, particularly for those involved in sports and physically demanding occupations, and this in
44
45 part affected the way they managed their pain in later life:
46
47

48
49 Interviewer (I): Do you think there's anything you do that helps you to prevent that pain
50
51 from interfering with things?
52

53
54 Participant (P): I know I'm strong willed . . . if I've set out to do something I intend to
55
56 get there, come what may. So it's affected me that way, that's all. Um, well it's just
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3 attitude of mind and, because I was athletic, as I say . . . even at school I was the senior
4
5 champion at the school . . . I was, you know, athletically minded then and I was athletic,
6
7 and I've kept myself fit enough to put up a good performance. (Male, 65–79, pni)
8
9

10 I: So you think that's stood you in good stead, your athletics and that attitude that you
11
12 had with that and your job? And that seems to have had quite an impact on the way that
13
14 you deal with pain in later life as well, in terms of your attitude.
15
16

17 P: Oh yeah, yeah I would say that, yes.
18
19

20
21
22 As a retired miner and keen athlete, this participant had always been an active person—someone
23
24 who both enjoyed and valued the benefits of being active—and this had some bearing on his
25
26 attitude and management of his CMP:
27
28

29 Participant (P): I still like to be physical, I like to keep myself moving all the time, and
30
31 I'm finding that, you know, I can't go and play football. I can't go and do a 100-yard
32
33 sprint or whatever nowadays, so just a walk round the fields and back, for a couple of
34
35 hours is my alternative . . . I can carry on walking forever, I can walk all day [laughs]
36
37

38 Interviewer: So it seems important to you to keep moving then, as you say to be . . .
39
40

41 P: Oh, yes. I've got to. I know that if I decided to come home, sit in front of the
42
43 television for five or six hours a night, I wouldn't have the style of life that I wanted. So
44
45 I've got to keep myself in a position where I can go out and meet people and have some
46
47 exercise and a bit of fresh air.
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3 The participant naturally took to walking for health, once running was impossible, as a way of
4 remaining both socially and physically active, using it as an alternative to the things that he could
5
6 no longer do because of his joint pain and his age.
7
8

9
10 Another participant also tried to remain active after her husband died, despite having
11
12 gout:
13

14
15 I've always been active and busy, out and about . . . When my husband was alive there
16
17 wasn't a Sunday that we ever stayed in, even in the thick snow we always had to go for a
18
19 walk when I didn't even want to, really, because I mean I was working all the week . . .
20
21 We were motorbikers and we went all over the place. We were always active. He never
22
23 danced but since this last seven years I've started to dance, so I dance most nights and
24
25 one afternoon a week as well. And that's what's brought on my gout, the dancing . . . but I
26
27 still go dancing. And that keeps me awake at night but I still go dancing. I don't think,
28
29 "Ooh, I'll have to give it up." (Female, 65–79, pni)
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36 As a naturally active person, this participant also linked the social with the physical. Dancing
37
38 was a way to socialize with other people and provided a way of maintaining the lifestyle she
39
40 wanted. Although she perceived dancing to be a contributor to her gout, she did not think of
41
42 stopping. She accepted pain as the price of being physically and socially active, and because she
43
44 had retired, from a cost-benefit perspective she did not perceive it to interfere with her life.
45
46
47

48 *Striving Toward Maintaining Physical Activity*

49

50
51 In a moral sense, people wished to present themselves as "aging well." More practically,
52
53 participants were conscious of the importance of maintaining activity as they aged—through
54
55 deliberate, strategic, or natural styles—to avoid developing pain or to manage it better. This
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1
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3 consciousness was evident in the language that participants used that showed a striving toward
4 maintaining physical activity and was often characterized by aphorisms such as “use it or lose
5 it,” and talk of “keeping going” and “not giving up.” There was also a perception that the more
6 one aged the more one had to push oneself to remain active and free from interfering pain, as this
7 participant (male, 65-79, pni) suggested, “A bit like, you’re getting older now so therefore you
8 just have to get on, you do a bit more, you’ll be all right.” Participants also felt that if they could
9 manage to remain active then it was possible to “learn” to live with any pain: “I think if you keep
10 active, keep going and occupy yourself then, uh . . . think you can learn to live with it if you’ve
11 got it” (male, 56-64, np).

12
13 In an earlier quotation, one participant spoke of keeping her hands moving despite the
14 pain for fear that they would “fasten up” on her. Her perception was based on the belief that her
15 own mother “got fast with arthritis.” She said, “That’s what I’m frightened of. You know, them
16 going stiff and you can’t use them, because the saying is, isn’t it, ‘If you don’t use it you lose
17 it.’” Her determination not to “lose it” is clear, and this sense of striving to retain movement
18 seemed to be a key issue for some participants. A participant who was diagnosed with
19 Dupuytren’s contracture in her hands and arthritis of the neck believed that her persistence and
20 deliberation in exercising her joints was the reason she overcame both:

21
22 I made it go, you know, gradually. I didn’t over— if it hurts, I stopped, you know, but I
23 did, I drove it, you know, pushed it as far as I could . . . A lot of it is exercise, you know,
24 it helps, and persisting as well, I don’t give up . . . You see it’s no good saying you can’t,
25 you’ve just got to try. (Female, 80+, pni)

1
2
3 The participant's persistence was also evident in her outlook on life and in her natural approach
4
5
6 to the limitations that she felt with old age:
7

8 Interviewer: Why is it that some people have pain and some people don't?
9

10 Participant: I think—I don't know, I think it's what you want to do. You know, I want to
11
12 get on with it, I want to be doing and I think that matters, you know. I'm not, I'm not
13
14 here to be entertained and I'm not here to be looked after, I'm here to do, you know, to
15
16 help other people, really, and do things.
17
18
19

20
21
22 Similarly, despite high levels of pain that interfered with his life this participant regularly
23
24 danced with his wife:
25

26
27 My wife and I go dancing three times a week for exercise as much as anything . . . I
28
29 sometimes lose my balance because I'm trying to avoid that pain. You know, if—you
30
31 know how you can rock on your feet, you go "Oh! Oh blimey!" And it'll hurt, really hurt.
32
33 And you think, "Am I doing the right thing?" But nevertheless, you know you keep on
34
35 going and, well, exercise is more important than suffering a bit of pain, you know. (Male,
36
37 80+, pi)
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43 For this participant, dancing was a valued, meaningful, and purposeful activity. His
44
45 determination to keep going despite the suffering incurred in doing so highlights the meaning
46
47 that movement and mobility had for these older people. At an even deeper level, one participant
48
49 suggested that movement was part of what it meant to be alive:
50
51

52
53 You've gotta keep yourself alive, what I call alive, you know . . . and it doesn't matter if
54
55 you go shopping, if you go shopping at least you're doing something, you're keeping
56
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1
2
3 your mind ticking over and at least you're using your arms by carrying shopping . . .

4
5 Don't sit, don't sit and like . . . reading a book, okay it passes the time, but you're not
6
7
8 moving. (Male, 55–64, pi)
9

10
11 Movement was therefore understood as an affirmation that one is still living and animated.

12
13 Movement also fends off what might be seen as a metaphorical rigor mortis, with many
14
15 participants equating movement not just with quality of life but with life itself—if life was to
16
17 have meaning for them—because movement and being physically active were a natural part of
18
19 their self-identity.
20
21

22
23 Striving toward physical activity was also about a conscious avoidance of being
24
25 sedentary. Characterized by sitting or a lack of activity, sedentariness was viewed as anathema to
26
27 those who were naturally active or wished to remain active and engaged with others or with their
28
29 immediate environment. Sitting was equated with being confined, inside, and disengaged from
30
31 the outside world, which seemed intolerable to some participants:
32
33

34
35 Bear in mind in the daytime I'm out and about, I never sit in here. . . . To me, kids today
36
37 have got a horrible life sitting in front of that [television] with the computers, with the
38
39 games and that . . . I've got friends that I visit and actually I don't like visiting much
40
41 because it means you're just sitting in. I'd much rather be out. (Female, 65–79, pni)
42
43
44
45

46
47 Only in the “pain with interference” group was sitting down dictated by pain or the anticipation
48
49 of pain. However, even in this group there was a preference for standing and moving over sitting,
50
51 which was partly strategic:
52

53
54 It doesn't allow you to sit for long or stand for long; you've got to keep moving it. You've
55
56 got to get up and. . . . That gives you a bit of relief—and as daft as it sounds sometimes
57
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2
3 when you—you keep it moving, it's probably better than sitting with it. . . . It's not so
4
5 intense—when you're moving with it, than when you're sitting. (Male, 55–64, pi)
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8
9

10 The perceived consequence of relinquishing activity routines was further degeneration,
11 and using physical aids such as motorized mobility scooters was seen to undermine one's
12 motivation to remain mobile and independent. Despite interfering pain, one participant made
13 efforts to remain mobile through everyday activities. His strategy was to recognize opportunities
14 for movement and to persist in activity routines that enabled him to remain mobile:
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16
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22 It [hip pain] stopped me from doing some exercise. I still walk the dog, I still walk up to
23 town instead of driving up to town. . . . I mean once you stop doing that then you start
24 vegetating don't you? . . . I see these people that go up to town in these invalid carriage
25 things, the motorized ones, and they get up and they walk around the stalls and they get
26 back on again and carry on. Well I suppose theoretically if I [asked] I could get one of
27 those, but that again is degeneration and you're going backwards all the time. So
28 eventually they won't bother to get out at the stalls, if they can't get close enough they
29 won't bother. (Male, 65–79, pi)
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43 Sedentariness was linked here with what the participant called “vegetating,” a part of the
44 “degeneration” brought about by relinquishing movement. Furthermore, it appeared to represent
45 a process that, if allowed to take hold, was irreversible. The narratives of all three pain groups
46 seemed to reflect an overriding acknowledgement that being too sedentary was detrimental to
47 one's health, although those with joint pain were perhaps closer to a realization of these
48 consequences and concerned about losing their independence.
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Slowing Down

There was a sense that although people tried to avoid sedentariness, an inevitable slowing down occurred in later life. This was partly because of changes in physical function and also from a desire to be less active, which might be seen as “natural,” but also “strategic.” In retirement, people had more control over their time and could take more time to do things, putting less stress on their body if they suffered from chronic pain:

Participant (P): I suppose my—the pace of my life has changed, hasn't it? I think that's what has happened, really. . . I sort of do the bathroom, Hoover [vacuum clean] the hall, Hoover in here, have a cup of coffee, [laughs] and do a bit more. It's lunchtime, you know, do you know what I mean? (Female, 65–79, pni)

Interviewer: Yeah.

P: This is this business of, you know, you've got the time so you spread the work out, you know.

Having no paid work meant that time could be taken, but also that one's pain could be accommodated more easily:

Interviewer: So, your day to day living—how has it affected that?

Participant: Um, well I just take my time now, now I'm not working. I do a bit on the good days, and if my back's bad, I just take it easy, you know. (Female, 65–79, pi)

The change in lifestyle that resulted from retirement or partial retirement seemed to release people from the pressure of responsibility, and this could make the difference between whether

1
2
3 or not something interfered with that person's life. For example, a participant was asked about
4
5 her dancing and the pain in her toe that kept her awake at night:
6
7

8 Participant (P): I don't go to work or anything. I haven't got to get up at 8 o'clock to go to
9
10 work; I know I can rest in the day if I'm that jiggered. (Female, 65–79, pni)

11
12 Interviewer: Yeah, so if you'd had a job then it would interfere perhaps?

13
14 P: Oh yes, it would interfere if I was working because I'd be absolutely shattered.
15
16
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18
19
20 Slowing down was not just seen as a consequence of arthritis or joint pain, but as part of
21
22 the wider aging process. As one participant (female, 80+, pi) suggested, “It isn't just the arthritis
23
24 though, it's age as well. I mean, everybody's—if they get to the age of 86—bound to slow up,
25
26 you know.” Retirement was not always seen as a benefit of aging, and participants perceived that
27
28 it could also bring its own problems for those who were not prepared:
29
30

31
32 You can retire too soon. We've noticed this with friends who've retired in their 50s. . . .

33
34 Even if you sort of loathe the work you do, at least find something else. You've got to
35
36 have projects in your life, you've got to have things that you want to do and want to
37
38 achieve. (Female, 55–64, pni)
39
40
41
42

43
44 This participant's words convey the importance she placed on having meaningful activities in
45
46 one's life.
47

48 Although retirement might be an opportunity to slow down, having nothing to replace
49
50 one's previous work, no incentive or meaningful activity, was seen as a disadvantage, and as
51
52 such it suggests that the process of “slowing down” must be managed properly. One participant
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2
3 suggested that involvement in the wider sense was not only important to having “a place” and a
4
5 sense of meaning in the world, but was also vital to one’s health:
6
7

8 So I think from a health point of view, whether it's mental health or physical health, is to
9
10 be part of something. It's absolutely essential. You've just got to go into an old folks'
11
12 home and see them sitting around in chairs all around the outside. They're just . . . they,
13
14 they've got no place. They, they've signed away their life, in effect. And so I think
15
16 involvement is absolutely vital . . . but involvement within your capabilities. (Male, 65–
17
18 79, pni)
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20
21
22
23

24 For the above participant, people who had become inactive had “no place,” suggesting a form of
25
26 existential loss. For him such people were no longer integral to society. This “dis-integration”
27
28 shares common ground with disengagement theories that suggest a mutual disengagement
29
30 between society and the older person. Nonetheless, some felt it was normal and acceptable in
31
32 later life to disengage from previous activities:
33
34

35
36 Interviewer: What will you do if that [swimming baths] closes, have you thought about
37
38 that?
39

40 Participant: I won't go anymore. It'll be a relief in one way, because I don't like getting
41
42 up in the morning, and about keeping fit, well I must be getting to the end of the line
43
44 now. (Male, 80+, np)
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47
48
49

50 At 91 years old, the participant believed his time was coming to an end and his motivations and
51
52 desires had changed. He no longer strived to remain active and was no longer interested in
53
54 “keeping fit” because he perceived himself nearing the end of his life. There were, however,
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3 exceptions, such as a participant (male, 80+, pni) who, in his late 80s, was quite active and
4
5 enjoying the “happiest time of my life,” though he too recognized his changing capacities for
6
7 physical activity.
8
9

10 **Discussion**

11
12 Through the deliberate, strategic, and natural ways that people found to remain active despite
13
14 having a body in pain, we found an underlying sense of striving toward activity, which fits with
15
16 the current active/successful aging discourse. We also found a recognition of slowing down. Our
17
18 findings show that striving is born out of the concerns of participants over loss of mobility.
19
20 These concerns might be interpreted as driven by a “fear” of losing one’s ability and
21
22 independence and being assigned to the “frail elderly” (Grenier, 2007).
23
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27
28 In contrast to theories of chronic illness as biographical disruption (Bury, 1982), chronic
29
30 conditions might be experienced as part of the “aging process” requiring acceptance (Gignac et
31
32 al., 2006) and normalized into a biographical flow, such that an enduring chronic illness
33
34 narrative is part and parcel of personal biography (Faircloth, Boylstein, Rittman, Young, &
35
36 Gubrium, 2004; Sanders, Donovan, & Dieppe, 2002; Sinding & Wiernikowski, 2008; Williams,
37
38 2000). In addition, personal experiences of continuing agency and self-management, despite
39
40 physical limitations, can sustain personal identities and lifestyles (Gilleard & Higgs, 2011) and a
41
42 belief that one is successfully aging (Bowling, 2006).
43
44
45

46
47 We suggest that striving illustrates a simple wish for a quality of life to be preserved, and
48
49 although participants did not deny losses, any losses were either accepted or compensated for
50
51 because participants chose other ways of remaining active or changed the way in which they
52
53 carried out activity. These findings echo those of others such as Janke et al. (2011), who found
54
55 that older people valued the health-promoting aspects of activities and showed commitment to
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1
2
3 activities to maintain health, adapting to changes in ability by replacing activities they could no
4
5 longer do with others they could. Baltes and Baltes' (1990) SOC theory provides a useful way of
6
7 understanding the strategies that older people use to modify their activities to suit their changing
8
9 body and changes in their experience of pain, reflecting Moody's (2010) assertion that "the idea
10
11 of successful aging should never be based on denial of real losses in functioning in the last stage
12
13 of life" (p. 21).
14
15

16
17 Moreover, the choices made by those who adjusted or replaced activities were often
18
19 informed by concepts of continuity (Atchley, 1993) and were illustrated in their histories of
20
21 physicality. These showed that those who were active in earlier life tended to want to continue
22
23 with an active lifestyle in later life. Histories of physicality gave some idea of meanings and
24
25 attitudes in relation to activity and how these influenced individuals' subsequent approaches to
26
27 pain. Although they might not have been able to continue the same sports, hobbies, or activities
28
29 to the same level, the typology showed that they adapted their activities and settled for what they
30
31 could do rather than for what they could no longer do, or strived to carry on with activities
32
33 despite pain to maintain their health. For the most part, this seemed to indicate an attitude or
34
35 approach that had developed over a lifetime.
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40
41 The opposite of striving toward physical activity is slowing down. At different points
42
43 during the life course people might become, or choose to become, less active. Although we
44
45 provide a typology of styles to illustrate how older people managed and maintained activity,
46
47 these are also relevant to how they managed "slowing down." There is a temptation in society to
48
49 make moral judgments about when people decide to slow down. This might be influenced by a
50
51 Western cultural ideology of aging that focuses on independence and fear of physical decline
52
53 (Waid & Leslie, 2003): a "busy ethic" that reflects and follows on from the "work ethic" valuing
54
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3 productivity and contribution to society in retirement (Ekerdt, 1986). It might also reflect
4
5 dominant discourses that focus on activity as a way to maintain health (Katz, 2000).
6
7

8 In our sample, those who were younger generally spoke of remaining active despite pain,
9
10 as conventional wisdom might suggest, and there was a point at which others felt that they had
11
12 lost their desire for exercise. What might be considered premature slowing down could have
13
14 more to do with individuals' beliefs about aging and their own limitations as a result of their pain
15
16 (a diagnosis of "wear and tear" in arthritic joint pain can be interpreted as meaning that if one
17
18 moves more, one will deteriorate more) and is therefore more strategic or purposeful. Slowing
19
20 down might also have more to do with a choice to enjoy the wisdom accrued through age
21
22 (Gattuso, 2003), to be more peaceful and reflective, and to enjoy having more time to do things
23
24 slowly.
25
26
27
28

29 Slowing down can also involve a sense of "dis-integration". Those who wish for a better
30
31 quality of life despite the presence of chronic painful conditions might view such "dis-
32
33 integration" as less acceptable than others who recognize that they are slowing down and do not
34
35 have the same "care" for exercise or activity as they come to what they perceive as the end of
36
37 their life. So it would seem that the goal is to find a more balanced perspective of physical
38
39 activity within the healthy aging ideal that takes account of painful conditions in a more coherent
40
41 way. We might consider the question: "When does slowing down become acceptable in
42
43 discourses of active and successful aging?"
44
45
46
47

48 The answer possibly lies in new theories of aging. Liang and Luo (2012) have recently
49
50 called for a discourse shift in social gerontology from "successful aging" to a more dialectic and
51
52 complementary "harmonious aging" that includes body and mind (which might include pain) and
53
54 family and social relationships. This view of aging would also incorporate both the opportunities
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3 (having more time) and challenges (having less mobility) that occur in old age. To our
4
5 knowledge, few studies have shown how pain intersects with ideologies of aging to influence
6
7 individuals' perspectives on when it is morally acceptable to slow down, and this poses an
8
9 opportunity for further exploration.
10
11

12
13 In this study we also build on work that identifies the "hard work of self-management"
14
15 (Ong, Jinks, & Morden, 2011), which should be acknowledged within practitioner/patient
16
17 relationships and utilized when promoting specific or tailored self-management programs that
18
19 include physical activities. It is easy to overstate the importance of activity and to imply that
20
21 older people with chronic pain should move more to reduce pain. As individuals, our capacity for
22
23 mobility will change, and it is important to be aware that the desire to be active might be lost and
24
25 possibly replaced with a desire to be more reflective and peaceful. Although this might be less
26
27 acceptable for those who still desire to be more active, it makes sense to those who believe they
28
29 are coming to the end of their life, and this should be respected by those involved in their care.
30
31
32

33 34 **Conclusion**

35
36 It is important to recognize that not only are the meanings that individuals give to remaining
37
38 activities variable, but the manner in which they engage in activities differs, and this is
39
40 influenced by a combination of physical determinants (chronic pain, illness), moral values, a
41
42 continuity of self-identity, and beliefs about the value of health as one ages. Although people
43
44 might engage less in physical activity as they get older, this does not necessarily equate to
45
46 failure, and it is important to recognize that individuals generally slow down as they age.
47
48

49
50 Drawing on Wiles's (2012) interpretation of resilience, it seems more important to balance what
51
52 is no longer possible with what is, and physical activity for those in pain can be defined in
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3 different ways depending on how people perceive and define activity rather than solely on
4
5 external behavior.
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7

8 So, for those in pain, remaining active can mean something entirely different from what it
9
10 means for those who are not in pain or for those who are at a different life stage. In recognition
11
12 that older people are not a homogeneous group, following Bowling and Dieppe (2005) we
13
14 suggest that clinicians should look more closely at individuals' values and expectations of aging.
15
16 They should also consider how activity has featured in an individual's personal history, how they
17
18 engage in activity, and their beliefs about what it means to them, to ascertain what kinds of
19
20 interventions might or might not be suitable.
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23

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25
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59
60

References

- Atchley, R. C. (1993). Continuity theory and the evolution of activity in later adulthood. In J. R. Kelly (Ed.), *Activity and ageing* (pp. 5-16). Newbury Park, CA: Sage.
- Baltes, P. B., & Baltes, M. M. (1990). Psychological perspectives on successful aging: The model of selective optimization with compensation. In P. B. Baltes, & M. M. Baltes (Eds.), *Successful aging: Perspectives from the behavioral sciences* (pp. 1-34). Cambridge: Cambridge University Press.
- Berney, L. R., & Blane, D. B. (1997). Collecting retrospective data: Accuracy of recall after 50 years judged against historical records. *Social Science & Medicine*, 45(10), 1519-1525. doi: 10.1016/S0277-9536(97)00088-9
- Blane, D., Berney, L., Smith, G. D., Gunnell, D., & Holland, P. (1999). Reconstructing the life course: Health during early old age in a follow-up study based on the Boyd Orr cohort. *Public Health*, 113(3), 117-124. doi:10.1038/sj.ph.1900551
- Blyth, F. M., March, L. M., Brnabic, A. J. M., Jorm, L. R., Williamson, M., & Cousins, M. J. (2001). Chronic pain in Australia: A prevalence study. *Pain*, 89(2-3), 127-134. doi: 10.1016/S0304-3959(00)00355-9
- Bowling, A., & Dieppe, P. (2005). What is successful ageing and who should define it? *BMJ*, 331(7531), 1548-1551. doi: 10.1136/bmj.331.7531.1548
- Bowling, A. (2006). Lay perceptions of successful ageing: Findings from a national survey of middle aged and older adults in Britain. *European Journal of Ageing*, 3(3), 123-136. doi: 10.1007/s10433-006-0032-2

- 1
2
3 Bury, M. (1982). Chronic illness as biographical disruption. *Sociology of Health and Illness*,
4
5 4(2), 167-182. doi:10.1111/1467-9566.ep11339939
6
7
8
9 Cumming, E., & Henry, W. E. (1961). *Growing old: The process of disengagement*. New York:
10
11 Basic Books.
12
13
14 Ekerdt, D. J. (1986). The busy ethic: moral continuity between work and retirement. In H. R.
15
16 Moody (Ed.), *Aging: Concepts and controversies* (6th ed., pp. 416-424). Thousand Oaks,
17
18 CA: Sage.
19
20
21
22 Faircloth, C. A., Boylstein, C., Rittman, M., Young, M. E., & Gubrium, J. (2004). Sudden illness
23
24 and biographical flow in narratives of stroke recovery. *Sociology of Health and Illness*,
25
26 26(2), 242-261. doi:10.1111/j.1467-9566.2004.00388.x
27
28
29
30 Gattuso, S. (2003). Becoming a wise old woman: Resilience and wellness in later life. *Health*
31
32 *Sociology Review*, 12(2), 171-177. doi:10.5172/hesr.12.2.171
33
34
35
36 Gibson, S. J., & Helme, R. D. (2001). Age-related differences in pain perception and report.
37
38 *Clinics in Geriatric Medicine*, 17(3), 433-456. doi:10.1016/S0749-0690(05)70079-3
39
40
41
42 Gignac, M. A. M., Cott, C., & Badley, E. M. (2002). Adaptation to disability: Applying selective
43
44 optimization with compensation to the behaviors of older adults with osteoarthritis.
45
46 *Psychology and Aging*, 17(3), 520-524. doi:10.1037/0882-7974.17.3.520
47
48
49
50 Gignac, M. A. M., Davis, A. M., Hawker, G., Wright, J. G., Mahomed, N., Fortin, P. R., Badley,
51
52 E.M. (2006). "What do you expect? You're just getting older": A comparison of
53
54 perceived osteoarthritis-related and aging-related health experiences in middle- and
55
56 older-age adults. *Arthritis Care and Research*, 55(6), 905-912. doi: 10.1002/art.22338
57
58
59
60

- 1
2
3 Gilleard, C., & Higgs, P. (2011). Frailty, disability and old age: A re-appraisal. *Health, 15*(5),
4
5 475-490. doi:10.1177/1363459310383595
6
7
8
9 Grenier, A. (2007). Constructions of frailty in the English language, care practice and the lived
10
11 experience. *Ageing & Society, 27*(03), 425-445. doi:10.1017/S0144686X06005782
12
13
14 Havighurst, R. J., Neugarten, B. L., & Tobin, S. S. (1968). Disengagement and patterns of aging.
15
16 In B. L. Neugarten (Ed.), *Middle age and aging* (pp. 161-172). Chicago: University of
17
18 Chicago Press.
19
20
21
22 Helme, R. D., & Gibson, S. J. (2001). The epidemiology of pain in elderly people. *Clinics in*
23
24 *Geriatric Medicine, 17*(3), 417-431. doi:10.1016/S0749-0690(05)70078-1
25
26
27
28 Jagger, C., Matthews, R., Spiers, N., Brayne, C., Comas-Herra, A., Robinson, T., Croft, P.
29
30 (2006). *Compression or expansion of disability? Forecasting future disability levels*
31
32 *under changing patterns of diseases*. London: King's Fund. Retrieved from
33
34 <http://eprints.lse.ac.uk/4459/>
35
36
37
38 Janke, M. C., Son, J. S., & Payne, L. L. (2009). Self-regulation and adaptation of leisure
39
40 activities among adults with arthritis. *Activities, Adaptation & Aging, 33*(2), 65-80.
41
42 doi:10.1080/01924780902947058
43
44
45
46 Janke, M. C., Jones, J. J., Payne, L. L., & Son, J. S. (2011). Living with arthritis: Using self-
47
48 management of valued activities to promote health. *Qualitative Health Research, 22*(3),
49
50 360-372. doi:10.1177/1049732311421179
51
52
53
54
55
56
57
58
59
60

- 1
2
3 Jordan, K. P., Thomas, E., Peat, G., Wilkie, R., & Croft, P. (2008). Social risks for disabling pain
4 in older people: A prospective study of individual and area characteristics. *Pain, 137*(3),
5 652-661. doi:10.1016/j.pain.2008.02.030
6
7
8
9
10
11 Jordan, K. P., Sim, J., Moore, A., Bernard, M., & Richardson, J. (2012). Distinctiveness of long-
12 term pain that does not interfere with life: An observational cohort study. *European*
13 *Journal of Pain, 16*(8), 1185-1194. doi:10.1002/j.1532-2149.2012.00118.x
14
15
16
17
18
19 Katz, S. (2000). Busy bodies: Activity, aging, and the management of everyday life. *Journal of*
20 *Aging Studies, 14*(2), 135-152. doi: 10.1016/S0890-4065(00)80008-0
21
22
23
24
25 Lacey, R. J., Lewis, M., Jordan, K., Jinks, C., & Sim, J. (2005). Interrater reliability of scoring of
26 pain drawings in a self-report health survey. *Spine, 30*(16), E455-E458.
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
- Lemon, B. W., Bengtson, V. L., & Peterson, J. A. (1972). An exploration of the activity theory
of aging: Activity types and life satisfaction among in-movers to a retirement
community. *Journal of Gerontology, 27*(4), 511-523. doi:10.1093/geronj/27.4.511
- Liang, J., & Luo, B. (2012). Toward a discourse shift in social gerontology: From successful
aging to harmonious aging. *Journal of Aging Studies, 26*(3), 327-334.
doi:10.1016/j.jaging.2012.03.001
- Longino, C. F., & Kart, C. S. (1982). Explicating activity theory: A formal replication. *Journal*
of Gerontology, 37(6), 713-722. doi:10.1093/geronj/37.6.713

- 1
2
3 McCormick, A., Fleming, D., & Charlton, J. (1995). *Morbidity statistics from general practice.*
4
5 *4th national study 1991-1992. (No. 3 of Series MB5).* London: Her Majesty's Stationery
6
7 Office.
8
9
10
11 Moody, H. R. (2010). *Aging: Concepts and controversies* (6th ed.). Thousand Oaks, CA: Pine
12
13 Forge Press.
14
15
16
17 Ong, B. N., Jinks, C., & Morden, A. (2011). The hard work of self-management: Living with
18
19 chronic knee pain. *International Journal of Qualitative Studies on Health and Well-*
20
21 *Being, 6*(3), doi:10.3402/qhw.v6i3.7035
22
23
24
25 QSR International Pty Ltd. (2008). NVivo (Version 8) [Computer software]. Doncaster,
26
27 Australia: Author
28
29
30 Rowe, J. W., & Kahn, R. L. (1997). Successful aging. *The Gerontologist, 37*(4), 433-440.
31
32 doi:10.1093/geront/37.4.433
33
34
35
36 Sanders, C., Donovan, J., & Dieppe, P. (2002). The significance and consequences of having
37
38 painful and disabled joints in older age: Co-existing accounts of normal and disrupted
39
40 biographies. *Sociology of Health and Illness, 24*(2), 227-253. doi:10.1111/1467-
41
42 9566.00292
43
44
45
46 Schutzer, K. A., & Graves, B. S. (2004). Barriers and motivations to exercise in older adults.
47
48 *Preventive Medicine, 39*(5), 1056-1061. doi:10.1016/j.ypmed.2004.04.003
49
50
51
52 Shi, Y., Hooten, W. M., Roberts, R. O., & Warner, D. O. (2010). Modifiable risk factors for
53
54 incidence of pain in older adults. *Pain, 151*(2), 366-371. doi:10.1016/j.pain.2010.07.021
55
56
57
58
59
60

- 1
2
3 Sinding, C., & Wiernikowski, J. (2008). Disruption foreclosed: Older women's cancer narratives.
4
5 *Health, 12*(3), 389-411. doi:10.1177/1363459308090055
6
7
8
9 Sternbach, R. A. (1986). Survey of pain in the United States: The Nuprin pain report. *Clinical*
10
11 *Journal of Pain, 2*(1), 49-53. doi:10.1097/00002508-198602010-00008
12
13
14 Stevens-Ratchford, R., & Lookingbill, J. (2004). Living well with arthritis: A phenomenological
15
16 study of leisure occupations. *Activities, Adaptation and Aging, 28*(2), 35-55. doi:
17
18 10.1300/J016v28n02_03
19
20
21
22 Thomas, E., Peat, G., Harris, L., Wilkie, R., & Croft, P. R. (2004). The prevalence of pain and
23
24 pain interference in a general population of older adults: Cross-sectional findings from
25
26 the North Staffordshire Osteoarthritis Project (NorStOP). *Pain, 110*(1-2), 361-368.
27
28 doi:10.1016/j.pain.2004.04.017
29
30
31
32
33 Thomas, E., Wilkie, R., Peat, G., Hill, S., Dziedzic, K., & Croft, P. (2004). The North
34
35 Staffordshire Osteoarthritis Project – NorStOP: Prospective, 3-year study of the
36
37 epidemiology and management of clinical osteoarthritis in a general population of older
38
39 adults. *BMC Musculoskeletal Disorders, 5*(2), 11/04/13. doi:10.1186/1471-2474-5-2
40
41
42
43 Thomas, E., Mottram, S., Peat, G., Wilkie, R., & Croft, P. (2007). The effect of age on the onset
44
45 of pain interference in a general population of older adults: Prospective findings from the
46
47 North Staffordshire Osteoarthritis Project (NorStOP). *Pain, 129*(1-2), 21-27.
48
49 doi:10.1016/j.pain.2006.09.027
50
51
52
53
54 Urwin, M., Symmons, D., Allison, T., Brammah, T., Busby, H., Roxby, M., Williams, G., &
55
56 Simmons, A. (1998). Estimating the burden of musculoskeletal disorders in the
57
58
59
60

1
2
3 community: The comparative prevalence of symptoms at different anatomical sites, and
4 the relation to social deprivation. *Annals of the Rheumatic Diseases*, 57(11), 649-655.
5
6
7
8 doi:10.1136/ard.57.11.649
9

10
11 Von Korff, M., Ormel, J., Keefe, F.J., & Dworkin, S.F. (1992). Grading the severity of chronic
12
13 pain. *Pain*, 50(2), 133-49. doi:10.1016/0304-3959(92)90154-4
14
15

16
17 Waid, L., & Leslie, F. (2003). Cultural differences in possible selves during later life. *Journal of*
18
19 *Aging Studies*, 17(3), 251-268. doi: 10.1016/S0890-4065(03)00031-8
20
21

22
23 Ware, J.E., & Sherbourne, C.D. (1992). The MOS 36-item short-form health survey (SF-36). I.
24
25 Conceptual framework and item selection. *Medical Care*, 30(6), 473-483. Retrieved from
26
27 <http://www.ncbi.nlm.nih.gov/pubmed/1593914>
28
29

30
31 Wiles, J. L., Wild, K., Kerse, N., & Allen, R. E. S. (2012). Resilience from the point of view of
32
33 older people: 'There's still life beyond a funny knee'. *Social Science & Medicine*, 73(4),
34
35 416-424. doi:10.1016/j.socscimed.2011.11.005
36
37

38
39 Williams, G. (2000). Chronic illness as biographical disruption or biographical disruption as
40
41 chronic illness? Reflections on a core concept. *Sociology of Health and Illness*, 22(1),
42
43 40-67. doi:10.1111/1467-9566.00191
44
45

46
47 World Health Organization. (2003). *The burden of musculoskeletal conditions at the start of the*
48
49 *new millennium. Report of a WHO scientific group*. Geneva: World Health Organization.
50
51 Retrieved from http://whqlibdoc.who.int/trs/WHO_TRS_919.pdf
52
53
54
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Table 1. Interview sample distribution in terms of age and pain status

Age group	No pain		Pain no interference		Pain with interference		Total
	Male	Female	Male	Female	Male	Female	
Age 56–64	3	5	3	7	6	3	27
Age 65–70	6	4	6	2	2	1	21
Age 80+	1	1	1	3	3	3	12
Total	10	10	10	12	11	7	60