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What do older adults want from spine care?

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ABSTRACT

Introduction: Older adults comprise a large portion of back pain (BP) sufferers but are under-represented in the literature. Patients over age 65 present with different clinical characteristics and psychosocial needs than younger patients. Therefore, recommended patient-centered outcomes for BP may not be relevant to older patients.
Research question: What treatment outcomes are most important to adults over 65 years of age?
Materials and methods: We queried older adults seeking treatment for BP using qualitative methods. Participants were asked about their goals and expectations of treatment in an audio-taped interview. Audiotapes were transcribed, coded and analyzed by the investigators. Using thematic analysis, main themes and constructs were extracted and interpreted by the investigators. From there we were able to generate hypotheses about what older patients want from spine treatment.
Results: For all participants, age played a role in their treatment goals as a moderator or motivator. They were most concerned with returning to usual activities and preventing further physical limitations to maintain independence. Goals that reflect important outcomes such as increasing walking tolerance and improving balance were of particular importance. Confidence in the provider acted as a facilitator of goals.
Discussion and conclusion: Unlike their younger cohorts, they did not emphasize work-related outcomes and pain relief. These findings can be tested in future quantitative studies and will help to develop protocols for outcomes assessment in older adults. This study is a first step towards understanding and improving the quality of care for older patients with back pain.

1. Introduction

Back pain (BP) is prevalent in older adults and the likelihood of developing persistent pain increases with age (Dawson et al., 2004; Jacobs et al., 2006; Wong et al., 2017; Docking et al., 2011). In the United States (US), it is estimated that moderate to severe protracted pain afflicts 45–80% of individuals aged 65 years and over (AGS Panel on Persistent Pain in Older Persons, 2002). Back pain is the most costly condition among beneficiaries of Medicare in terms of total adjusted costs and it is steadily on the rise as the population ages (Pasquale et al., 2014). This is a global issue. For example, in a recent study, Swiss individuals suffering from LBP had significantly more problems than LBP non-sufferers on all dimensions of health-related quality of life (HRQoL) (Luthy et al., 2015). Additionally, LBP appeared to be a more permanent condition in older groups (Luthy et al., 2015).

BP in the elderly is associated with high levels of functional limitations, psychological and cognitive difficulties and social restrictions, hence globally impaired HRQoL (Wong et al., 2017; Cedraschi et al., 2016). This is particularly true for older patients with radiating pain, which is common among older adults (Ludwig et al., 2018; Manogharan et al., 2017). Because of the high incidence of comorbidities in the elderly, there is an increased risk of adverse medication interactions (Galicia-Castillo and McElhaney, 2003). The impact that BP has in older individuals poses a threat to longevity (Macfarlane et al., 2012a; Scheele et al., 2013). The incidence of BP in the population is projected to increase even more in coming years due to a rapidly aging population (Wong et al., 2017; Prince et al., 2015). The financial burden and human suffering caused by back pain is likely to rise accordingly (Prince et al.,

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2015; Friedly et al., 2007; Rundell et al., 2015).

Despite this, our knowledge about treatment of older adults with back pain is limited (Wong et al., 2017; Carvalho do Nascimento et al., 2019). A 2012 systematic review identified only three studies involving older adults undergoing physical therapy and none were strong enough to draw firm conclusions (Database of Abstracts of Reviews of Effects (DARE), 2012). One study found that older patients were less enthusiastic about participating in physical therapy and were less optimistic that it would be helpful than younger patients (Macfarlane et al., 2012b). However, in general, clinical trials in older groups are limited and have methodological shortcomings such as heterogeneous samples and low participation rates (Rundell et al., 2015; Reid et al., 2015; Kuss et al., 2015).

In the absence of strong evidence, clinical practice guidelines for older adults recommend the same protocols suggested for younger patients. Exercise programs composed of strengthening, flexibility and endurance activities are encouraged (Abdulla et al., 2013). There is some data to suggest that exercise may be associated with clinically important improvements in disability in older adults with BP (Rundell et al., 2015; Kuss et al., 2015). However, it is not known how any of the recommended treatment regimens affect other outcomes that may matter most to older adults. More high-quality research is needed to understand what is important to older patients in order to develop relevant outcome measures and form better-suited guidelines for treatment in this population (Jones et al., 2014; van Middelkoop et al., 2011; Hicks et al., 2012).

There is reason to believe that older individuals have different treatment goals than their younger counterparts. For example, they may care more about social isolation and balance issues than do younger adults, and return to work may be less relevant (Akpan et al., 2018; Makris et al., 2017; Teh et al., 2009; Cherry et al., 2013; Fried et al., 2008; Sofaer-Bennett et al., 2007). In a recent global consensus statement, clinicians noted that specific functional outcomes, like playing with grandchildren, were most important for older adults with chronic pain (Wong et al., 2019). However, this consensus was based on the observations of clinicians and not the patients themselves. Social isolation was a frequently cited concern in a qualitative study of older patients with activity-limiting back pain but is not commonly assessed in clinical practice (Makris et al., 2017; Simon and Hicks, 2018). Older patients may also place value on different aspects of care than younger patients. It has been asserted that psychological and process-related factors such as provider interaction and shared goals may play a greater role in determining outcomes like satisfaction with care in older adults than in younger patients (Maiers et al., 2014; Marie and Arnstein, 2016).

A clear understanding of the older patient's needs, expectations and desired treatment outcomes is a prerequisite for successful treatment planning (Makris et al., 2014). Current treatment recommendations stress the attainment of patient–centered outcomes that have been established to be meaningful for the general population. Pain, perceived disability, quality of life, satisfaction and ability to work have been identified as universally relevant (Deyo et al., 1998; Pincus et al., 2008; Chiarotto et al., 2015). In the absence of understanding for the relevance of these outcomes to older patients, meaningful goals for this group will be difficult to achieve.

Reid et al. (2015), stresses the need to identify the best ways to measure outcomes in this population in order to advance research in this area (Reid et al., 2015). The International Consortium for Health Outcomes Measurement (ICHOM) has established a core set of health outcome measures across conditions and populations for older adults (Akpan et al., 2018). Using a consensus-driven modified Delphi technique, they identified 13 domains including overall survival, frailty, place of death, polypharmacy, falls, participation in decision making, time spent in the hospital, loneliness and isolation, activities of daily living, pain, mood and emotional health, autonomy and control and career burden. Some of these may be relevant for older individuals seeking care for BP as well.

Other outcomes not typically considered in BP outcome studies, such as maintaining balance might also be considered important to older adults. In two studies, it was found that pain was associated with increased fall risk in the elderly (Stubbs et al., 2014; Kimachi et al., 2019).

It is not possible to develop targeted treatment protocols for older patients with BP without understanding the patients' treatment goals. This study takes the first step in addressing this gap in the literature by seeking to identify treatment outcomes that are important to older patients with BP. Identifying outcomes that accurately reflect the values of these patient populations will not only guide researchers in the selection of appropriate outcomes for future studies, but also can help clinicians to develop patient-centered treatment approaches for older patients with BP across cultures.

1.1. Research question

This is an exploratory hypothesis generating study that specifically aims to identify outcomes most valued by adults aged 65 and older seeking treatment for persistent BP. Current methods of outcome assessment test broad constructs that may differ from those considered most important among older adults. This study queries participants on the most important treatment outcomes for them.

2. Methods

2.1. Qualitative framework and approach

Our study's goal, to identify what treatment outcomes are important to older adults with back pain, is focused, practical and action oriented. To meet this goal, our research framework is pragmatic, which focuses on action and change (Patton, 2015; Goldkuhl, 2012). This framework fits well with our study since both the approach and the research aim are problem-centered and real-life practice oriented (Creswell and Poth, 2017). Consistent with this framework, our approach to answering our research question is qualitative descriptive, which is based in naturalistic inquiry (Lincoln and Guba, 1985). The goal of this approach is to describe data at a manifest level, with interpretation in this study aimed at identifying common themes and grouping ideas to develop pragmatic and relevant patient centered outcomes for this older population with back pain (Sandelowski, 2010).

In contrast to quantitative research that is hypotheses confirming and relies on a specific number of subjects to attain sufficient statistical power, qualitative research is concerned with generating hypotheses to answer broad questions that warrant exploration. Therefore, it diverges from quantitative research in its methods and analyses. Understanding what older individuals hope to achieve in treatment for spine pain is a topic that we know little about and therefore, lends itself to an open-ended inquisition where the participant generates topics and themes that they find are relevant to the general question.

2.2. Study design, patients, and setting

Our qualitative study design included semi-structured, individual interviews. We sampled older adults with persistent back pain who were presenting to an outpatient clinic for conservative treatment or to an orthopedic surgeon prior to surgery at a large metropolitan hospital in New York City. The authors took care to conform to the ethical standards promoted in the Declaration of Helsinki. The study protocol was approved by NYU Langone Health's IRB and all participants gave verbal informed consent.

2.2.1. Inclusion criteria

To be included in the study participants had to be $\geq$ 65 years of age and report persistent BP. Persistent pain is defined as patient-reported

frequent or constant pain lasting longer than 3 months (Wong et al., 2017; Kennedy et al., 2014). Surgical patients had to exhibit radiculopathy or neurogenic claudication as an indicator for surgery. Conservative care patients had to be referred to physical therapy for a BP diagnosis with or without radiculopathy or neurogenic claudication.

2.2.2. Exclusion criteria

Patients who could not communicate in English.

2.2.3. Study recruitment

Study recruitment took place in two facilities, associated with New York University Langone Health: a surgical clinic and an outpatient physical therapy facility. Surgical patients were identified by the participating surgeon's office and referred to the research associate at their pre-surgical office visit. Conservative care patients were identified by the outpatient clinic office and recruited at their first physical therapy appointment by the research associate. Patients who met our eligibility criteria were contacted by telephone by the research associate. All participants were informed of the goals and design of the study and assured of confidentiality before formally agreeing to participate. Verbal informed consent for participation and permission to audio record the interviews were obtained over the telephone. Patients were then scheduled for a telephone or WebEx interview at their convenience. All patients were provided with contact information for the Research Associate and Principal Investigator.

We used purposeful sampling which allowed us to sample based on predetermined characteristics that may be associated with outcome in this population. This blocking procedure ensured we recruited a sufficient sample in all categories. It has been reported that back pain patients aged ≥75 years reported more disabilities, more co-morbidity and, more often, low bone quality than patients aged >55–74 years (Scheele et al., 2013). This indicates that age is an appropriate category on which to block. Previous studies on spine pain in the general population have found differences in outcome based on gender and work status. Therefore, we blocked on those characteristics as well. Finally, the type of treatment may affect patient outcome goals and therefore, we blocked on type of treatment (conservative or surgical). We planned to sample at least five patients for each block (five females, five males, five under 75 years old, five over 75 years old, 5 working, 5 not working, five in conservative care and 5 having surgical treatment). The final sample size for the qualitative study was guided by the concept of saturation, which is the point at which no new information was being obtained by recruiting more participants. The depth and complexity of the data obtained determines how quickly saturation is achieved.

Blocking categories overlapped for each participant. For example, participant one may be female, 78 years old, not working, and receiving conservative care. Therefore, we expected it would not be necessary to interview five patients in all blocks in order to reach saturation.

2.3. Data collection

Interviews were conducted by the research associate, who was trained by one of the investigators. The interviews lasted from 20 to 45 min and were audio recorded and transcribed verbatim by the research associate. Data were rendered anonymous after data collection to ensure confidentiality.

Patients were asked about their goals and expectations for treatment and the treatment outcomes that are the most important to them. The interview guide included the following main questions, along with probes to expand and clarify answers.

1. What was it that led to you seeking treatment at this time?
2. What do you expect your course of treatment will be like?
3. What do you hope to gain from treatment (ideal goals, most important goals)?
4. How confident are you that you will achieve your … (ideal goals; most important goals)? Why?

The questions were developed to elicit patients' lines of reasoning in formulating their answers. Interviews were structured around the above topic areas rather than around a specific list of questions, and data collection took a flexible and iterative approach so that additional themes could be formulated within and between interviews. Thus, data collection and analysis stood in a reciprocal relationship until a point of theoretical saturation was reached, that is, no new insights were forthcoming (Braun and Clarke, 2012). A 2-step verification process was used for data collection. The first step was interrespondent verification procedures, whereby respondents are asked about critical issues or anomalies raised by earlier patients. The second step was another on-site verification process, which consists of tagged responses and probes to attain a more embedded sense of meaning and to ensure clarification, illustration, and expansion of ideas (Rothe, 2000).

2.4. Data analysis

We employed Braun and Clarke's approach to thematic analysis (TA) to draw out patterns in patients' responses (Braun and Clarke, 2006). This analytic approach is highly suitable to a qualitative descriptive research approach (Willis et al., 2016). The analysis of this data consisted of interpreting the subjective meanings that the participants are expressing within the context of the question and summarizing them by categorizing the participants expressed meanings into themes. The results are presented in the words of the participants using direct quotes that generate the conclusions of the study.

After ensuring the accuracy of the transcripts against the audio recordings, the analysis was guided by the following steps, although the actual process was recursive, rather than linear. Two investigators began coding across the data set after familiarizing themselves with the data. Given the goal of presenting descriptive accounts of patients' expectations and desired outcomes of treatment, they focus on semantic codes rather than latent ones. Superordinate and sub-themes were developed from the codes, thus identifying patterns across the whole dataset. These themes were refined, named, and synthesized through discussion between the two investigators, and with the rest of the research team. This involved checking themes against each other and back to the dataset, and insured that themes are internally consistent, coherent and distinctive (Braun and Clarke, 2006).

3. Results

Data collection ran from June 2022 to February 2023. Sixteen patients fit the inclusion criteria during that period, and fourteen were approached to participate by the RA. Of these, three were not able to be reached and two agreed to participate but cancelled before their scheduled interviews. A total of nine participants completed the study interview. One of these was a patient awaiting surgery and eight were scheduled to begin or had just begun physical therapy. Recruitment ended when saturation was achieved. Participants ranged in age from 66 to 76. Four participants were female and five were male. Three were still working.

Regarding the question "what do older patients want from spine care," four themes emerged. They were: getting back to life, prevention of BP worsening, relief of uncomfortable symptoms, and fitness and strength. Additional themes that arose during the interviews were age/aging and confidence in treatment.

3.1. Major themes

Two major themes were mentioned by all or almost all of the participants, getting back to life and prevention of BP worsening.

3.1.1. Getting back to life

This theme included subthemes of meaningful activities, activities of daily living (ADLs) and feeling like their "normal" selves. For this group meaningful activities often included walking as exercise, or to facilitate tasks. A 70-year-old female PT patient remarked "I used to just walk all over the place … What I'm hoping to gain is that the discomfort I have when I walk goes away and that I can sort of get my life back." Some patients included participation in social or leisure activities in this theme. For instance, a 68-year-old female PT patient emphatically said "I don't want to NOT do something with someone or go somewhere because my back is so painful or its hard to get around … And I notice now that pain stops me from accepting things to do when people ask me." Another 76-year-old male PT patient spoke enthusiastically about an outdoor recreational activity that has been an important part of his life, as well as his concerns about having to limit this activity recently due to his pain and associated neuropathic symptoms. Of this group, only 3 participants were working and only 1 was working full time. Among the working participants, only a couple of participants identified being able to work at their job as a meaningful activity. A 66-year-old male PT patient required learning how to lift properly for an important volunteering activity and a 67-year-old male PT patient needed to stand to do part-time kitchen work.

ADLs mentioned included household chores and, for many, shopping. Here the importance of independence was emphasized by almost all participants. A 68-year-old female PT patient expressed, "I realized that I won't have somebody to help me when I'm older … I don't have children … I want to be independent the next 20 years." Another 70-year-old female PT patient stated "I live alone, and I wanted to do things for myself, I don't want to be dependent on people."

A number of participants said their goal was to feel like their "normal" self which involved returning to premorbid function. They spoke about being very active and fit and feeling very capable. They were acutely aware that the pain was slowing them down.

A 73-year-old male PT patient detailed, "You know, I used to be very physically active … I came from a strong physical culture … I played tennis, I jogged a lot, I jumped rope, and you know, just do push-ups and stuff like that … I had to stop all that." A 66-year-old male PT patient remarked, "I think of myself as highly active and in good shape, and I want to maintain that same rigor to that. And recognizing I have to be more thoughtful about it than I have in the past."

3.1.2. Prevention of BP worsening

Over half of the participants spoke about getting treatment to stop the progression or recurrence of BP. These participants had a fear of getting worse and wished to avoid surgery or needing medications that were unsustainable or had unpleasant side effects such as pain with regular cortisone injections due to scarring and waning effects of regular cortisone injections.

Some of these fears came from hearing the experiences of others. For example, one patient recounted "my mother had major spine surgery several times … She had rods and fusion and all sorts of surgery … the first surgery, that was like 3 or 4 months that she was like basically housebound."

Participants who expressed fear of BP progression were focused on future outcomes, rather than their current condition as distinct from the theme of getting back to meaningful activities after treatment. However, there was a clear link between the 2 themes in that the fear of worsening BP made it more urgent that treatment made it possible for them to return to normal activities.

This concern was expressed in various ways:" It's a little bit of a worry, a concern, that I may be doing, that if I do nothing, moving in the direction of permanent situation that cannot be relieved and may progressively get worse" (76-year-old male PT patient) or "So for the last year, it was kind of manageable and I didn't really feel like I could make the time to go to PT twice a week, but then in the last 6 months, its been really painful. So I decided I'd better do it now before it gets harder to do" (68-year-old female PT patient) or "I don't want this to keep progressing and then I get older and then I have complications and then we have OTHER problems to deal with it. The Dr said as you get older its harder, and you also have starting arthritis back there. So we got to get it before it gets real bad. Now its good. It's a better fix now. Not that its good. It's a better fix NOW. Later might not be such a better fix, because we might have other factors that are contributory to it. And then you're going to, maybe your recovery time is longer, maybe you won't recover as well." (66-year-old female surgical patient)

3.2. Latent theme

Every participant that participated in this study brought up their age during the interview. In this study, age acted as a modifier and a motivator with respect to treatment goals. In cases where age was a modifier, participants took their age into account when discussing what they hoped to achieve in treatment like this patient: "I'd like to be able to perform better athletically. But with age, one does not perform better, one generally performs worse. That may be part of this, and it may not be" (76 year-old male PT patient). Likewise, this participant said "You know, I used to be very physically active. You know, you get older, you slow down."

For a few, pain was a factor in their decision to retire. A 70-year-old female PT patient who had recently retired recounted, "the buses really aren't convenient so I would just walk to work every day in all types of weather. And I left my job the end of April for a bunch of reasons … and this discomfort came into the picture." Something they may not have done when they were younger.

Age as a motivator was another subtheme that emerged in this group. In order to achieve their primary goals, some participants felt they had to work harder because of age, or needed to do it now before they got older. For example, one participant remarked "I, think kind of behind this, long range is, at 66, you know, I don't want to age any more prematurely than any of us want to do (laughing). (66-year-old male PT patient)" For one participant, being retired permitted them the time to devote to rehabilitation. "… I'm now retired more or less, so I can really program … doing the exercises into my day, which was a little hard before when I was working full time. And I kind of have new resolve at age 66, not to get myself in trouble again" (66 year-old male PT patient).

Others were motivated by the impact of their back pain on their sense of identity as they age. They said things such as "I guess I'm focused on … hopes for longevity, that I keep this to the extent possible out of my life going on into the future as my body ages. You know, that's a difference than any time in the last 20 years that I've been getting PT. I'm kind of bringing that in too. Facing myself as well as having an older body than I used to it" and "when it's particularly bad, I walk with a noticeable limp then people say, what's wrong, you're walking with a limp. And that doesn't feel good." (66-year-old male PT patient). For many participants, their identity was tied to being in good shape despite their age. One such participant was almost in denial about aging. "I'm an active person, I'm 70, people don't believe my age … but everybody's treating me with kid gloves and I guess I resent that … if that just means I'm getting old, I refuse to accept that" (70-year-old female PT patient).

3.3. Minor themes

Two themes were mentioned by at least one participant, relieving uncomfortable symptoms and increasing fitness and strength. However, for all but one participant, neither of these goals were primary but instead, were in service to the major themes.

3.3.1. Relieving uncomfortable symptoms

Participants felt that improving fatigue, balance issues, neuropathy and pain would be instrumental in returning to "normal" and preventing worsening or recurrence of BP. One 66-year-old female patient included in her expectations of successful treatment that "I'm not constantly

getting the tingling in my foot and toes." The participant who mentioned eliminating pain as a primary goal was a 73-year-old male. He stated that he would know he was making progress when, "I can go about my job, my daily life, my routine, pain-free." The others who mentioned pain wanted to be able to manage it. "I'm looking at strengthening my back and try to get back to being able to function normally … And build up stamina." Another participant explained that she'll know she's making progress when it takes less time to get ready in the morning.

3.3.2. Increasing fitness

The desire to improve or maintain fitness and strength included posture and balance. A 73-year-old male PT patient stated his hopes for treatment included, "exercises for my posture. I don't really stand straight like I used to … People comment, like, why are you hunched over." A 76-year-old male PT patient stated, "I'm having issues with balance … I would hope to improve my balance as well."

3.4. Confidence in the health care provider

All but one participant expressed very high confidence in their health care provider and the remaining participant expressed moderate confidence. This assessment was based on several things. One main subtheme was experience, either theirs or others', with past or current PT. One patient stated, "I had PT in the past … I was thankful, it was so helpful. So I have faith in PT." Another patient, who was the primary caretaker for her elderly mother, described observing her mother's courses of PT as "wonderful! It was really really good for her. We solved a lot of issues doing PT, so I'm a real believer." The reputation of the hospital or having worked in the health field also contributed to their evaluation, with one patient stating, "the hospitals a good hospital. It's a good organization." Finally, several participants cited their positive attitude as the reason they were confident about their treatment. One 73-year-old male stated that "keeping a positive attitude" was key to his confidence and progress. The participant who had only moderate confidence in their treatment stated "I think I'll get minor improvement in my neck through PT, but I think the sensations in my neck emanating in my arms will always be there … it could avoid surgery."

4. Discussion

Previous studies suggest that older patients with back pain may have different goals for treatment than their younger counterparts (Teh et al., 2009; Cherry et al., 2013; Fried et al., 2008; Sofaer-Bennett et al., 2007). We found this to be partly true. Our participants shared treatment goal domains with both younger and other older cohorts, but also differed from them on a number of dimensions. For example, five outcomes that are commonly recommended for use in the general population of individuals with spine pain are pain, perceived disability, quality of life, satisfaction with care and ability to work (Deyo et al., 1998). Of these, three were emphasized as important in our patient sample; perceived disability, quality of life and satisfaction with care. Pain and discomfort were mentioned but not stressed and ability to work outside the home, even less so. Reid et al. identified a core set of 13 outcomes specific to older individual across conditions (Reid et al., 2015). We found that five of these including frailty, falls, activities of daily living, autonomy and control were relevant to our study participants. In our sample, the desire for independence was the underlying reason these outcomes were important. Taken together, our findings justify the need to understand key goals that are specific to older people with spine pain.

4.1. Getting back to life and prevention of worsening

Although our cohort shared some important outcomes with younger patients, the meaning of these outcomes may be different because of age-related factors. We identified 2 main themes from our interviews; getting back to life and prevention of worsening. Age was a universal topic embedded in both themes, and was mentioned by every patient. In many cases age served as a goal modifier and as a motivator for reaching meaningful goals in treatment. For example, some participants set goals that were realistic in light of their age, indicating that their goals may have been more aggressive when they were younger. When discussing function for example, one participant indicated that their objective to perform better athletically may not be realistic as age usually suggests the opposite. Goals, although still focused on athletic performance, needed to be modified. For others, the awareness of age acted as a motivator for reaching goals. The focus for some participants was to maintain and prolong function with treatment. The idea that if they decline now it will be harder to regain function as they age was incentive to work hard in therapy. Regarding quality of life, maintaining independence was a motivator for some in this group. For a number of participants, depending on others was not an option and some were simply loath to do so. This overlapped with their sense of identity. Seeing themselves as productive and capable was part of their identity and injury and pain was seen as a threat to this. Regaining function was all the more urgent because they were feeling themselves decline. Some attributed this solely to injury and pain, but others had more sober assessments of aging. Injury in this group seemed to have a great impact on how they felt others saw them and how they saw themselves. These findings suggest that developing realistic goals focused on valued activities and independence should be a priority for treatment.

4.2. Relieving symptoms and increasing fitness

Relieving symptoms and increasing fitness were secondary themes in this group. Older adults present to health care providers differently than younger adults (Manogharan et al., 2017; Hicks et al., 2009). For example, leg pain predominates over back pain more frequently in the older population. In our sample approximately half of the participants emphasized walking for exercise or necessity to maintain independence. It is also easily available, inexpensive and can encourage social interaction when done with others in a group that is sometimes isolated. This valued activity is affected by leg pain. However, here the reality of aging also weaved its way through the participant's responses. Though pain and discomfort were important to most, they were also acceptable to many as a normal aspect of aging. It is also possible that because of the life experiences of older patients, they have become better at coping with pain and physical limitations in general. Regardless, it seems reasonable to incorporate general walking programs into treatment for older patients.

Other outcomes not typically considered in BP outcome studies, such as maintaining balance and posture were mentioned by some of our patients. In one study, it was found that pain was associated with increased fall risk in the elderly. Falls in older patients can lead to serious injury with long recovery periods (Stubbs et al., 2014; Kimachi et al., 2019). Sometimes older patients are required to enter rehabilitation facilities which, to them, may be anathema. In addition, impaired posture can affect the way others see older people. Walking with assistive devices or with a limp can signal frailty to others and to the patients themselves. This is something older people in our cohort wished to avoid. Rehabilitation specialists may consider evaluating posture and balance in their older patients as part of their protocol.

4.3. Confidence in provider

A previous study found that older patients were less enthusiastic about participating in physical therapy and were less optimistic that it would be helpful than younger patients (Macfarlane et al., 2012a). We found the opposite in our study. Older patients may place value on different aspects of care such as their relationship with the health care provider, than younger patients. Based on the results of their qualitative study, Maiers et al. assert that psychological and process-related factors such as provider interaction may play a greater role in determining

outcomes like satisfaction with care in older adults than in younger patients (Maiers et al., 2014). In our study, all patients expressed confidence in the provider. Outcome expectations were largely positive. In our study, provider satisfaction may account for participant's optimism and enthusiasm for treatment. Forming a strong therapeutic alliance seems to be of particular importance for older patients.

5. Clinical relevance

The findings of our study have clear clinical relevance. Our results support developing treatment protocols that foster independence and emphasize activity goals that are meaningful to the patient. Walking programs and a focus on posture and balance seem like good options for many older patients. Certainly, older patients are not a homogeneous group. There are many people in their 60's and 70's who pursue more strenuous activities. In developing functional goals, the provider should consider how the patient views themselves vis a vis their age and adjust the expectations accordingly. Many in our cohort express fears of aging and the impact it would have on function and self-image. This coupled with the importance of the patient-provider relationship that seems central in older patients argues for a combined approach to care. It seems likely that many older patients could benefit from psychological approaches that address fear of reinjury, pain and aging. This can be done through cognitive-behavior therapy approaches practiced by pain psychologists or though providers trained in psychologically informed practice (PiP). PiP integrates a biomedical traditional approach with cognitive-behavioral approaches that can be applied by non-mental health professionals (Main and George, 2011). An important aspect of PiP is a patient-centered approach to communication, which is associated with increased patient satisfaction (Main et al., 2023).

6. Strengths and limitations

The main strength of this study is that it is the first of its kind to explore the specific needs and desires of older patients with BP who are undergoing treatment. The clinical relevance is clear. In light of the aging population and their desire to stay active and healthy, these findings are important and can inform treatment in this cohort. Effective treatment for older adults has implications for health care utilization and work retention. Both can reduce the burden of cost and suffering for this group and society at large.

Although there was an attempt to recruit both surgical and conservative care patients for the study, we were only able to enroll one surgical patient. This could lead to a lack of external validity since surgical patients may have different treatment goals than patients undergoing PT. For one thing, they may be more impaired initially and surgery is often a treatment of last resort. Also, if they are having surgery for radiculopathy, relief of symptoms may be a primary goal of theirs. We compared the responses of the surgical participant to those of the other participants and did not observe any meaningful differences. Furthermore, three of the PT patients also had radicular symptoms but did not want surgery. However, we can't know the generalizability of our findings to surgical patients without additional study.

The age range of our participants was between 66 and 76 years of age. This limits the generalizability of our findings to older patients. It seems possible that patients in their 80s and 90s would be less active than our cohort or even more concerned with safety issues. This older group may be less likely to present to outpatient clinic for PT services and may opt for home care instead making them more difficult to approach. However, this is an empirical question that should be investigated in future studies.

Another threat to the generalizability of our findings is the setting and population. The study took place in a large urban hospital and participants were all urban dwellers. The lifestyles, personal preferences and demographics of urban vs. suburban and exurban dwellers may be different. For instance, it is likely that urban dwellers rely on walking and public transit to navigate their neighborhood more than suburban dwellers who often rely on private vehicles. For the latter, driving may be more important than being able to walk long distances for running errands and socializing. The differences between these cohorts may impact patient's goals for treatment. This supposition requires further research.

7. Future studies

Future studies should include participants from other cultures where aging and retirement may have different cultural and social connotations. This is an empirical question that deserves exploration. Differences in desired outcomes for urban vs. suburban dwellers should be investigated as well. It would also be instructive to include patients who are undergoing a variety of interventions, including surgery and complementary approaches to see how their goals for treatment compare to those of our participants. Furthermore, an attempt should be made to include patients in the higher end of the older adults range.

8. Summary and conclusions

Our knowledge of important treatment outcomes in the older population is limited. The purpose of this qualitative study was to identify outcomes most valued by adults aged 65 and older seeking treatment for persistent back pain. Though there was some overlap in valued outcomes, we found several areas where our participants diverged from the younger populations. The reality of aging and what it means for their physical ability was forefront in their minds. Our cohort was most concerned with "getting back to life" which meant premorbid function and preventing their pain from worsening. These goals were driven by the need to maintain independence and threats to self-identity. Based on these findings we conclude that treatment for older patients with back pain should prioritize independence in daily and valued activities. For many this means a focus on walking, balance and posture. Confidence in the provider also drove positive expectations in this cohort. A strong therapeutic alliance may also allow for the health care provider to address fears associated with aging that we found were amplified by injury and pain. These findings underscore the importance of understanding the needs of our aging population when planning treatment protocols for older patients with back pain. The themes extracted from this study can form the basis of hypotheses to be tested in larger, quantitative studies.

Authorship

All authors have made substantial contributions to all of the following: (1) the conception and design of the study, or acquisition of data, or analysis and interpretation of data, (2) drafting the article or revising it critically for important intellectual content, (3) final approval of the version to be submitted.

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Declaration of competing interest

The authors have no competing interests to declare.

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