Perceptions of Balance Across the Adult Lifespan: A Comparison of Younger and Older Adults

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INTRODUCTION

This project is intended to help explain why older adults may possess a fear of falling from an as-of-yet unexplored angle – one that is purely based on stereotyping and expectations about falls that they may apply to themselves. Although it is generally understood that older adults are more vulnerable to falls than are younger adults, the nature of this belief (or stereotyping) has not yet been investigated.

Previous research clarified various risk factors for the development of a fear of falling, including psychological factors such as general anxiety and non-psychological factors such as gender, medication intake, age, and more. However, no one has yet investigated the potential role of stereotyping in the development of a fear of falling.

Part one of this study was a questionnaire in which participants answered questions focused on the ability of adults of various ages (i.e., 20-100, by decade) to maintain their balance in general and in specific situations (e.g., getting dressed or undressed). After these lifespan questions, they were asked questions focused on their own balance, how it has changed in the past, and how they expect it to change in the future.

Part two of this study was a questionnaire in which participants answered a revised version of part one, as well as questions about their personal experiences with falling. If participants had experienced a significant fall in their life, then they were asked circumstantial questions regarding that fall. All participants were then asked about their potential fear of falling and about if they know someone else who has fallen in the past ten years. If participants knew someone else who had experienced a fall, then they were asked circumstantial questions regarding that fall.

For study one, we hypothesized that younger adults would rate older adults as having worse balance in general and in specific situations than older adults would. We also hypothesized that both younger and older adults would rate balance worse for each age group as age increased. For study two, we hypothesized that having experienced a fall or knowing someone who had experienced a fall would be associated with a greater fear of falling, especially for older adults.

METHOD

Participants

For both parts, younger adult data was gathered from UWEC undergraduate students who participated through the SONA online research pool; participants received course credit or extra credit for participation. Older adult data was gathered using Amazon's Mechanical Turk, through which participants were paid. Participation followed informed consent and ended with debriefing.

Part One Group	N	Gender	Average Age	Age Range	Race	Ethnicity
Younger Adults	104	11 M 92 W 1 T	*M* = 18.88 years *SD* = 1.24 years	18-24 years	89 White/Caucasian 12 Asian 2 Other 1 Black/African American	3 Hispanic or Latino/a Participants
Older Adults	50	19 M 31 W	*M* = 64.80 years *SD* = 4.96 years	58-75 years	48 White/Caucasian 1 Black/African American 1 Other	No Hispanic or Latino/a Participants

Part Two Group	N	Gender	Average Age	Age Range	Race	Ethnicity
Younger Adults	41	9 M 31 W 1 T	*M* = 19.39 years *SD* = 0.97 years	18-22 years	36 White/Caucasian 1 American Indian/Alaska Native 1 Native Hawaiian/Pacific Islander 1 Asian 1 Black/African American	2 Hispanic or Latino/a Participants
Older Adults	46	19 M 27 W	*M* = 63.43 years *SD* = 5.44 years	56-78 years	45 White/Caucasian 1 Black/African American	No Hispanic or Latino/a Participants

Part One

We modified General Beliefs about Memory (GBMI) and Personal Beliefs about Memory (PBMI) scales to create items which focused on participants' ratings of age groups by decade from 20 years old to 100 years of age in terms of each group's general balance, control over current balance, control over future balance, and balance in seven specific situations (e.g., getting dressed or undressed, taking a bath or shower, and getting in or out of a chair). For personal questions, participants were asked about their general sense of balance, balance while walking quickly, balance compared to other adults, how their balance has changed, how their balance will change in the future, how much control they have over their balance, and their balance in the same seven specific situations as for each age group. The Falls Efficacy Scale International (FES-I) was then administered. Finally, participants answered demographic questions.

Part Two

Data collection is mostly completed for this study. This questionnaire began with the modified GBMI and PBMI scales from part one. Then, based on a lack of data from previous research (e.g., see references), we developed questions regarding participants' personal falls and the circumstances around those falls (e.g., where they fell), if they knew someone who had fallen and the circumstances around those falls, and their personal fear of falling. We included the Activities-Specific Balance Confidence scale (ABC), the FES-I, and the Geriatric Depression Scale Short Form (GDS-SF). Finally, participants answered demographic and health related questions.

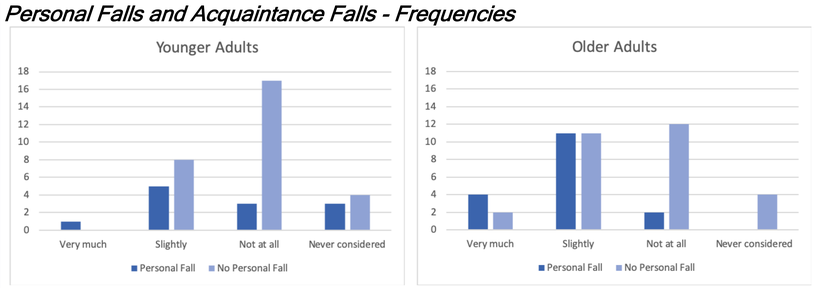
Example Questions

Do you have a fear of falling? (Very much, slightly, not at all, never considered before)

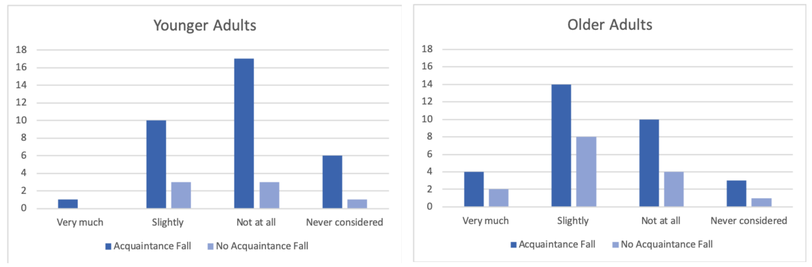
I believe I was at fault for the fall in some way (Strongly disagree to strongly agree)

RESULTS

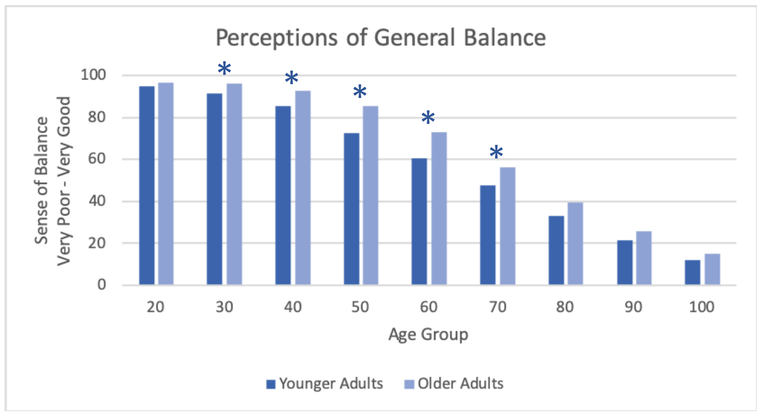
Personal Falls and Acquaintance Falls - Frequencies



In a chi-square test of independence, we found that older and younger adults differed in their degree of fear of falling based on whether they had experienced a fall personally or not. No such difference existed between whether participants knew someone who had fallen in the past 10 years or not.

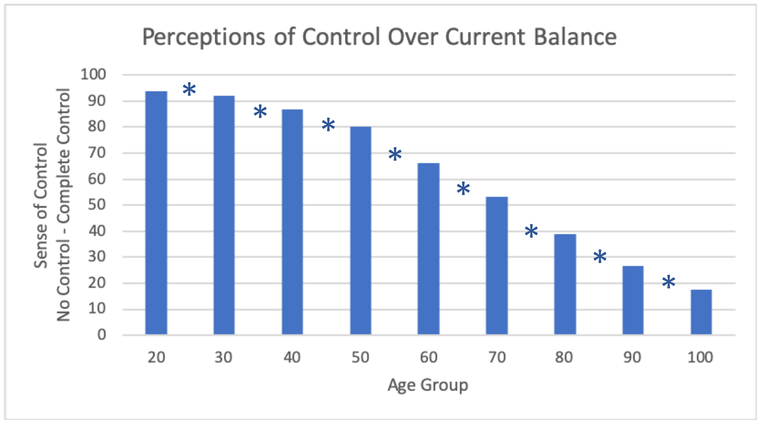


In general, each age group's sense of balance is:



Balance ratings differed the most between older and younger adults for decades in mid-life. In young adulthood and older adulthood the ratings are the same. These data are consistent with our pilot study.

How much can adults do now to determine whether they maintain their sense of balance right now?



Ratings of control over current balance did not differ between age groups. There was a statistically significant decline between all age groups with the largest decreases occurring in mid-life.

I do things now to control what my balance will be like in the future (% Agreement)

Age Group	Mean	Standard Deviation
Younger Adults	58.58	20.83
Older Adults	60.87	25.61

DISCUSSION

Experiencing a personal fall appears to be associated with an increased fear of falling. However, simply knowing someone who has fallen does not seem to be associated with the degree of participants' fear of falling.

Many participants–especially older adults–who had never experienced a fall still had a slight fear of falling.

Many people who had neither a personal nor a secondhand experience with falling still had at least a slight fear of falling.

Some older adults reported never having considered a fear of falling, regardless of their fall history or whether they knew someone who had fallen. This indicates that these older adults are not self-stereotyping in this regard by expecting to fall based solely on their age.

The strongest fear level (very much) reported by younger adults was only reported in those who experienced a personal or secondhand fall.

Both younger and older adults expect a decline in general balance across adulthood, but younger adults expect a worse decline. We speculate that this could be because our older adults have actually experienced those ages, so their judgements may be less based on stereotypes and more on personal experiences, especially considering our age range and average age of older adults.

Not only is balance expected to decline as people get older, but participants also expected that personal control over balance would decline. Older adults are perceived as being more vulnerable to falling due to potential frailty, and–even if they try to exert control over their balance–participants did not think they would be able to maintain their balance as well as their younger counterparts.

Although participants expect significant declines in balance as they age, many of them were not doing anything to help themselves maintain their balance over time.

FUTURE DIRECTIONS

Further analyses will be conducted on the qualitative data from part two. We will analyze how the circumstances surrounding both personal and secondhand falls may be associated with the severity of participants' fear of falling. We will also analyze the outcomes and attitudes from those falls in a similar way.

We will explore how the relationship quality (between the participant and a friend or family member who they know has fallen) may be associated with the impact that fall has left on the participant. For example, worse outcomes from others' falls could be associated with increased fear on the part of a participant.

Finally, we plan to examine the balance ratings for specific scenarios and how participants think of the people in their age group and whether these relate to either the participants' age group or the types of experiences they have had.

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