Age Stereotypes and Their Potential Relationship to Frailty Risk in Older Adults: A Literature Review to Improve Understandings and Orient a Nurse Practitioner Response

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ABSTRACT

The older adult population is growing in Canada. This is accompanied by increasing rates of frailty, making it a healthcare priority. A nurse practitioner (NP) approach emphasizing holism, health promotion and illness/injury prevention may be particularly well-positioned to lead this challenge. NP practice experience identified older adult reluctance to engage in evidence-based frailty mitigating recommendations because of beliefs that they are unlikely to be of benefit or are too risky and generated the questions: Where might these beliefs come from? How powerful is their impact on the progression and outcomes of frailty? And how might frailty be mitigated by addressing them? Frailty concepts and best practice guidelines have yet to explore systemic factors, such as age stereotypes, as potential reversible risk factors and sources of health inequity for older adults. This literature review aims to explore (a) the existing literature on the relationship between age stereotypes and frailty, (b) the underlying assumptions and objectives of this knowledge base, (c) the gaps and limitations for informing NP knowledge and practice development, and (d) the implications for NP practice.

Methodology and methods: This literature review was designed to inform a future interpretive description study to develop understanding and inform disciplinary action.

Results: Studies exploring the potential relationship between age stereotypes and frailty, wholly and directly, are few and inconsistent in their findings. There is significantly more research suggestive of a relationship between age stereotypes and singular frailty factors, across multiple domains, and associated outcomes.

Discussion: The literature exploring the relationship between age stereotypes and frailty appears to justify concern and warrant further inquiry and action. To orient and inform future knowledge development for NPs, the existing knowledge is examined and critiqued to reveal its underpinnings and gaps for disciplinary knowledge development. Until such knowledge is available, NPs can lead an initiative to embrace the opportunities inherent in existing knowledge and create practice change through critical self-reflection, a shift in approach with older adult clients, disruption of social systems, and re-consideration of engagement with the concept of frailty.

Conclusion: NPs will increasingly provide healthcare for older adults. Experience in NP practice generated the concern about a potential relationship between frailty and age stereotypes, which appears supported by the existing, but limited, literature base. There remains an intriguing space for future NP research and an emerging awareness that is a call to action to prevent harm and health inequity for older adults.

Background

Healthcare of older adults is regarded as a healthcare priority.[1-2] The Canadian population of older adults is increasing[3] and accompanied by escalating frailty rates.[1] According to the Canadian Frailty Network (2021), our healthcare system is "organized to manage illness based on single body systems and diseases, not the complex multisystems of those living with frailty."[1] Nurse Practitioners [NP] are well-positioned to address this systemic shortcoming because it is core to NP practice to approach the healthcare encounter with a view to holism, complexity, and contextualization.[4] NPs are often the most appropriate healthcare providers for complex patients[5] and serve frail older adults in primary care and specialty services.[6] In personal NP practice, a pattern is noted in which older adults with frailty often resist or restrict health-promoting efforts, expressing beliefs that their health conditions are due to age, that improvements are doubtful, or that recovery activities are risky. This response stymies NP efforts to implement best practice recommendations and generates the following questions: Where might these beliefs come from? How powerful is their impact on the progression and outcomes of frailty? And how might frailty be mitigated by addressing them?

Age stereotypes are emerging in the literature as potentially related to frailty[7] and health inequity for older adults; yet, frailty definitions and practice tools lack consideration of systemic social risk factors.[8] Age stereotypes, for this

review, are conceived of as one process of ageism in which negative stereotypes of old age are internalized over a lifetime and embodied once they become self-relevant to a person[9] and operationalized as self-perceptions of aging. Frailty, for this review, is conceptualized as "a dynamic state affecting an individual who experiences losses in one or more domains of human functioning [physical, psychological, and social,[10] cognitive,[11] and environmental[12-13] with an eye toward systemic factors]... caused by the influence of a range of variables and which increases the risk of adverse outcomes."[10] To explore the current state of knowledge, this literature review aims to (a) present the results of the search of existing literature on the relationship between age stereotypes and frailty, (b) discuss the underlying assumptions and objectives of this knowledge base, (c) identify the gaps and limitations of this knowledge for informing nursing knowledge and practice development, and (d) suggest the implications for NP practice.

Methodology and Methods

This literature review was designed to inform the need for an interpretive description study on the topic. As such, it is logical, "formal", "critical", "thoughtful,"[14] and is intentionally not systematic or comprehensive.[14] In consultation with an academic librarian, five databases (CINAHL, MedLine with full text, AgeLine, Social Science Abstracts, and PsycInfo) were searched using the keywords (age OR aging OR ageis*) AND (stereotyp*) AND (internaliz* OR embodi*) AND (concept* OR theor*). Limiters included English language and publication date of 1969-present, with 1969 selected as it was when Butler's[15] seminal work on the concept of ageism was published. Titles and abstracts were reviewed by a single reviewer. Articles were included if they were focused on the nature, process, or extent of age stereotype internalization or embodiment; impact on frailty; and community setting. Literature was excluded if it focused on (a) other types of ageism (such as stereotype threat or age discrimination), (b) particular conditions or disease (such as cancer), (c) acute or residential care settings, or (d) operationalizations or interventions. The reference lists of retrieved literature were also searched for sources of relevant literature.

Inclusion of the search word (frail*) was trialed but resulted in few-to-no results and so was removed. Thus, the review of the literature was logically extended to include a targeted search of literature from the field of frailty study; specifically, to explore what older adults living with frailty identify as influences on their experiences of health, including ageism. A total of 48 pieces of literature were included.

Results

Existing literature on the relationship between age stereotypes and frailty

Studies exploring the potential relationship between age stereotypes and frailty, wholly and directly, are few and inconsistent in their findings. It is notable that these few studies relied on attitudes toward aging generally rather than attitudes towards one's own aging, and biomedical models of frailty, rather than integral models. Salguero et al.[16] found that neither explicit nor implicit ageist attitudes were associated with a greater risk of frailty. Ye et al.[17] found that age stereotypes did influence frailty, but indirectly, mediated by attitudes towards aging. Gale and Cooper[18] found that persons with more negative attitudes toward aging were more likely to develop physical frailty or pre-frailty, though negative attitude was not an independent contributing factor.

> Aims of this review:
>
> (a) present the results of existing literature on the relationship between age stereotypes and frailty,
>
> (b) discuss underlying assumptions and objectives,
>
> (c) identify gaps and limitations,
>
> (d) suggest implications for NP practice.

The literature search revealed significantly more knowledge on the relationship between age stereotypes and singular frailty factors, across multiple domains, and associated outcomes.

In the physical frailty domain, more negative self-perceptions of aging were found to be associated with elevated cardiovascular stress,[19] lower levels of physical activity,[20] worse experience of physical health,[21] beliefs of being incompetent to successfully take part in exercise and exaggerating the risk of injury and exertion related to exercise.[22] Longitudinally, they predicted a steep decline lower extremity performance.[23] Further, the number of health conditions, such as those appearing on a Frailty Index, attributable to ageism in the USA was estimated at 17.04 million per year.[24]

In the cognitive domain, negative self-perceptions of aging were associated with lower cognitive function and increased likelihood of having cognitive symptoms secondary to depression.[25] Longitudinally, they were predictive of significantly worse memory performance[26]; significantly steeper emergence of the biomarkers of Alzheimer's disease[27]; and, amongst those with the APOE4 gene, development of dementia.[28]

In the psychological domain, more negative perceptions of aging were, longitudinally, significant predictors of the onset and persistence of depression and anxiety[29] and, correlationally, associated with positive screening and new-onset post-traumatic stress disorder, suicidal ideation, generalized anxiety disorder, major depressive disorder,[30-31] and the experience of worse mental health in general.[21] A dose-response gradient was detected.[30-31]

In the social domain, negative self-perceptions of age were correlated with increased loneliness and intra-version.[32] Longitudinally, they predicted worse performance on screened hearing.[33]

Frailty associated outcomes have also been found to be impacted by age stereotypes. The phenomena has been correlated with or predictive of poor self-rated health,[21,32,34-35] functional decline,[32,34,36-38] morbidity,[24,27,39-40] mortality,[35-36,39] and costs to the healthcare system.[24]

Two findings challenged the relationship. Moser et al.[38] found that negative perceptions of aging were not predictive of falls or hospitalizations and Coudin and Alexopoulos[32] found that they were not associated with decreased self-esteem.

One qualitative study was found in the literature search. Van Wijngaarden et al.[41] found that "the negative metaphorical representations of old age used by the participants [older adults with a death wish] seem to correspond with the negative deficit-oriented societal discourse on aging AND that these shared cultural beliefs resonate in participants' self-perception, thus 'becoming flesh: lived and perceived as true'." This study adds support from an authentic and particular source for the possibility that age stereotypes significantly impact multiple domains of frailty.

When viewed collectively, the evidence to date provides a strong rationale for concern about the potential contribution of age stereotypes to various singular frailty factors and outcomes. It justifies further inquiry into their relationship with frailty wholly.

Theoretical Development

Studies have also explored the relational processes and mechanisms between these two concepts [frailty and ageism]. The predominant model in the literature is Levy's[42] Stereotype Embodiment Theory (SET). The theory, its supporting research, and theoretical challenges and extensions are summarized here. SET posits that age stereotypes in the sociocultural environment can be internalized over the life course,[43] implicit in nature,[39,44] and more salient once considered self-relevant,[39-40] with some authors going so far as to say that self-relevance is a precondition for their health manifestations.[45]

Levy proposes that embodiment occurs via psychological, behavioural, and physical pathways.[42] The psychological pathway occurs via age expectations becoming self-fulfilling prophecies.[42] The process is influenced by the stability of the belief,[35,46] attitude toward aging,[17] motivation,[25] and perception of control.[23,35] The behavioural pathway occurs when beliefs of reduced self-efficacy[39] and the inevitability of symptoms or illness in old age[35,47] result in decreased engagement in health maintenance behaviours such as exercise,[22,35] diet, sleep,[35] and use of healthcare services.[29,35,48] This pathway is influenced by negative emotions[35] and reduced openness to experience.[20] The physiological pathway occurs when cardiovascular stress associated with age stereotypes manifests in increased cardiovascular events[42] with poorer recovery,[40] increased cognitive impairment[49] and increased psychiatric conditions.[29] Chronic inflammation biomarkers have been found to partially mediate the relationship between negative self-perceptions of aging and survival.[50]

Challenging SET, research suggests that internalized ageism specific to the health domain[20,34] may be associated with exceptionally negative stereotypes[51] and, therefore, particularly detrimental. Considering this possibility, the health impacts suggested thus far may be diluted. SET would benefit from extension to consider intersections with discriminatory factors beyond age, such as race[48] and gender.[22]

Enrichment with Frailty Literature

The exploration of the literature on what older adults living with frailty identify as influential to their experience of health revealed an absence of explicit discourse on ageism however, potentially common or shared experiences are visible. First, older adults' perceptions of frailty appear to be consistent with ageist stereotype content which is predominantly negative[52] and related to health concepts[9]: slow-thinking, incompetent, feeble, senile, depressed, lonely, hopeless, afraid, neglected, complaining, ill-tempered, demanding, and inflexible[52]. This is suggestive of the possibility that the experience of frailty may increase the self-relevancy of internalized negative age stereotypes, thereby, increasing susceptibility to detrimental health effects. Second, older adults living with frailty have described a process or turning point of assuming a frail identity, which they hold as distinct from their authentic self and find negative in nature.[53-54] The congruences between this experience and that of age stereotype embodiment raise the possibility that they may be describing the same phenomena from a different conceptual perspective. Third, the frailty literature suggests that the relationship between age stereotype internalization and health detriments may be bidirectional or cyclical, which would be an extension of the current unidirectional model[42]. Fourth, descriptions by older adults living with frailty identified potentially relevant factors in the relationship between frailty identity and health detriments which also appear in the age stereotype embodiment literature.[55]

Literature on the potential contribution of frailty to ageism is more common and suggests that it may fuel ageism. More specifically, frailty is temporally linked to concerns about an aging population and its perceived threat to the sustainability of the healthcare system[56] and is conceptually linked to advancing age and negative stereotypical views of aging.[57]

Discussion

Underlying assumptions, objectives, gaps, and limitations of existing knowledge

The literature exploring the relationship between age stereotypes and frailty appears to justify concern and warrant further inquiry and intervention. To orient and inform future knowledge development for nursing, the existing knowledge must first be examined and critiqued to reveal its underpinnings.

Studies identified by the formal literature search, with a single exception, were quantitative in approach, held negative views of aging, and were individualistic.

The quantitative approach generally aims to advance theory through exploration of the relationships between variables to predict, control, or manage the phenomena,[58] constructing linear, empirical understandings.[59] The need to extend understandings to those that are qualitative[60] and aim to shift practice approaches to potentially improve the health of older adults are acknowledged.

There is an assumption in the body of work to date that health and functional changes that occur with age are unquestionably negative, consistent with the stereotypical view. However, there are suggestions that this may not consistently resonate with older adults[53] and leaves a void in understandings that allow for positive possibilities.

The knowledge developed so far, despite vague acknowledgement of sociocultural influences, frames health detriments potentially related to age stereotypes as being the result of how an individual feels, thinks, behaves, and physically responds based on their own self-perceptions which results in placing the work and burden of resisting or remedying the situation on the individual[55]

and de-emphasizes the cooperative and communal responsibility for social change that, at least, share responsibility.

The nursing discipline has distinct ways of seeing and knowing that are required to inform practice. Nursing epistemology is pluralistic in its approach, though it does require integration of authentic sources; holism, complexity, and contextualism[61]; particularization and generalization[62]; and a focus on praxis[14]. Such approaches to knowledge development remain unexplored in terms of the phenomenon of interest.

Implications for Nurse Practitioner Practice

Nurse practitioners recognize the need to mitigate vulnerabilities and prevent risks in order to promote health and improve outcomes for all individuals in their care. As suggested by this literature review, the emerging awareness of a potential relationship between age stereotypes and frailty justifies and obligates NPs to act for the well-being of older adults receiving their care. Many of the authors cited in this literature review propose suggestions for practitioners, though future research is needed to develop understandings of the phenomena and inform intervention effectiveness studies. Until such knowledge is developed, NPs can lead an initiative to embrace the opportunities inherent in existing knowledge. Initiatives include critical reflection, a shift in approach, disruption of social systems, and re-consideration of how to engage with frailty.

Nurse practitioners must critically reflect on their own age assumptions. The likelihood is that those raised within Western culture have internalized ageist stereotypes over their lifespan[63] and bring these implicitly into practice. Studies have found that ageism is prevalent and unintentional amongst healthcare professionals[35]. This can manifest as misattribution of biological changes or health problems to chronological age[42] or paternalistic approaches to care provision, thereby perpetuating social harms.

To take action in this area, NPs need to be aware that there is much variability in objective and subjective perceptions of older adults' age and health[42,54] and critique whether the 'evidence' of age-related changes has captured authentically biological processes or whether it has, unknowingly, captured other invisible influences, such as stereotype embodiment. For example, how much of slowed memory retrieval with age is due to biological deterioration of the brain and how much might be the result of reduced stimulation that accompanies forced retirement with expectations of engagement in leisure pursuits, educational institutions organized for the young, and beliefs that 'you can't teach an old dog new tricks'? Or how much of kyphosis is age-related biological deterioration and how much might be due to beliefs that exercise is too risky[22], embodied social inferiority, or efforts to appear enfeebled enough to receive services[46]? NPs must recognize that the attribution of age-related changes to inevitable biological decline may be over-emphasized in our learning and practice environments, reinforcing the misinformed age stereotype.[35,46]

For the individual care encounter, assessing for self-identified age and health, intervening in ageist expectations and stereotypes, optimizing client control, and reconsidering the usefulness of frailty in practice may contribute to well-being of older adults.

NPs could ask individuals to self-identify their age and health status, respecting the variability of perceptions and experiences.[33] NPs must recognize that being frail does not imply the holding of a frail identity.[53-54] To label someone as old, frail, or draw attention to health vulnerabilities, risks activating the identity shift that threatens health. Conversely, NPs can recognize that identification with age stereotypes may indicate a potential reversible risk factor for frailty.[17,25,30,47]

> NPs should expose and disempower age stereotypes by informing older adults, their families and caregivers of their implicit nature and potential negative impacts.[32]

NPs should actively promote a positive outlook on aging[21,23,39-40,47,64] and sensitively disrupt negative expectations of aging.[35-36,48] Studies have shown that self-perceptions of aging can be made significantly more positive with intervention and that even small increments of change in these perceptions can create a significant health impact.[28] Presenting signs and symptoms should be attributed to a particular cause or part of the body,[54] avoiding attribution to age[35] and emphasizing that age needs not be a barrier to treatment or recovery.[29,35] Active coping skills,[31] health promotion, chronic disease self-management,[21-22,54] and agency and control over health decisions[29] should be encouraged regardless of age or frailty. NPs should expose and disempower age stereotypes by informing older adults, their families and caregivers of their implicit nature and potential negative impacts.[32]

NPs are encouraged to reconsider the usefulness of 'frailty' in their practice. Holistic, complex, contextual, client-centered assessments and care planning to prevent decline and promote health are inherent to NP practice, so it is worth asking why a particular label and tool are employed for older adults. If it has little usefulness in distinguishing a practice approach and potentially triggers health decline via increasing the self-relevancy of age stereotypes, then its harms seem to outweigh its benefits.

The focus on the care of individual older adults in practice is essential, but should not be without concurrent social action to relieve the source of the issue: societal ageism.[24] The systemic ageism that perpetuates the age stereotypes and health inequities of older adults persist largely unchallenged.[42] For example, age is not yet explicitly included in the United Nations Declaration of Human Rights.[65]

Suggestions for NP actions could include large-scale campaigns by our NP associations or NP representation in the political realm to (a) disrupt the denigration of older adults[17,24,36]; (b) lead a shift in values toward cooperation and interdependence in healthcare; and (c) ally with older adults for structural and policy changes that outlaw age discrimination and facilitate engagement of older adults.[29]

Conclusion

NPs will increasingly provide healthcare for older adults. Practice experience generated concern about a potential relationship between frailty and ageism. The existing literature suggests interconnectedness between age stereotypes and various singular frailty factors. However, understandings to date are generated from a narrow angle of vision and frailty as a whole remains largely unexplored, leaving an intriguing space for future investigation for nursing. In the meantime, Nurse Practitioners are called to action based on an emerging awareness of the phenomena's potential for harm and health inequity for older adults. NPs can take action through personal and professional critical reflection, a shift in their approach toward age and frailty in practice, and disruption of social complacency on the issue of ageism.

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