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Gabrielle E. Anderson
Minnesota State University, Mankato

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**An Exploration of Differences in Perceptions of Gerotranscendent Behaviors Between
Younger and Older Adults**

Gabrielle E. Anderson

Department of Psychology, Minnesota State University, Mankato

April 21, 2023

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Younger and Older Adults**

Gabrielle Anderson

This thesis has been examined and approved by the following members of the student's committee.

_____ Dr. Jeffrey Buchanan
Advisor

_____ Dr. Eric Sprankle
Committee Member

_____ Dr. Aaron Hoy
Committee Member

Table of Contents

<i>An Exploration of Differences in Perceptions of Gerotranscendent Behaviors Between</i>	
<i>Younger and Older Adults.....</i>	1
<i>Abstract</i>	4
<i>Introduction.....</i>	5
Theory of Gerotranscendence.....	6
Cosmic Dimension.....	6
Dimension of the Self.....	7
Dimension of Social and Personal Relationships.....	8
Relevant Literature.....	9
Purpose of the Study.....	11
<i>Methods.....</i>	11
Participants.....	11
Materials.....	12
Demographics Questionnaire.....	12
Gerotranscendence Survey.....	13
Follow-up Interview.....	15
Data Analysis.....	15
<i>Results.....</i>	16
Findings for Vignette #2.....	16
Findings for Vignette #3.....	20
Results Regarding Overall Reactions.....	21
Explanatory Analyses.....	22

<i>Discussion</i>	22
Limitations & Future Directions	26
Implications	29
Conclusion	29
<i>References</i>	31
<i>Appendix A</i>	33
<i>Appendix B</i>	35
<i>Appendix C</i>	52
<i>Tables</i>	53

Abstract

The theory of gerotranscendence was developed as a means of addressing limitations in current developmental theories. It is defined as the natural developmental process in which people gradually change their fundamental views of themselves, the world, their relationships, and reality in general. Research has shown that gerotranscendent behaviors are viewed as pathological by younger adults. The purpose of this study was to further explore differences in perception of gerotranscendent behaviors between college students and older adults. An additional goal was to better understand how and why these behaviors are interpreted differently by younger and older adults. Perceptions of gerotranscendent behaviors were quantified using survey methods from previous research (Buchanan, et al, 2015). Quantitative ratings were followed by open-ended questions prompting participant to explain why they rated a behavior as they did. As hypothesized, quantitative analyses revealed that college students were more likely to view certain gerotranscendent behaviors as more concerning compared to older adults. Themes were extracted from qualitative responses, which provided further context as to why differences in perceptions occurred. Implications of these findings are relevant to the care of older adults, as we know variations in interpretations of behaviors results in differential treatment of residents. Opening a conversation about the meaning of older adults' behaviors leads to more understanding, empathy and increased sensitivity of care.

An Exploration of Differences in Perceptions of Gerotranscendent Behaviors Between Younger and Older Adults

Several theories of aging have been proposed to better understand psychosocial aspects of aging, each proposing different factors related to successful. Of the numerous theories in existence, three theories have gained the most attention: activity theory, disengagement theory, and continuity theory. Briefly explained, activity theory assumes that all kinds of physical and social activity are beneficial for the aging process; therefore, unsuccessful aging is characterized by a lack of activity that results in maladjustment (Havighurst & Albrecht, 1953).

Disengagement theory assumes an inherent and natural drive of older adult to disengage from society when aging (Cumming et al., 1960). The disengagement is mutually satisfying for both older adults and younger adults, allowing younger adults to fill roles once occupied by older adults. Lastly, continuity theory poses that older adult experience a positive and natural urge to continue engaging in one's typical habits, commitments, and preferences into old age (Atchley, 1989).

These theories are problematic because the same behavior can be understood very differently based on which perspective of aging one adopts. For example, if an individual spent their career teaching decided to do substitute teaching following retirement, this transition is seen as positive by the activity theory of aging, but viewed as negative according to disengagement theory. Therefore, such behaviors may be positive/successful from one perspective and negative/unsuccessful from another. In addition, Tornstam (2005) points out current theories of aging project Western society's values onto the older adults, values such as productivity, effectiveness, and independence. Thus, if an older adult does not display behaviors aligning with those Western values, the older adults are deemed "abnormal." Further, these theories may not

truly represent what older adults experience as successful aging, but instead embody what younger individuals believe represents successful aging (Tornstam, 1992).

Theory of Gerotranscendence

Lars Tornstam developed the theory of gerotranscendence as an extension and alternative to the current theories of aging although the aforementioned theories of aging and the theory of gerotranscendence can be valid at the same time (Tornstam, 2005). However, gerotranscendence adds new concepts to understanding the process and transition of aging, especially into the “oldest old” age range. Gerotranscendence can be defined as a natural developmental process in which people gradually change their basic conceptions of reality, resulting in a fundamental shift in how they view the world, themselves, and their relationships (Wadensten, 2005). The shift is from a materialistic and rational view of the world to a more cosmic and transcendental one (Tornstam, 2005). The word “transcendence” was chosen given the many changes, crises, or developmental characteristics that provide older adults the opportunity to break through old boundaries or transcend developmental crises. Gerotranscendence comprises developmental changes within three dimensions: cosmic, self, and social and personal relationships. For a better understanding of some of the more esoteric themes within the three dimensions, quotes will be provided from the book entitled *Gerotranscendence: A Developmental Theory of Positive Aging* by Lars Tornstam (2005), the primary developer of the theory of gerotranscendence.

Cosmic Dimension

The cosmic dimension encompasses five themes, the first labeled “time and childhood.” This theme signifies changes in one’s definitions of time and the return of childhood resulting in the transcendence of borders between past and present occurs. When describing their experiences, one respondent stated, “You go back to childhood almost daily...childhood means

much more than one thinks, I go back to it all the time” (Tornstam, 2005, pg. 55). The second theme is labeled “connection to earlier generations.” The older adult feels as though they are now a part of the stream of life with earlier generations, rather than just an individual life. For example, one respondent stated, “If we take the 17th century, it used to be tremendously distant, but today I don’t think that the 17th century is all that far away. It is somehow as if it has come nearer. And everything in history has come nearer” (Tornstam, 2005, pg. 56). The third theme is “life and death,” in which the fear of death diminishes and a new comprehension of life and death results. The fourth theme is “mystery in life” where older adults accept that there are unknowable aspects of the world. As one individual stated, “...But now I have realized that there is an awful lot beyond the reach of human knowledge [and] especially senses, that we can’t know anything about” (Tornstam, 2005, pg. 58). Lastly, the fifth theme is “rejoicing,” in which older adults take joy in both grand events, but more importantly, subtle experiences such as “watching the buds on trees blossom,” or “feeling a sense of euphoria from listening to pretty music.”

Dimension of the Self

The self dimension also includes five themes, the first being “self-confrontation,” which includes the discovery of hidden aspects of the self, both positive and negative. One example includes, “I talked very egotistically about how I was doing. It was me all the time... I never listened to my children. Today I can listen.” (Tornstam, 2005, pg. 61). “Decrease in self-centeredness” is the second theme and is characterized by the removal of the self from the center of one’s universe. The third theme is labeled “development of body-transcendence” where individuals take care of their bodies, but do not obsess with it like when they were younger. The fourth theme, “self-transcendence,” is the shift from egoism (self-focus) to altruism (focus on

others). Lastly, the fifth theme is “ego-integrity.” This can be seen as the individual realizes that the pieces of life’s jigsaw puzzle form a whole (e.g., “Earlier I thought that...if it weren’t like this, if I had had a little more money, then things may have been different. But now I think...this is my life after all, and it didn’t turn out all that bad.”

Dimension of Social and Personal Relationships

The final dimension is also comprised of five themes. The first is “changed meaning and importance of relations” which involves becoming more selective and less interested in superficial relations as well as an increased need for solitude. The second theme, “role play,” describes the process of understanding the difference between self and roles. An example includes, “...it’s just so clear that everyone is allowed to be himself...I think that’s a great relief, you know” (Tornstam, 2005, pg. 65). The third theme is called “emancipated innocence” where the aging adult has a new capacity to transcend needless social conventions and break away from role expectations. An individual stated, “Now I don’t care a bit about what people think...I dare to go out biking or walking wearing torn stockings, I couldn’t do that before...” (Tornstam, 2005, pg. 66). The fourth theme is “modern asceticism,” in which one shifts their attitudes from material assets to needing just the necessities of life and nothing more. Finally, “everyday wisdom” is the fifth theme. This theme explains the recognition to withhold judgments and give advice based on one’s idea of what is right and wrong. The aging adult becomes more broad-minded and tolerant of other ideologies and opinions.

In support of Tornstam’s theory, studies show that across cultures older adults have an experience of aging that is in some way in line with gerotranscendent behaviors (Wadensten, 2005; Wortman & Lewis, 2021). Importantly, older adults appreciate this theory as it gives them a more positive view of aging (Wadensten, 2005).

Relevant Literature

One implication of the theory of gerotranscendence is that many behaviors that could appear to be pathological or concerning to younger adults may be developmentally typical. Although there is limited research on the perceptions of gerotranscendent behaviors, some studies have suggested that some gerotranscendent behaviors are over-pathologized by younger adults (Buchanan, et al., 2015; Buchanan, et al., 2016; Tornstam & Tornqvist, 2000; Wadensten & Carlsson, 2001). For example, Tornstam and Tornqvist (2000) found variation in the degree to which staff members noticed and interpreted different gerotranscendent behaviors. For instance, the cosmic theme “time and space” was seen as pathological and as a sign of dementia. In addition, the social theme “changed meaning and importance of relationships” was viewed negatively by staff given the older adults do not have the strength or energy to socialize. Other themes such as rejoicing in the small things, modern asceticism, self-transcendence, and fear of death were also viewed negatively.

Wadensten and Carlsson (2001) qualitatively explored nursing staff members’ interpretations of signs of gerotranscendence. Researchers grouped aging signs into three categories: pathological, invisible, and normal signs of aging. The behaviors that the nursing staff viewed as pathological fell into the cosmic category and social and individual relations category. For example, changed perception of time-space, rejoicing in the small things, changed meaning and importance of relations, and emancipated innocence were regarded as pathological. Interestingly, when the nursing staff explained why they believed these behaviors were pathological, they referenced incipient dementia, lack of energy, or having non-eventful lives. This study highlights the importance of the theory of gerotranscendence as a lens for interpreting

these behaviors as developmentally typical whereas they would be regarded “undesirable” based on activity theory.

The former study demonstrated that certain gerotranscendent behaviors have been viewed as pathological. Other research has specifically investigated differences in perceptions of gerotranscendent behaviors between younger and older adults. In a recent study, college students and older adults read short stories of an older adult displaying common behaviors indicative of gerotranscendence (Buchanan et al, 2015). Subsequently, participants rated the behaviors on a Likert scale based on abnormality (i.e., unusual) and pathology (i.e., concerning), similar to the constructs explored in Wadensten and Carlsson (2001). Findings from Buchanan et al (2015) revealed college students found five out of eighteen behaviors as more abnormal and pathological compared to older adults.

Buchanan (2015) purported the possible differences in perceptions could be due to a younger adult’s general lack of familiarity with or knowledge of these behaviors, which results in interpreting them as more pathological. Buchanan et al (2016) extended their research on age differences, but aimed to focus solely on the cosmic dimension because (1) this dimension represents a unique contribution to aging theory, (2) these behaviors are particularly likely to be viewed as unusual, concerning and even possible signs of depression or dementia, and (3) greater cosmic transcendence is associated with greater life satisfaction, increased activity, and greater satisfaction with social activity. The study also presented extended descriptions of the more esoteric behaviors of gerotranscendence (e.g., changes in perceptions of time and space). Buchanan et al (2016) postulated differences in perceptions would occur due to the lack of familiarity in younger adults. Results supported the researchers’ hypotheses. Younger adults rated all of the gerotranscendent behaviors as more abnormal (i.e., unusual) than the older adults.

In addition, younger adults rated all of the behaviors, except for one (e.g., rejoicing) as more pathological (i.e., concerning) than the older adults. Importantly, this study demonstrates that self-reported familiarity with cosmic-level behaviors may not account for age differences in perceptions of these behaviors. Therefore, if personal experience or observation does not account for age differences in perceptions of gerotranscendent behaviors, then what does?

Purpose of the Study

The purpose of the current study is to replicate and extend the findings of Buchanan et al (2015; 2016) exploring how younger and older adults perceive gerotranscendent behaviors. The current study utilizes the same quantitative approach of Buchanan et al (2015). It is hypothesized that older adults will be less likely than college students to perceive all 18 gerotranscendent behaviors as pathological.

As suggested by Buchanan et al (2015; 2016), a second purpose of the study is to explore the meaning attributed to various gerotranscendence behaviors to better understand why respondents rate behaviors as they do. Therefore, the study augments the quantitative approach with subsequent qualitative open-ended questions as well as interviews with a sub-sample of participants. It is hoped that qualitative data will provide insights into how older and younger adults interpret gerotranscendent behaviors as well as reasons why each age group find these behaviors (un)concerning or (ab)normal.

Method

Participants

A total of 64 individuals participated in the current study. The sample contained 48 females and 15 males, while one participant did not respond to the question related to gender. It is important to note that other gender options were available to the participants including “prefer

not to say” and a text box for “another gender not listed, please specify.” Most of the participants identified as Caucasian (72%), while 6% identified as African American, 5% identified as Asian, 2% identified as middle eastern, and 3% identified as Hispanic. 8% of participants were placed in the “other” group including German, mixed, Norwegian/German, white/Jewish, and west European. Lastly, 5% did not respond to the question regarding ethnicity.

Regarding age, participants were classified into two populations: younger adults and older adults. The first group of participants consisted of younger adults recruited from undergraduate courses at a Midwestern university. A total of 32 younger adults participated in the study. The mean age of the young adult sample was 22 years old, with a range of 18 to 44 years of age. The second group of participants consisted of older adults recruited from a senior community center in a small metropolitan area. A total of 30 older adults participated in the study. The mean age of the older adult sample was 73 years old, with a range of 62 to 87 years of age.

Participants completed the following forms and questionnaires online via a Qualtrics survey.

Materials

Demographics Questionnaire

Participants completed a demographic questionnaire requesting information regarding gender, age, ethnicity, religion, and for the college students, their year in school. In addition, participants were asked to provide a rough estimate of how many older adults they know well, including family members, co-workers, and/or friends. Participants were then asked if they have an in-depth knowledge about older adult development (such as taken aging related courses). Lastly, participants were asked to answer “yes” or “no” to the question: Do you currently have or

ever worked in a long-term care facility such as a nursing home? See Appendix A for a copy of the demographic questionnaire.

Gerotranscendence Survey

Perceptions of behaviors indicative of gerotranscendence were measured using a survey created for another study (Buchanan et al., 2015). The survey began with a set of instructions about the survey. This was followed by an introduction to the main character of the stories as well as instructions for the participant to read the stories as if they were an employee of the assisted living facility where the main character lived.

Participants were then asked to read a series of short stories about an older adult male (“Mr. Smith”) who lives in a senior care facility. The three stories corresponded to the three different dimensions of gerotranscendence (cosmic, self, social/personal relations dimensions). Vital to the purpose of the study, descriptions of specific behaviors indicative of gerotranscendence that Mr. Smith engaged in were embedded within the stories. These examples of gerotranscendent behaviors were developed by Buchanan and colleagues (2015) based on descriptions of gerotranscendence found in the existing research literature. The content validity of these behaviors was verified by the developer of the Theory of Gerotranscendence, Lars Tornstam. Dr. Tornstam indicated that the content of the vignettes was reflective of an individual experiencing gerotranscendence.

After reading each story, participants were asked to complete a rating scale concerning their opinions about Mr. Smith’s behavior. A total of 18 behaviors were included in the three vignettes. The first story contained five behaviors manifesting the cosmic dimension, for example: Mr. Smith described experiencing memories in great detail and that, “it is almost as if I am there again” and that, “it is like I can go back in time and relive parts of my childhood.” The

second story contained 10 behaviors manifesting the self-dimension, for example: “Mr. Smith now goes to lunch in sweatpants, a t-shirt, and baseball hat instead of his usual suit. He commented to his daughter that, “I don’t need to impress anyone anymore.” Lastly, the third story contained three behaviors manifesting the social dimension, for example: Staff always lets him know when activities are, but he rarely agrees to participate. He has mentioned now he prefers his “alone time” so he can sit, think and reflect on his past. In total, there were 18 behaviors integrated into the short stories.

Participants were asked to rate each behavior on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree) for the following three statements: (1) This behavior is common in other older adults, (2) I have observed similar behavior to this, and (3) Someone should be concerned about this behavior. Lastly, for each behavior participants were asked, “We want to know more about why you gave the rating you did for the statement, “Someone should be concerned about this behavior.” Tell us a little bit more about why you agreed/disagreed with this statement.” A text box was available for the participants to provide their responses.

After the three stories, three additional follow-up concluding questions were presented. The first asked, “how satisfied is Mr. Smith with his current situation?” Participants were asked to rate the question on a 4-point Likert scale ranging from 1 (very dissatisfied) to 4 (very satisfied). The second asked, “how typical/normal is Mr. Smith compared to others his age (he is 85 years old)? Participants were asked to rate the question on a 4-point Likert scale ranging from 1 (not normal/typical at all) to 4 (very normal/typical). Finally, the third question was, “Please rate Mr. Smith’s overall mood on the following scale.” Participants were given responses on a 4-point Likert scale from 1 (very depressed) to 4 (very happy). A copy of the entire survey is included in Appendix B.

Follow-up Interview

Upon completion of the survey, participants were asked if they would like to be contacted by the researcher for further questioning. The purpose of this interview was to obtain more in-depth qualitative information as to why the participants responded the way they did.

For the participants who volunteered to do the interview, one vignette was randomly selected to discuss more thoroughly. Initially, it was hoped that all three of the short stories would be discussed, but time restraints limited the researcher in doing so. The interview consisted of a refresher of the randomly selected vignette, followed by the behaviors and their respective responses. Participants were probed with questions such as, “Was your rating based on personal experience? If so, please give an example.” Other questions provided include “Would you be concerned that the individual has a mental illness based on this behavior? Is so, why or why not?” It is important to note, these questions were only provided if responses such as “I don’t know” were provided to open-ended questions are responded Lastly, no new information was presented to the participant.

Data Analysis

A power analysis was conducted based on the aforementioned findings (Buchanan et al. (2015) and indicated that 34 participants were needed to detect relations between the variables for a medium effect size.

Independent sample t-tests were used to test for group differences between older adults and college students. The independent sample t-tests will be conducted on all 18 behaviors. Because a total of 18 tests will be conducted, a Bonferroni correction was used to minimize the likelihood that a significant finding would occur by chance.

As for the open-ended qualitative questions, the researcher developed an individual coding system for each of the 18 behaviors. The coding system consisted of common themes displayed throughout the responses. To ensure reliability for each coding system, the first authors and a trained research assistant coded 30% of the responses and inter-rater reliability coefficients were calculated. The average interobserver agreement for all 18 behaviors was 87.5%. Lastly, the researcher calculated descriptive statistics (e.g., frequency counts) of the final codes. Responses were first coded into categories: (1) positive or not concerning, (2) negative or concerning, (3) dependent upon or needs more context, (4) not applicable. Further, responses were placed into subcategories that were derived from responses specific to the behavior. Therefore, unique subcategories were chosen for each behavior.

Results

A series of independent samples t-tests were conducted to determine if there were differences in the perceptions of gerotranscendence behaviors between college students and community-dwelling older adults. Due to the number of t-tests being conducted, a Bonferroni adjustment was implemented to reduce the likelihood of Type I errors. This adjustment resulted in a significant alpha level of 0.003.

Findings for Vignette #2

Vignette number two included 10 behaviors indicative of the self-dimension of gerotranscendence. Three significant differences between younger and older adults were found. **Behavior #1.** For behavior one (e.g., “He now seems less sure of himself and admits that he is not always right.”), the results showed a significant between-groups difference on ratings of how concerning the behavior was perceived to be, $t(45) = -2.92, p = .0027$. More specifically, older adults ($M = 1.18, SD = 0.39$) found the behavior to be less concerning than the college students

($M = 1.66$, $SD = 0.83$). The effect size for the difference between the groups was calculated using Cohen's d , resulting in a value of $.72$, which is considered a moderate effect.

Answers to open-ended questions asking participants to indicate why they provided their specific rating revealed that 23 older adults (77%) reported these behaviors as not concerning, while 0% found this behavior concerning. Conversely, 65% of younger adults viewed these behaviors as not concerning, and 22% perceiving these behaviors as concerning/negative. See Table 2a for complete set of frequencies.

Responses to open-ended questions were additionally subcategorized into themes generated from all the responses. Themes evoked from participants included, (1) healthy, normal or common behavior, (2) a general health concern or potential for health concern, (3) introspective, (4) a more pragmatic perspective on life, (5) odd or uncommon behavior, or (6) a self-less behavior. Older adults perceived these behaviors as healthy, normal and common behaviors 44% of the time compared to only 23% of younger adults. Further, only 7% of older adults viewed this behavior as a general health concern or potential for health concern (e.g., depression, cognitive decline, deteriorating health, red flags), whereas 16% of younger adults viewed this as a health concern. Lastly, 33% of both older adults and younger adults viewed this behavior as indicative of introspection (e.g., acceptance, reflection, realization). See Table 2b for complete set of frequencies.

Behavior #5. For behavior five (e.g., “His daughter also mentioned that he now rarely talks about himself, instead choosing to ask her about her day and her family.”), the results showed a significant difference between older adults and college students on ratings of how concerning the behavior was perceived to be, $t(40) = -2.92$, $p = .0029$. More specifically, older adults ($M = 1.07$,

$SD = 0.26$) found the behavior to be less concerning than the college students ($M = 1.47$, $SD = 0.72$). The effect size (Cohen's d) was 0.72, indicating a moderate effect size.

Further qualitative investigation into the responses to open-ended questions asking participants to indicate why they provided their specific rating showed similar percentages of older adults (70%) and younger adults (69%) described this behavior as positive or not concerning. However, while only 3% of older adults' responses viewed this behavior as negative or concerning, 13% of younger adults described this behavior as concerning. See Table 3a for complete set of frequencies.

Once again, responses to open-ended questions were additionally subcategorized into themes generated from all the responses. Themes identified in these qualitative responses derived from participants responses included (1) healthy, normal or common behavior, (2) general health concern or potential for health concern (e.g., depression), (3) introspective (e.g., reflection and realization), (4) interest in the outside world (e.g., curiosity, (5) care and love for family (e.g., interested in family, being a better grandfather, leaving a positive impression), (6) uncommon or inconsistent behavior (e.g., participants have seen the opposite behavior or the behavior is inconsistent with Mr. Smith's previous behavior), (7) self-less behavior (e.g., showing more care for others than himself, giving attention to others), or (8) behavior brings joy. Older adults viewed this as a healthy, normal, and common behavior in 31% of cases compared to only 13% of younger adults. Furthermore, 13% of younger adults labeled this behavior as a general health concern or potential for a health concern compared to only 3% of older adults. Interestingly, 18% of younger adults viewed this behavior as Mr. Smith being self-less and showing more care for others compared to only 7% of older adults. The majority of older adults (31%) and younger

adults (40%) were alike in their belief that this behavior showed Mr. Smith was demonstrating care and love toward his family. See Table 3b for complete set of frequencies.

Behavior #7. Lastly, for behavior seven (e.g., “Mr. Smith has recently started giving away some of his most prized possessions to his children grandchildren. He was overheard telling his daughter that, “I have no interest in keeping that stuff anymore. You all probably have more of a use for those things.”), a significant difference was found between older adults and college students on rates of how concerning the behavior was perceived to be, $t(50) = -2.99, p = .002$. More specifically, older adults ($M = 1.28, SD = 0.53$) found the behavior to be less concerning than college students ($M = 1.84, SD = 0.92$). A moderate effect size of .75 was found for this analysis.

Answers to open-ended questions asking participants to indicate why they provided their specific rating revealed 70% of older adults categorized this behavior as positive or not concerning, while 56% of younger adults viewed it this way. More interestingly, 34% of younger adults viewed this behavior as negative or concerning, while only 3% of older adults viewed it as concerning. See Table 4a for complete set of frequencies.

Additionally, responses to open-ended questions were additionally subcategorized into themes generated from all the responses. Themes derived from these qualitative responses were (1) healthy, normal, common behavior, (2) general health concern or potential for health concern, (3) preparation for the future (i.e., death), (4) evokes a positive emotional experience with family (e.g., wants to share enjoyment and memories with family, feels appreciated, desires to have a positive lasting impression, (5) possessions were no longer useful or important. For this behavior, responses were highly variable among older adults and younger adults. Older adults viewed this behavior as a healthy, common and normal behavior in 32% of cases, while 21% of

younger adults viewed it as healthy, normal and common. A total of 25% of younger adults viewed this behavior as a general health concern or potential for concern (e.g., suicidal ideation, depression) compared to only 9% of older adults. Similarly, differences can be seen in the subcategory “preparation for the future.” A total of 31% of younger adults perceived the behavior as preparation for the future compared to only 6% of the responses of older adults. Furthermore, 28% of older adults saw this behavior as evoking a positive emotional experience with family, compared to 17% of younger adults. Lastly, 22% of older adults interpreted this behavior as indicating that Mr. Smith no longer found these possessions as important compared to only 6% of younger adults. See Table 4b for complete set of frequencies.

Findings for Vignette #3

Vignette three described three behaviors indicative of the social-dimension of gerotranscendence.

Behavior #2. There was one significant finding for behavior two (e.g., “Staff always let him know when activities are, but he rarely agrees to participate. He has mentioned how he prefers his “alone time” so he can sit, think and reflect on his past.”). Results showed a significant difference between older adults and college students on rates of how concerning the behavior was perceived to be, $t(55) = -2.84, p = .003$. More specifically, older adults ($M = 1.73, SD = 0.78$) found the behavior to be less concerning than the college students ($M = 2.34, SD = 0.87$). Using Cohen’s d , a moderate effect size of .74 was found for this analysis.

Additional investigation into the differences in participants’ responses of the open-ended questions showed 40% of older adults rated the behavior as positive or not concerning, while 31% of younger adults rated it as not concerning. Interestingly, 53% of younger adults rated this

behavior as negative or concerning and only 20% of older adults regarded this behavior as concerning.

Moreover, responses to open-ended questions were additionally subcategorized into themes generated from all the responses. Specific themes drawn from participant's responses were (1) normal and common behavior, (2) general health concern or potential for concern, (2) preference (Mr. Smith doesn't prefer or enjoy the provided activities), (3) introversion (Mr. Smith desires alone time), (4) other (e.g., death is near, decreased energy/motivation, inconsistent behavior), (5) context or situational changes, (6) too much reflection and stuck in the past, and (7) concern of isolation and neglect of social life. Twenty five percent of older adults perceived this behavior as a general health concern or potential for concern compared to 17% of younger adults. A difference was observed between the older adults and younger adults in the "preference" category, with 46% of older adults reporting that Mr. Smith did not participate because he did not enjoy the activity, while just 2% of younger adults provide a similar explanation. A total of 21% of younger adults explained this behavior as excessive reflection or being stuck in the past compared to 0% of older adults. Lastly, 29% of younger adults demonstrated a concern of isolation or neglect of one's social life compared to 17% of older adults. See Table 5b for complete set of frequencies.

Results Regarding Overall Reactions

Participants were asked three concluding questions about their overall reactions to the three vignettes. For concluding question one (e.g., "How satisfied is Mr. Smith with his current situation?"), results showed a significant difference between older adults and college students, $t(55) = 4.37, p < .001$. This demonstrates that older adults believed Mr. Smith was more satisfied with his current situation ($M = 3.76, SD = 0.66$), while college students believed Mr. Smith was

more dissatisfied with his situation ($M = 2.84, SD = 0.92$). A total of 25% of older adults and 17% of younger adults viewed this behavior as a general health concern or potential for concern (e.g., depression, suicidal ideation, dementia). Older adults attributed this behavior to Mr. Smith not preferring or enjoying the activities offered to him in 46% of cases compared to just 2% of younger adults. A total of 21% of younger adults thought Mr. Smith was spending too much time reflecting and being stuck in the past, while 0% of older adults viewed this behavior in the same way. Lastly, 29% of younger adults and 17% of older adults saw this behavior as a concern of isolation and neglect of social life.

Exploratory Analyses

Exploratory analyses examined if students' knowledge of older adults had a relationship between how normal they perceived Mr. Smith's behaviors. Marginally significant results were found, $t(55) = 1.89, p = .03$, showing the possibility that those who had previous knowledge of older adult development were more likely to view Mr. Smith's behaviors as normal or typical ($M = 3.12, SD = 0.6$), whereas college students who did not have previous knowledge were more likely to view the behaviors as abnormal or atypical ($M = 2.82, SD = 0.59$).

Discussion

The purpose of this study was to gain a better understanding of how older adults and younger adults viewed behaviors indicative of gerotranscendence. Buchanan et al. (2015) recommended that future research explore the meaning attributed to various gerotranscendent behaviors to better understand why people rate the behaviors they do. The question is: how do people perceive these behaviors? Thus, the aim of this study was to replicate Buchanan et al.'s (2015) findings comparing ratings of younger and older adults in terms of abnormality of gerotranscendence behaviors. More importantly, an additional purpose of the study was to

explore qualitative data to further understand how/if these behaviors were interpreted differently by younger and older adults. The results of the present study support the hypothesis that younger adults would find behaviors indicative of gerotranscendence as more abnormal (i.e., concerning) than community-dwelling older adults.

The key findings of the present research demonstrate that significant differences between older adults and younger adults were found in four behaviors of gerotranscendence embedded in the short stories. One of these behaviors was indicative of the theme “self-transcendence”, which represents a shift from egoism to altruism. Therefore, younger adults were more likely to rate this behavior as abnormal than older adults. This result is surprising, as one would think becoming more altruistic or self-less would be viewed as a positive sign. However, exploring deeper into why these differences occurred, qualitative responses coded as concerning by the younger adults stated, “People love to talk about themselves so it can be alarming if someone refuses to talk about themselves even if they have good news,” and, “Even though he could be genuine in asking about her day, like I said in the previous questions, this could be a sign of depression.” More specifically, 13% of younger adults viewed this behavior as a general health concern or potential for a health concern, compared to 3% of older adults. For example, younger adults stated, “...this could be a sign of decline,” and, “...this could be a sign of depression.” Lastly a participant mentioned, “...it is a good thing to be asking your loved ones what is new in their lives, but it can be a little concerning to never talk about yourself because it could be a sign that they are not improving themselves or enjoying their days as much.” Results suggest that younger adults may have viewed this as such a substantial shift in behavior and personality that it likely indicates some form of pathology.

Paradoxically, younger adult participants were more likely to consider this behavior as a self-less act (18%) than older adults (7%). Participants were quoted stating, “Older people tend to focus their attention outward than receive focus on themselves,” and, “He is becoming more thoughtful and aware that people around him also have lives and it is empathetic/sympathetic and compassionate to ask about people's lives.” It is interesting that even though younger adults believe this behavior to be concerning, some still view it as a positive attribute. As mentioned above, this could possibly be contributed to the drastic shift in personality. The substantial change in personality might outweigh the self-less characteristic that is now being portrayed.

Significant differences were also found regarding the theme of “ego-integrity”, which is the realization that life’s jigsaw puzzles form a whole. Younger adults were again more likely to rate this behavior as abnormal than older adults. Qualitative data indicated that half of younger adults viewed this behavior as concerning compared to only 20% of older adults. Older adults explained this behavior was not concerning because it was simply a matter of preference (i.e., Mr. Smith might not have enjoyed the activities that were being offered to him). To the older adults, Mr. Smith is doing as he chooses, stating, “It's good to encourage or invite him to activities. He sounds like he is at peace...let him do what he chooses.” Conversely, younger adults explained this behavior as concerning due to the isolation and a neglect of his social life. Moreover, younger adults stated Mr. Smith was spending too much time in reflection, that it was nearing excessive and displaying he was stuck in the past. Younger adults were quoted saying, “He can make time to reflect on his past around the designated activity. It sounds like he is using it as an excuse.” In regard to isolation, another stated, “...this behavior is self-isolating and is a sign of declining mental health and a big change in character.”

Age differences were found in relation to the concept of “everyday wisdom”, which involves an increase in broad-mindedness as individuals transcend the right-wrong duality. In line with previous findings, younger adults were more likely to rate this behavior as abnormal than older adults. Qualitative analysis indicated that more younger adults stated this behavior was a general health concern or a potential health concern (e.g., red flags for depression or cognitive decline). For example, a younger adult participant indicated, “...it could be the beginning stages of dementia or something.” Another stated, “In the context of the story, I think that it could be concerning if he continues to think like this and it gets more negative.” Whereas older adults were more likely to perceive this behavior as healthy and normal stating, “His behavior seems reasonable, closer to ‘wisdom’,” and, “A natural feeling and progression.” In addition, older adults stated they felt aligned with the behavior responding, “I feel it reflects some of my changes.”

Lastly, significant differences in perceptions of “modern asceticism” (i.e., having enough necessities for life, but no more) were found. Again, younger adults viewed this behavior as more pathological than older adults. This statistic was supported in the qualitative analyses as 34% of written responses by younger adults indicated they found this behavior concerning or negative, while only 3% of older adults did. Further analysis revealed that younger adults interpreted this behavior as preparation for a future negative event such as death or suicide. A younger adult was quoted, “...it is a little concerning, he is going to give away all his things like he is going to die,” and, “some people give away their prize possessions when they are going to take their own lives.” Older adults took this behavior as Mr. Smith having a positive emotional experience with his family members. For example, an older adult stated, “he’s enjoyed his possessions so why not share the enjoyment.” In addition, older adults also understood this

behavior as Mr. Smith giving away items that were no longer useful or important to him, which was not of any concern. An older adult explained, "...aging helps you realize you don't need all kinds of things and downsizing is good and it is good to see things that are important to him he has put thought into who he wants to have them."

Overall, when asked how satisfied they believed Mr. Smith was with his life, older adults were more likely to rate Mr. Smith as satisfied whereas younger adults were more likely to rate Mr. Smith as dissatisfied.

Surprisingly, the results of the current study are inconsistent with the previous literature (Buchanan et al., 2015; Buchanan et al., 2016; Wadensten & Carlsson, 2001). Whereas previous research has found significant differences in all themes in the cosmic dimension, in addition to, a few in the social dimension (e.g., changed meaning of importance of relations and emancipated innocence), the present study found fewer statistically significant differences. However, the results are consistent with general findings in the literature that older adults find these behaviors as less concerning or abnormal than younger adults (Buchanan et al., 2015; Buchanan et al., 2016; Tornstam & Tornqvist, 2000; Wadensten & Carlsson, 2001).

Limitations & Future Directions

Although the present results clearly support that younger adults view certain gerotranscendent behaviors as pathological, it is appropriate to recognize several possible limitations. For example, one limitation of this study could be how the researchers worded the survey question regarding abnormality. To evoke more information from the participants, researchers asked, "We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement." It is possible that the question was interpreted as asking participants to find reasons to be concerned,

whereas the actual intent of the question was to simply obtain a more in-depth explanation of their rating. For instance, some older adults defended Mr. Smith, stating, “Wow, you really want concern here...he is a good guy, admitting he made mistakes, ability to change is fabulous!” Future research should consider modify the wording of this question to minimize the chance of biasing participants toward reporting reasons to be concerned.

A second limitation also related to the wording of the survey. More specifically, clarification in the instructions regarding whether the participant was to interpret the behavior exclusively or interpret the behavior in the context of all the other behaviors described in the vignette would have been beneficial. Some participants would reference other behaviors previously mentioned and base their perception on them collectively while others would focus exclusively on the present behavior. For example, a participant stated, “Within context of previous stories he seems fine.” Other respondents would simply state they needed more context and information to be able to completely answer the question. Overall, improving the instructions would prevent differences in how participants interpreted this question and improve consistency of responding.

The third limitation pertains to the participant sample. First, females consisted of almost 75% of the participants. Second, the participant pool was almost 75% white. It is possible behaviors indicative of gerotranscendence are interpreted differently by individuals of different racial or ethnic backgrounds. Overall, future research should attempt to recruit a more diverse sample in terms of sex, gender identity, and racial and ethnic identity in order to improve the generalizability of the findings.

Lastly, there is inherent subjectivity when conducting content analysis of qualitative data. There is no current research that has identified themes regarding perceptions of gerotranscendent

behaviors, other than Wadensten and Carlsson's (2001) findings of "pathological," "normal," and "invisible" categorizations of gerotranscendent behaviors. Therefore, the respondent's responses were subjectively placed into themes (e.g., categories and subcategories) that were reviewed, questioned, and revised by other raters where appropriate. High interobserver agreement indicated that the identified themes could reliably be recognized across coders. Despite the best efforts of the researchers, however, the themes were by no means entirely inclusive of all possible themes. Future research should refine and extend the current coding system so it takes into account a broader range of interpretations of gerotranscendent behaviors.

Additional limitations of this study are related to the vignettes. For instance, the character in the vignettes for this study was male, lived in an assisted living facility, and had a specific profession (i.e., teacher). Some qualitative responses indicated that these contextual factors partly determined participant responses. For instance, participants frequently commented on his career as a professor stating, "It's part of his nature. He was a teacher," suggesting his career played a role in their perception of the behaviors. Future studies using variations of these vignettes in terms of the character's gender, race, occupation, and living situation are warranted to determine if these factors alter how gerotranscendent behaviors are interpreted. Alternatively, open-ended questions could be added to inquire about the importance of other contextual factors (e.g., "What contexts would change your perception of this behavior, both positively or negatively?").

One final limitation is that qualitative responses to most behaviors were not examined for this study. The researcher chose to only report findings related to behaviors where there were statistically significant findings. Future studies should examine qualitative data for all other

behaviors to explore whether there are age-related differences in how these behaviors are interpreted.

Implications

Despite these limitations, the results suggest several theoretical and practical implications for care of older adults in various atmospheres (e.g., at home, nursing homes, hospitals).

Research has shown that variation in interpretations of gerotranscendent behaviors results in differential treatment of older adults (Wadensten & Carlsson, 2001). For example, if staff members' view a lack of engagement in social activities as isolating and pathological, staff may push individuals to participate in activities, even if it against the wishes of the older adult.

Another example involved the theme "living in the past and present" being perceived as a symptom of dementia. In this case, staff could potential try to bring the individual back to the present rather than letting them contently reflect on life. Therefore, researchers recommend that care providers initiate conversations with older adults about the meaning of their behavior.

Having a conversation with older adults, for example, about why they prefer to spend more time in their room reflecting on life will lead to (1) education and understanding of the individual, (2) increased sensitivity of care by engendering empathy and decreasing judgement of the individual, and 3) a more satisfying interaction for the older adult as well as the caregiver.

Conversations such as these may also prevent caretakers from making suggestions that go against the needs or wishes of the older adults for whom they care (e.g., leave their room to participate in activities; seek treatment for perceived mental health conditions).

Conclusion

In summary, our research partially replicates Buchanan et al.'s (2015) results demonstrating that older adults are less likely to perceive gerotranscendent behaviors as

abnormal compared to young adults. In addition, it extends Wadensten and Carlsson (2001) by examining alternate themes derived from the responses to open-ended questions about perceptions of gerotranscendent behaviors.

It is hoped that the current research will stimulate further investigation of this important area as much work remains to be done before a full understanding of the extent of perceptions of gerotranscendent behaviors is established. This research is essential in increasing sensitivity of care and empathy for older adults, in addition to the creation of an interpretive framework for care of older adults (Wadensten & Carlsson, 2007).

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Appendix A

Demographics Questionnaire

Gender

1. Male
2. Female
3. Prefer not to say
4. Another gender not listed (if not listed, please specify)
 - a. (Text Box)

Age

(Text box)

Ethnicity

(Text box)

Please estimate how many older adults (people over the age of 65) you know well (e.g., family members, co-workers, or friends)?

(Text box)

Do you have in-depth knowledge about older adult development (e.g. have taken a course in aging: psychology of aging, biology of aging, sociology of aging, family dynamics of aging)?

1. Yes
2. No

Do you currently or have you ever worked in a long-term care facility such as a nursing home?

1. Yes
2. No

From the choices below, please circle which best describes your religious preference:

1. Catholic
2. Jewish
3. Protestant
4. Muslim
5. Spiritual: a belief in something bigger than yourself
6. None (Atheist or Agnostic)
7. Another religion not listed (if not listed, please specify)
 - a. (Text box)

Year in school (college students only):

1. Freshman
2. Sophomore
3. Junior
4. Senior
5. Graduated/No longer attending

Appendix B

Gerotranscendence Survey

Instructions:

You are going to be asked to read a series of short stories about an older adult who lives in a senior care facility. In these stories, the behavior of this older individual will be described in some detail. After reading each story, you will be asked to complete a rating scale concerning your opinions about the person's behavior.

Introduction/Demographics:

John Smith is an 85-year-old Caucasian male living in an assisted living facility. This facility is for older individuals who need some assistance with everyday tasks such as cooking, laundry, or making meals. Mr. Smith has struggled with health problems such as heart disease, prostate cancer, high blood pressure, and arthritis over the past several years. However, his health is currently stable and he is able to walk on his own with the use of a cane, manage his own medications, carry on conversations with others, and he has no problems with his memory. Mr. Smith has a Ph.D. in Chemistry was as a professor at the local university for 35 years before retiring. He was married for 52 years, but lost his wife to cancer about three years ago. About a year after his wife's death, he decided to move into the assisted living facility at the urging of his two adult children (a son who is 51 and a daughter who is 48) who both live in a different state. He has five grandchildren ranging in ages from 7 to 22.

You work in the facility Mr. Smith lives in and have known him since he moved into the facility two years ago. You see Mr. Smith frequently throughout the day, so know him fairly well. The following stories about Mr. Smith are written from your perspective – in other words, these stories are based on observations of him, conversations with his children when they visit, as well as direct interactions you have had with him during your work in the facility. Please read the following story carefully.

Story #1:

Over the past 6 months, Mr. Smith has been talking much more about his childhood. For example, he often tells stories to other residents about his life on the family farm and talks fondly about his deceased parents, siblings, and grandparents. He describes these memories in great detail and he has told his daughter that these memories are sometimes so vivid that, "it is almost as if I am there again" and that, "it is like I can go back in time and relive parts of my childhood." You have also observed him at the facility's computer nearly every day on Ancestry.com in an attempt to learn more information about his family of origin and how they arrived in the United States.

Mr. Smith has been dealing with various illnesses for the past several years and he has had to face his own mortality many times. For example, he had a heart attack eight years ago and was diagnosed with prostate cancer last year, which was successfully treated. Nonetheless, Mr. Smith

mentions death nearly every day and yesterday commented, “Now I am not so sure what happens after we die. I guess I will find out soon enough – when it comes, it comes and I will be ready.” Having been trained as a scientist, Mr. Smith has always believed that most things about the world can be understood through science and reason. However, a few weeks ago he was talking with a former colleague and he commented that “perhaps some things will never be explained.”

Mr. Smith had many hobbies and interests when he was younger and he took great joy in conducting research at the university, publishing papers, going to professional conferences, and attending events at the university. Mr. Smith won many teaching awards and was well-regarded as an expert in his field. However, now he explains that his joy comes from things such as listening to a thunderstorm, watching it snow, hearing the birds chirping in the morning outside his window, and reading the newspaper. He also very much looks forward to getting his mail and his occasional visits from his children and grandchildren.

You will now be asked a series of questions about some of the behaviors Mr. Smith displayed in the story above.

Behavior #1: Mr. Smith described experiencing memories in great detail and that, “it is almost as if I am there again” and that, “it is like I can go back in time and relive parts of my childhood.”

Indicate how much you agree or disagree with the following statements about behavior #1.

There is nothing unusual about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Behavior #2: He often tells stories to other residents about his life on the family farm and talks fondly about his deceased parents, siblings, and grandparents. You have also observed him at the facility's computer nearly every day on Ancestry.com in an attempt to learn more information about his family of origin and how they arrived in the United States.

Indicate how much you agree or disagree with the following statements about behavior #2.

There is nothing unusual about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Behavior #3: Mr. Smith mentions death nearly every day and yesterday commented, "Now I am not so sure what happens after we die. I guess I will find out soon enough – when it comes, it comes and I will be ready."

Indicate how much you agree or disagree with the following statements about behavior #3.

There is nothing unusual about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Behavior #4: Although he was trained as a scientist, a few weeks ago he was talking with a former colleague and he commented that “perhaps some things will never be explained.”

Indicate how much you agree or disagree with the following statements about behavior #4.

There is nothing unusual about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Behavior #5: His joy now comes from things such as listening to a thunderstorm, watching it snow, hearing the birds chirping in the morning outside his window, and reading the newspaper. He also very much looks forward to getting his mail and his occasional visits from his children and grandchildren.

Indicate how much you agree or disagree with the following statements about behavior #5:

There is nothing unusual about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Story #2:

A few weeks ago you had a conversation with Mr. Smith's daughter and she told you many things about what Mr. Smith was like when he was younger. She explained that Mr. Smith was someone who had always been quite concerned with what others thought of him. Also, he was worried about his appearance and self-conscious about how others might perceive him. For example, he would always dress in a suit and tie and was concerned with saying things "just right" so as to "not look foolish." His daughter explained that he always was, "in 'Professor Smith' mode and rarely relaxed." She also explained that when he was younger, he spent a lot of time traveling to conferences and when he was home, he often was working. She stated that although he was a good father, "he was always in his own world, doing his own thing."

However, his daughter described observing many changes in her father over the past several months and even said, "Dad seems so different, he was never like this when I was younger." She gave an example of how her father was usually sure he knew what was right and wrong, always knew exactly what to do, was very opinionated, and was "always giving me advice I didn't ask for." She says that he now seems less sure of himself and admits that he is not always right. She explained that he seems much more open-minded because her son got an earring and, "dad didn't even seem to care. He even said he thought the earring was 'fun' – he really listens to the kids and doesn't lecture them or tell them what to do."

You have even observed some these changes as well. For example, Mr. Smith now goes to lunch in sweatpants, a t-shirt, and baseball hat instead of his usual suit. He commented to his daughter that, "I don't need to impress anyone anymore." His daughter also mentioned that he now rarely talks about himself, instead choosing to ask her about her day and her family. He also regularly gives money to her children, buys gifts for them, and even calls them and writes to them. His daughter mentioned that, "he's showing more interest in my family than he ever has before." Also, Mr. Smith has recently started giving away some of his most prized possessions to his children grandchildren. For example, he gave his 14-year-old grandson a chess set given to him by his own father and he gave his 22-year-old granddaughter many of his old textbooks. He also gave his son and daughter some of his teaching awards and a photo album filled with pictures from their youth. He was overheard telling his daughter that, "I have no interest in keeping that stuff anymore. You all probably have more of a use for those things."

In a conversation with you last week, Mr. Smith said that, "I finally realized the other day that I've been a stubborn, self-centered, boring old fart my whole life. That was fine when I was a professor, but not now. I think I've finally realized how great my kids and grandkids are and even found out that I can be pretty fun when I want to be. I like being a granddad." In fact, he has been observed playing Barbies with one of his granddaughters, the Wii with his grandsons, and has taken up building model cars which was a hobby of his when he was a boy. He told his daughter that he doesn't care if others think his behavior is silly or undignified and that, "at my age I'm going to act how I want to act."

One late afternoon you saw Mr. Smith after not seeing him for a few days, which was very unusual. When you asked him where he had been “hiding”, he explained that his son had visited earlier in the week and talked a lot about his kids and what they had been doing lately. Mr. Smith described that he got to thinking a lot about his deceased wife, the life they had lived together with their two kids, and his work at the university. He said, “I came to the conclusion that I wasn’t the best husband, father, or teacher, but I think I did the best I could. I lived a full and good life - I don’t think I would change a whole lot.”

You will now be asked a series of questions about some of the behaviors Mr. Smith displayed in the story above.

Behavior #1: He now seems less sure of himself and admits that he is not always right.

Indicate how much you agree or disagree with the following statements about behavior #1:

There is nothing unusual about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Behavior #2: He seems much more open-minded.

Indicate how much you agree or disagree with the following statements about behavior
#2:

There is nothing unusual about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Behavior #3: He doesn't lecture his grandchildren or tell them what to do.

Indicate how much you agree or disagree with the following statements about behavior
#3:

There is nothing unusual about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Behavior #4: Mr. Smith now goes to lunch in sweatpants, a t-shirt, and baseball hat instead of his usual suit. He commented to his daughter that, "I don't need to impress anyone anymore."

Indicate how much you agree or disagree with the following statements about behavior #4:

There is nothing unusual about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Behavior #5: His daughter also mentioned that he now rarely talks about himself, instead choosing to ask her about her day and her family.

Indicate how much you agree or disagree with the following statements about behavior #5:

There is nothing unusual about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Behavior #6: He regularly gives money to his grandchildren, buys gifts for them, and even calls them and writes to them. His daughter mentioned that, "he's showing more interest in my family than he ever has before."

Indicate how much you agree or disagree with the following statements about behavior #6:

There is nothing unusual about this behavior.

1	2	3	4
---	---	---	---

Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree
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I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Behavior #7: Mr. Smith has recently started giving away some of his most prized possessions to his children grandchildren. He was overheard telling his daughter that, "I have no interest in keeping that stuff anymore. You all probably have more of a use for those things."

Indicate how much you agree or disagree with the following statements about behavior #7:

There is nothing unusual about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Behavior #8: Mr. Smith said that, "I finally realized the other day that I've been a stubborn, self-centered, boring old fart my whole life. That was fine when I was a professor, but not now. I think I've finally realized how great my kids and grandkids are and even found out that I can be pretty fun when I want to be. I like being a granddad."

Indicate how much you agree or disagree with the following statements about behavior #8:

There is nothing unusual about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Behavior #9: He has been observed playing Barbies with one of his granddaughters, the Wii with his grandsons, and has taken up building model cars which was a hobby of his when he was a boy. He told his daughter that he doesn't care if others think his behavior is silly or undignified and that, "at my age I'm going to act how I want to act."

Indicate how much you agree or disagree with the following statements about behavior #9:

There is nothing unusual about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Behavior #10: Mr. Smith said, "I came to the conclusion that I wasn't the best husband, father, or teacher, but I think I did the best I could. I lived a full and good life - I don't think I would change a whole lot."

Indicate how much you agree or disagree with the following statements about behavior #10:

There is nothing unusual about this behavior.

1	2	3	4
---	---	---	---

Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree
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I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Story #3:

Because of his role as a professor and parent, Mr. Smith knew many people in town who were either former students, colleagues at the university, or parents of his children's friends. He and his wife also had many friends. Therefore, Mr. Smith was a relatively social person most of his life and knew many people. Now Mr. Smith socializes much less. Although he has many old acquaintances and colleagues in town, he does not visit them nor does he invite them to visit him. He also socializes little in the facility, except for nearly daily conversations with you and coffee in the morning with two other gentlemen who were also former professors. He also sees family 1-2 times a month. Otherwise, a good deal of his day is spent in his room or in the facility library. Staff always let him know when activities are, but he rarely agrees to participate. He has mentioned how he prefers his "alone time" so he can sit, think and reflect on his past. The activity director in the facility asked Mr. Smith why he rarely comes to activities and said that he wants to talk to people he already knows and likes (such as his family or close friends) and isn't interested in making new friends. He remarked, "I don't have the time or energy to make new friends, I'll stick with the people I already know I like."

You will now be asked a series of questions about some of the behaviors Mr. Smith displayed in the story above.

Behavior #1: Although he has many old acquaintances and colleagues in town, he does not visit them nor does he invite them to visit him. He also socializes little in the facility.

Indicate how much you agree or disagree with the following statements about behavior
#1:

There is nothing unusual about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Behavior #2: Staff always let him know when activities are, but he rarely agrees to participate. He has mentioned how he prefers his “alone time” so he can sit, think and reflect on his past.

Indicate how much you agree or disagree with the following statements about behavior
#2:

There is nothing unusual about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Behavior #3: He wants to talk to people he already knows and likes and isn't interested in making new friends. He remarked, "I don't have the time or energy to make new friends, I'll stick with the people I already know I like."

Indicate how much you agree or disagree with the following statements about behavior #3:

There is nothing unusual about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

I have observed behavior similar to this.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

Someone should be concerned about this behavior.

1	2	3	4
Strongly Disagree	Somewhat Disagree	Somewhat Agree	Strongly Agree

We want to know more about why you gave the rating you did for this question, tell us a little bit more about why you agreed/disagreed with this statement.

Please answer the following questions about Mr. Smith based on *all three* stories:

1. How satisfied is Mr. Smith with his current situation?

1	2	3	4
Very	Somewhat	Somewhat	Very
Dissatisfied	Dissatisfied	Satisfied	Satisfied

2. How typical/normal is Mr. Smith compared to others his age (he is 85-years-old)?

1	2	3	4
Not Normal/ Typical At all	Somewhat Abnormal/Atypical	Somewhat Normal/Typical	Very
Normal/Typical			

3. Please rate Mr. Smith's overall mood on the following scale:

1	2	3	4
Very	Somewhat	Somewhat	Very
Depressed	Depressed	Happy	Happy

Appendix C

Consent Form

You are requested to participate in research supervised by Dr. Jeffrey Buchanan on perceptions of behaviors that occur in older adulthood. This survey should take about 30-45 minutes to complete. The goal of this survey is to understand how younger and older adults evaluate different behaviors that elderly individuals may display, and you will be asked to answer questions about that topic. If you have any questions about the research, please contact Dr. Buchanan at Jeffrey.buchanan@mnsu.edu.

Participation is voluntary. You have the option not to respond to any of the questions. You may stop taking the survey at any time by closing your web browser. Participation or nonparticipation will not impact your relationship with Minnesota State University, Mankato. If you have questions about participants' rights and for research-related injuries, please contact the Director of the Institutional Review Board at (507) 389-1242.

Responses will be anonymous. However, whenever one works with online technology there is always the risk of compromising privacy, confidentiality, and/or anonymity. If you would like more information about the specific privacy and anonymity risks posed by online surveys, please contact the Minnesota State University, Mankato Information and Technology Services Help Desk (507-389-6654) and ask to speak to the Information Security Manager.

The risks of participating are no more than are experienced in daily life. There are no direct benefits for participating. Society might benefit from this research in that results may provide information about how developmentally normal behaviors displayed by older adults are perceived different by older versus younger people. This information may lead to more appropriate and sensitive care for older adults.

Submitting the completed survey will indicate your informed consent to participate and indicate your assurance that you are at least 18 years of age.

Please print a copy of this page for your future reference.

MSU IRBNet LOG # 1878236

Tables

Table 1

Descriptions of Targeted Behaviors.

	Dimension and Theme	Description of targeted behavior
<i>Story 1</i>		
Behavior 1	Cosmic: Changed perception of time and space	Mr. Smith described experiencing memories in great detail and that, “it is almost as if I am there again” and that, “it is like I can go back in time and relive parts of my childhood.”
Behavior 2	Cosmic: Connection to earlier generations	He often tells stories to other residents about his life on the family farm and talks fondly about his deceased parents, siblings, and grandparents. You have also observed him at the facility’s computer nearly every day on Ancestry.com in an attempt to learn more information about his family of origin and how they arrived in the United States.
Behavior 3	Cosmic: Life and death	Mr. Smith mentions death nearly every day and yesterday commented, “Now I am not so sure what happens after we die. I guess I will find out soon enough – when it comes, it comes and I will be ready.”

Behavior 4	Cosmic: Mystery in life	Although he was trained as a scientist, a few weeks ago he was talking with a former colleague and he commented that “perhaps some things will never be explained.”
Behavior 5	Cosmic: Rejoicing	His joy now comes from things such as listening to a thunderstorm, watching it snow, hearing the birds chirping in the morning outside his window, and reading the newspaper. He also very much looks forward to getting his mail and his occasional visits from his children and grandchildren.
<i>Story 2</i>		
Behavior 6	Social: Everyday wisdom	He now seems less sure of himself and admits that he is not always right.
Behavior 7	Social: Everyday wisdom	He seems much more open-minded.
Behavior 8	Social: Everyday wisdom	He doesn't lecture his grandchildren or tell them what to do.
Behavior 9	Self: Decrease in self-centeredness (physical appearance)	Mr. Smith now goes to lunch in sweatpants, a t-shirt, and baseball hat instead of his usual suit. He commented to his daughter that, “I don't need to impress anyone anymore.”

Behavior 10	Self: Self-transcendence	His daughter also mentioned that he now rarely talks about himself, instead choosing to ask her about her day and her family.
Behavior 11	Self: Decrease in self-centeredness	He regularly gives money to his grandchildren, buys gifts for them, and even calls them and writes to them. His daughter mentioned that, “he’s showing more interest in my family than he ever has before.”
Behavior 12	Social: Modern asceticism	Mr. Smith has recently started giving away some of his most prized possessions to his children grandchildren. He was overheard telling his daughter that, “I have no interest in keeping that stuff anymore. You all probably have more of a use for those things.”
Behavior 13	Self: Self-confrontation	Mr. Smith said that, “I finally realized the other day that I’ve been a stubborn, self-centered, boring old fart my whole life. That was fine when I was a professor, but not now. I think I’ve finally realized how great my kids and grandkids are and even found out that I can be pretty fun when I want to be. I like being a granddad.”

Behavior 14	Social: Emancipated innocence	He has been observed playing Barbies with one of his granddaughters, the Wii with his grandsons, and has taken up building model cars which was a hobby of his when he was a boy. He told his daughter that he doesn't care if others think his behavior is silly or undignified and that, "at my age I'm going to act how I want to act."
Behavior 15	Self: Ego-integrity	Mr. Smith said, "I came to the conclusion that I wasn't the best husband, father, or teacher, but I think I did the best I could. I lived a full and good life - I don't think I would change a whole lot."
<i>Story 3</i>		
Behavior 16	Social: Changed meaning and importance of relations	Although he has many old acquaintances and colleagues in town, he does not visit them nor does he invite them to visit him. He also socializes little in the facility.
Behavior 17	Self: Ego-integrity	Staff always let him know when activities are, but he rarely agrees to participate. He has mentioned how he prefers his "alone time" so he can sit, think and reflect on his past.

Behavior 18	Social: Changed meaning and importance of social relations	He wants to talk to people he already knows and likes and isn't interested in making new friends. He remarked, "I don't have the time or energy to make new friends, I'll stick with the people I already know I like."
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Table 2a.

Frequencies of Categories for Behavior 6.

Category	Frequency	
	Older adults	Younger Adults
Positive (Not concerning)	23	21
Negative (Concerning)	0	7
Behavior is dependent upon or needs more context	3	2
Response does not fit category	4	2

Table 2b.

Frequencies of Subcategories for Behavior 6.

Subcategory	Frequency	
	Older adults	Younger adults
Healthy, normal and common behavior	12	10

General health concern or potential for concern	0	7
Introspection	9	14
Increased pragmatic perspective	2	3
Odd or uncommon behavior	1	2
Self-less behavior	3	4
Other	0	3

Table 3a.

Frequencies of Categories for Behavior 10.

Category	Frequency	
	Older adults	Younger Adults
Positive (Not concerning)	21	22
Negative (Concerning)	1	4
Behavior is dependent upon or needs more context	3	5
Response does not fit category	5	1

Table 3b.

Frequencies of Subcategories for Behavior 10.

Subcategory	Frequency	
	Older adults	Younger adults

Healthy, normal and common behavior	9	5
General health concern or potential for concern	1	5
Introspection	2	2
Interest in the outside world	3	1
Care and love for family	9	16
Uncommon or inconsistent behavior	2	3
Self-less behavior	2	7
Behavior brings joy	1	1

Table 4a.

Frequencies of Categories for Behavior 12.

Category	Frequency	
	Older adults	Younger Adults
Positive (Not concerning)	21	18
Negative (Concerning)	1	11
Behavior is dependent upon or needs more context	3	2
Response does not fit category	5	1

Table 4b.

Frequencies of Subcategories for Behavior 12.

Subcategory	Frequency	
	Older adults	Younger adults
Healthy, normal and common behavior	10	10
General health concern or potential for concern	4	12
Preparation for the future	2	15
Evokes positive emotional experience with family	9	8
Possessions are no longer useful or important	7	3

Table 5a.

Frequencies of Categories for Behavior 17.

Category	Frequency	
	Older adults	Younger Adults
Positive (Not concerning)	12	10
Negative (Concerning)	6	17
Behavior is dependent upon or needs more context	5	4
Response does not fit category	7	1

Table 5b.

Frequencies of Subcategories for Behavior 17.

Subcategory	Frequency	
	Older adults	Younger adults
Healthy, normal and common behavior	0	3
General health concern or potential for concern	6	7
Preference	11	1
Introversion	1	5
Other	1	5
Context or situational changes	1	0
Excessive reflection	0	9
Concern of isolation and neglect of social life	4	12

Table 6.

Results of Comparisons of Older Adults and Younger Adults Perceptions of Abnormality

Behavior	Older Adults		Younger Adults		<i>t</i> (45)	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Behavior 1	1.63	.85	1.75	.80	-.55	.29	.14

Behavior 2	1.21	.41	1.41	.61	-1.50	.07	.38
Behavior 3	1.66	.81	2.03	1.03	-1.59	.06	.40
Behavior 4	1.24	.64	1.41	.67	-0.99	.16	.25
Behavior 5	1.17	.54	1.13	.34	.41	.66	.11
Behavior 6	1.18	.39	1.66	.83	-2.92	.003*	.72
Behavior 7	1.12	.31	1.13	.34	-.21	.42	.05
Behavior 8	1.21	.50	1.34	.60	-.91	.18	.23
Behavior 9	1.38	.78	1.55	.77	-.85	.20	.22
Behavior 10	1.07	.26	1.47	.72	-2.92	.003*	.72
Behavior 11	1.07	.26	1.28	.58	-1.84	.04	.75
Behavior 12	1.28	.53	1.84	.92	-2.99	.002*	.75
Behavior 13	1.07	.26	1.19	.54	-1.09	.14	.27
Behavior 14	1.17	.38	1.19	.47	-.14	.45	.03
Behavior 15	1.14	.35	1.28	.73	-.99	.16	.25
Behavior 16	1.81	.90	2.38	.94	-2.34	.01	.62
Behavior 17	1.73	.78	2.34	.87	-2.84	.003*	.74
Behavior 18	1.65	.80	2.03	1.00	-1.60	.06	.41

Table 7.

Demographic Characteristics of Participants

Characteristic	College Students		Older Adults		Full Sample	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Gender						

Female	22	69%	24	83%	46	75%
Male	10	31%	5	17%	15	25%
Ethnicity						
White	21	66%	23	85%	44	75%
African American	4	13%	0	0%	4	7%
Asian	3	9%	0	0%	3	5%
Middle Eastern	1	3%	0	0%	1	2%
Hispanic	2	6%	0	0%	2	3%
Other	1	3%	4	15%	5	8%
Religion						
Catholic	8	25%	6	21%	14	23%
Protestant	3	9%	14	50%	17	28%
Muslim	3	9%	0	0%	3	5%
Spiritual	5	16%	3	11%	8	13%
Lutheran	1	3%	1	4%	2	3%
Baptist	2	6%	0	0%	2	3%
Evangelical	1	3%	0	0%	1	2%
Lutheran						
Christianity	1	3%	0	0%	1	2%
None	8	25%	4	14%	12	20%
(Atheist/Agnostic						
Knowledge of						
Aging						

Yes	10	31%	11	37%	21	34%
No	22	69%	19	63%	41	66%

Worked in Care

Facility

Yes	7	22%	7	23%	14	23%
No	25	78%	23	77%	48	77%

Year in School

Freshman	6	19%	n/a		6	19%
Sophomore	4	12%	n/a		4	12%
Junior	7	22%	n/a		7	22%
Senior	14	44%	n/a		14	44%
Graduated/No	1	3%			1	3%

Longer Attending