

## EMPIRICAL RESEARCH QUANTITATIVE

# Psychological Well-Being and Optimism–Pessimism of the Elderly People in Nursing Home: The Effect of Regular Intergenerational Visitation

Sevda Turen<sup>1</sup>  | Fatma Toksoz<sup>2</sup> | Seyhan Cerci<sup>3</sup> | Edanur Yenisu<sup>4</sup> | Ayke Nisa Cetin<sup>5</sup> | Gulcan Batur Taskin<sup>6</sup>

<sup>1</sup>Internal Medicine Nursing, Faculty of Health Sciences, Istanbul Arel University, Istanbul, Turkiye | <sup>2</sup>Child Health and Diseases Nursing, Faculty of Health Sciences, Marmara University, Istanbul, Turkiye | <sup>3</sup>Management in Nursing, Faculty of Health Sciences, Istanbul Arel University, Istanbul, Turkiye | <sup>4</sup>Nursing Program, Graduate Education Institute, Istanbul Arel University, Istanbul, Turkiye | <sup>5</sup>Istanbul Kultur University, Istanbul, Turkiye | <sup>6</sup>Darulaceze Presidency, Istanbul, Turkiye

**Correspondence:** Sevda Turen ([sevdamercanhm@hotmail.com](mailto:sevdamercanhm@hotmail.com))

**Received:** 13 September 2024 | **Revised:** 29 May 2025 | **Accepted:** 4 June 2025

**Funding:** The authors received no specific funding for this work.

**Keywords:** elderly | nursing homes | optimism | pessimism | psychological well-being

## ABSTRACT

**Aim:** This study was conducted to determine the impact of regular visits by Generation Z individuals on the psychological well-being and optimism–pessimism levels of elderly people in a nursing home.

**Methods:** The study employed a quasi-experimental design with a single group, utilising pre-test and post-test measurements. “Psychological Well-Being Scale,” and the “Optimism–Pessimism Scale-Adult Form” were used. Study reported in accordance with STROBE Checklist.

**Results:** The participants ( $n = 201$ ) had a mean age of  $72.40 \pm 7.72$  years, with most residing in the nursing home for over 5 years. A significant difference was observed between the mean psychological well-being scores of participants before and after the visit. Also, there was a significant difference in the optimism–pessimism dimension scores on the Optimism–Pessimism Scale before and after the visit.

**Conclusion:** It was established that regular intergenerational visits had a beneficial impact on the psychological well-being of the elderly in nursing homes, resulting in an increase in optimism and a reduction in pessimism.

**Relevance to Clinical Practice:** Intergenerational programs are gaining more and more attention every day due to their potential to benefit young people, older people, and society. Thus, it may be possible to increase the social support levels of the elderly and prevent negative age discrimination.

## 1 | Introduction

Advancements in science and technology have increased life expectancy, leading to a rise in the population of older age groups. By 2030, it is estimated that one out of every 6 people in the world will be 60 years of age or older, and this number will increase to 2.1 billion people by 2050 (WHO 2022). In Turkey, the

elderly population aged 65 and over constitutes 10.2% of the total population (Turkish Statistical Institute (TUIK) 2024).

Aging is a natural process that is characterised by a decline in both biological and psychosocial functions (WHO 2022). Physiological changes that occur in this process, increase in chronic diseases, loneliness, etc. situations may disadvantage

## Summary

- What does this paper contribute to the wider global clinical community?
  - Biological and psychosocial changes in aging can disadvantage elderly individuals.
  - These disadvantages may result in elderly individuals experiencing ageism from various generations.
  - Intergenerational interventions are essential to combating ageism.
  - The study shows that regular intergenerational visits to nursing homes enhance the psychological well-being and optimism of elderly residents.

the elderly. Elderly individuals may encounter prejudice and discrimination in a number of contexts, including the business world, healthcare systems, and even social life. This situation presents a significant risk to the psychological well-being of elderly individuals, which in turn may have a detrimental impact on their overall health and well-being (Kang and Kim 2022; Levy et al. 2022). Additionally, loneliness and social isolation may contribute to the development of various psychological disorders in the elderly (Zhao et al. 2018). These unfavourable conditions are more prevalent among the elderly population residing in nursing homes (Marsa et al. 2020).

The psychological wellbeing of older people and the acquisition of an optimistic perspective will be beneficial in terms of living well in old age. Enhancing perceived social support among older individuals through intergenerational interactions fosters a more positive outlook. Elderly individuals who maintain a positive outlook on the future are more likely to engage actively in their own healthcare (Ahmed Haaek and Bes 2022; Moeini et al. 2018; Eskimez et al. 2019). In its 2021 global report on ageism, the World Health Organization identified three fundamental principles as key to reducing ageism: policy/law, education and intergenerational contact (WHO 2021). Intergenerational contact encompasses various activities that bring young and elderly individuals together, such as visits to nursing homes and schools, as well as mentoring programs led by older adults (Whear et al. 2023).

A systematic review highlights that various types of intergenerational interventions positively impact the mental health and well-being of elderly individuals (Whear et al. 2023). The study conducted by Li et al. (2019) revealed that improved intergenerational relationships were associated with a reduction in depression levels among elderly individuals. Various studies in the literature have found that intergenerational visits to nursing homes have numerous positive effects on elderly individuals (Gualano et al. 2018; Boyano et al. 2022; Murayama et al. 2015). However, the literature review revealed a lack of studies examining intergenerational interaction in conjunction with levels of optimism–pessimism and the psychological well-being of elderly individuals. This study was conducted to assess the impact of regular visits by Generation Z individuals to elderly residents in

nursing homes on the psychological well-being and optimism–pessimism of the elderly.

## 2 | Research Hypotheses

**H1.** *There is a significant difference between the mean scores of the psychological well-being for nursing home residents before and after regular intergenerational visits.*

**H2.** *There is a significant difference between the mean scores of the optimism dimension for nursing home residents before and after regular intergenerational visits.*

**H3.** *There is a significant difference between the mean scores of the pessimism dimension for nursing home residents before and after regular intergenerational visits.*

## 3 | Material and Methods

### 3.1 | Study Design

The research was conducted in accordance with a pre-test post-test, one-group quasi-experimental design. This study is reported according to the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Checklist (Data S1) (von Elm et al. 2014).

### 3.2 | Sample

The study population comprised elderly individuals residing in a nursing home in Istanbul, Türkiye. Prior to the commencement of the study, the requisite minimum sample size was calculated using the G Power 3.1.9.7 software (Faul et al. 2007). In order to conduct a sample calculation, the study conducted by Young et al. (2022) was selected as a point of reference. The results indicated that the intervention program implemented in the study led to a significant improvement in participants' psychological well-being scores during the post-test phase. The effect size for this outcome was calculated to be 0.240. The primary hypothesis of the study was that there would be a difference between the pre-test and post-test mean scores of the two dependent groups. Therefore, it was determined that at least 138 people should be included in the study, with a Type 1 error level of 5%, an effect size of a medium level (0.240), and a power level of 80%. The study population comprised 223 individuals who initially met the inclusion criteria and consented to participate in the study. However, 22 participants (16 due to death and 6 due to their departure from the institution) withdrew from the study before the second test. Consequently, the study was completed with a total of 201 participants.

### 3.3 | Inclusion Criteria

Being 65 years of age or older and agreeing to participate in the study.

### 3.4 | Exclusion Criteria

Being under 65 years of age, having a communication problem (vision, hearing, etc.), having a cognitive and mental disability and refusing to participate in the study.

### 3.5 | Data Collection Instruments

The data for the study were collected using the 'Descriptive Information Form', the 'Psychological Well-Being Scale', and the 'Optimism-Pessimism Scale-Adult Form'. Data collection tools were administered in two stages: a pre-test in September 2023 and a post-test in February 2024.

#### 3.5.1 | Descriptive Information Form

This form, prepared by the researchers based on the literature, includes 24 questions addressing the socio-demographic characteristics, social support level, and intergenerational relations of the elderly individuals.

#### 3.5.2 | Psychological Well-Being Scale

The original version of the Psychological Well-Being Scale was developed by Diener et al. (2010) and adapted into Turkish by Telef (2013). The items of the scale are answered on a 7-point Likert scale ranging from 'strongly disagree' (1) to 'strongly agree' (7). The total score on the scale ranges from 8 to 56, with higher scores indicating individual possesses numerous psychological resources and considerable strength. Cronbach's alpha internal consistency coefficient was found to be 0.87 in the original version of the scale and 0.80 in the Turkish adaptation. In this study, Cronbach alpha internal consistency coefficient of the scale was found to be 0.92.

#### 3.5.3 | Optimism-Pessimism Scale—Adult Form (OPS)

The Optimism-Pessimism Scale-Adult Form was developed by Caliskan and Uzunkol in 2023 to assess the optimism and pessimism levels of adult individuals (Caliskan and Karademir 2023). The scale is 5-point Likert type ('Not at all appropriate', 'Not appropriate', 'Somewhat appropriate', 'Appropriate', 'Appropriate', 'Fully appropriate') and consists of 16 items. The scale is comprised of two dimensions, namely optimism and pessimism. The odd-numbered items of the scale pertain to the optimism dimension, while the even-numbered items pertain to the pessimism dimension. It should be noted that the sub-dimensions of the scale are scored separately. The Cronbach's alpha internal consistency coefficient for the optimism sub-dimension was determined to be 0.92, while the coefficient for the pessimism sub-dimension was found to be 0.90. In this study, the Cronbach's alpha internal consistency coefficient was found to be 0.94 for the optimism sub-dimension and 0.92 for the pessimism sub-dimension of the scale.

**TABLE 1** | Participants demographics (N: 201).

| Variable                                                     |                                | n   | %    |
|--------------------------------------------------------------|--------------------------------|-----|------|
| Gender                                                       | Female                         | 96  | 47.8 |
|                                                              | Male                           | 105 | 52.2 |
| Age (year) (range: 72.40 ± 7.72)                             | 65–70                          | 110 | 54.7 |
|                                                              | 71–75                          | 26  | 12.9 |
|                                                              | 76–80                          | 34  | 15.4 |
|                                                              | 81 ve ↑                        | 31  | 15.4 |
| Marital status                                               | Single                         | 186 | 92.5 |
|                                                              | Married                        | 15  | 7.5  |
| Child presence                                               | Yes                            | 61  | 30.3 |
|                                                              | No                             | 140 | 69.7 |
| Educational background                                       | Illiterate                     | 30  | 14.9 |
|                                                              | Primary education              | 135 | 67.2 |
|                                                              | Secondary education and higher | 36  | 17.9 |
| Presence of continuous medication                            | Yes                            | 143 | 71.1 |
|                                                              | No                             | 58  | 28.9 |
| Presence of chronic disease                                  | Yes                            | 138 | 68.7 |
|                                                              | No                             | 63  | 31.3 |
| Perception of own age                                        | Too old                        | 25  | 12.4 |
|                                                              | Old                            | 44  | 21.9 |
|                                                              | Middle aged                    | 69  | 34.3 |
|                                                              | Young                          | 63  | 31.3 |
| Length of stay in the nursing home                           | Less than 1 year               | 40  | 19.9 |
|                                                              | 1–5 years                      | 80  | 39.8 |
|                                                              | More than 5 years              | 81  | 40.3 |
| Reason for being in a nursing home                           | Willingly                      | 78  | 38.8 |
|                                                              | By request of children         | 23  | 11.4 |
|                                                              | Loneliness                     | 100 | 49.8 |
| Status of contact with family (spouse, child etc.)           | Yes                            | 116 | 57.7 |
|                                                              | No                             | 85  | 42.3 |
| Being visited by immediate circle (family/relatives/friends) | Yes                            | 119 | 59.2 |
|                                                              | No                             | 82  | 40.8 |
| Presence of nursing home friends                             | Yes                            | 132 | 65.7 |
|                                                              | No                             | 69  | 34.3 |

Abbreviations: %, percentage; Max, maximum; Min, minimum; n, population size.

**TABLE 2** | Participants' perspectives on nursing home residency before and after visits.

| Category                                                                                                                                          | Pre-test |      | Post-test |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------|----------|------|-----------|------|
|                                                                                                                                                   | <i>n</i> | %    | <i>n</i>  | %    |
| How would you assess your overall health status?                                                                                                  |          |      |           |      |
| Too bad                                                                                                                                           | 12       | 6.0  | 11        | 5.5  |
| Bad                                                                                                                                               | 30       | 14.9 | 37        | 18.4 |
| Neither good nor bad                                                                                                                              | 44       | 21.9 | 54        | 26.9 |
| Good                                                                                                                                              | 92       | 45.8 | 92        | 45.8 |
| Too good                                                                                                                                          | 23       | 11.4 | 7         | 3.5  |
| Would you feel happier if someone came to visit you?                                                                                              |          |      |           |      |
| Yes                                                                                                                                               | 169      | 84.1 | 175       | 87.1 |
| No                                                                                                                                                | 32       | 15.9 | 26        | 12.9 |
| Are you satisfied with your living conditions in the nursing home?                                                                                |          |      |           |      |
| Yes                                                                                                                                               | 166      | 82.6 | 170       | 84.6 |
| No                                                                                                                                                | 35       | 17.4 | 31        | 15.4 |
| If you are not satisfied, what is the reason?                                                                                                     |          |      |           |      |
| I experience feelings of loneliness.                                                                                                              | 12       | 34.3 | 13        | 41.9 |
| I miss my home                                                                                                                                    | 14       | 40.0 | 13        | 41.9 |
| Other                                                                                                                                             | 9        | 25.7 | 5         | 16.2 |
| How would you evaluate your social life within the nursing home?                                                                                  |          |      |           |      |
| Good                                                                                                                                              | 93       | 46.3 | 116       | 57.7 |
| Neither good nor bad                                                                                                                              | 73       | 36.3 | 55        | 27.4 |
| Bad                                                                                                                                               | 35       | 17.4 | 30        | 14.9 |
| How would you evaluate your interactions with individuals from different generations (e.g., Generation Y, Generation Z, Generation Alpha)?        |          |      |           |      |
| Good                                                                                                                                              | 154      | 76.6 | 158       | 78.6 |
| Neither good nor bad                                                                                                                              | 28       | 13.9 | 32        | 15.9 |
| Bad                                                                                                                                               | 19       | 9.5  | 11        | 5.5  |
| Do you enjoy spending time with individuals from different generations (e.g., Generation Y, Generation Z, Generation Alpha)?                      |          |      |           |      |
| Yes                                                                                                                                               | 165      | 82.1 | 178       | 88.6 |
| No                                                                                                                                                | 36       | 17.9 | 23        | 11.4 |
| Do you believe that individuals from different generations (e.g., Generation Y, Generation Z, Generation Alpha) show respect towards the elderly? |          |      |           |      |
| Yes                                                                                                                                               | 140      | 69.7 | 161       | 80.1 |
| No                                                                                                                                                | 61       | 30.3 | 40        | 19.9 |

(Continues)

**TABLE 2** | (Continued)

| Category                                                      | Pre-test |      | Post-test |      |
|---------------------------------------------------------------|----------|------|-----------|------|
|                                                               | <i>n</i> | %    | <i>n</i>  | %    |
| How would you characterise yourself?                          |          |      |           |      |
| Optimistic                                                    | 112      | 55.7 | 133       | 66.2 |
| Neither optimistic nor pessimistic                            | 62       | 30.8 | 52        | 25.9 |
| Pessimistic                                                   | 27       | 13.4 | 16        | 8.0  |
| How would you describe your level of happiness?               |          |      |           |      |
| Unhappy                                                       | 41       | 20.4 | 22        | 10.9 |
| Somewhat happy                                                | 47       | 23.4 | 55        | 27.4 |
| Happy                                                         | 80       | 39.8 | 96        | 47.8 |
| Very happy                                                    | 33       | 16.4 | 28        | 13.9 |
| To what extent are you able to perform your daily activities? |          |      |           |      |
| None                                                          | 32       | 15.9 | 20        | 10.0 |
| Little                                                        | 29       | 14.4 | 25        | 12.4 |
| Enough                                                        | 77       | 38.3 | 97        | 48.3 |
| Much                                                          | 23       | 11.4 | 25        | 12.4 |
| Completely                                                    | 40       | 19.9 | 34        | 16.9 |

Abbreviations: %, percentage; *n*, population size.

### 3.6 | Intervention

In the study, regular visits were made to elderly residents in the nursing home by 13 volunteer senior undergraduate students from Generation Z, all of whom are studying in the field of nursing. Before the visits, the 'Data Information Form', 'Psychological Well-Being Scale', and 'Optimism-Pessimism Scale-Adult Form' were administered as pre-tests to the elderly participants who agreed to take part in the study. Following the pre-test, participants were scheduled for weekly follow-up visits over a total duration of 3 months. Students cared for the elderly during each visit (1 day per week for 8 h), and the visits had no specified topic. During these visits, activities such as meeting the elderly's physical care needs, talking and discussing topics of interest to the elderly (current events, sports, art, etc.), reading books, artistic activities, games (card games, team games, etc.), walking in the garden with the elderly in nice weather, and listening to the elderly's memories were carried out. The activities were carried out spontaneously, taking into account the elderly's wishes and requirements, rather than as part of a program. The activities were carried out spontaneously, taking into account the elderly's desires and requirements, rather than as part of a program. The older people's regular routines were maintained throughout the study, and their interactions with others, such as those with family and friends, were not altered. On the contrary, the daily routines of the elderly individuals were supported by the students, and their interactions with the young people were evaluated. One of the researchers observed the students from afar throughout the intervention.

**TABLE 3** | Comparison of pre-test and post-test mean scale scores for the participants.

| Scales                         | Dimension           | Item number | Min-max | Pre-test, $M \pm SD$ | Post-test, $M \pm SD$ | $t$   | $p$    | $d$    |
|--------------------------------|---------------------|-------------|---------|----------------------|-----------------------|-------|--------|--------|
| Psychological Well-Being Scale | Single dimension    | 8           | 8–56    | 37.05 $\pm$ 15.16    | 42.27 $\pm$ 14.02     | –7.11 | <0.001 | –0.502 |
| Optimism–Pessimism Scale       | Optimism dimension  | 10          | 8–50    | 35.90 $\pm$ 12.50    | 38.30 $\pm$ 12.80     | –2.91 | 0.004  | –0.205 |
|                                | Pessimism dimension | 10          | 8–50    | 24.70 $\pm$ 12.20    | 22.40 $\pm$ 12.40     | 2.60  | 0.010  | 0.184  |

Abbreviations:  $d$ , Cohen's  $d$  effect size;  $M$ , mean;  $p$ , significance level <0.05;  $SD$ , standard deviation;  $t$ , paired sample  $t$  test.

### 3.7 | Data Analysis

The data were evaluated using the SPSS 22.0 package, a computer program designed for statistical analysis. The normality of the data distribution was assessed using Skewness and Kurtosis values, Q-Q plots, and the Shapiro-Wilk test. Descriptive statistical techniques, including the calculation of percentage and frequency values, were employed to analyse the data. In order to facilitate intergroup comparisons, a series of statistical tests were conducted, including independent sample  $t$  test and paired sample  $t$  test, as well as one-way ANOVA tests. Tukey's HSD test was applied for further analyses. The significance level was accepted as 0.05. Cohen's  $d$  was used to determine the effect size.

## 4 | Ethical Considerations

The requisite ethical approval was obtained from the Ethics Committee of Istanbul Kültür University (permission number 2032.128, dated 12/10/2023) and from the institution where the research was conducted (permission number E.93021335-770-6845, dated 25/09/2023). Written and verbal consent was obtained from the elderly participants using an informed consent form prior to the study. Furthermore, the necessary permissions were obtained from the students who participated in the study.

## 5 | Results

The mean age of the individuals participating in the study was 72.40  $\pm$  7.72 years (range: 65–95 years). Table 1 presents the demographic characteristics of the participants, while Table 2 outlines the participants' perspectives on nursing home residency before and after visits.

Table 3 illustrates the comparison of the mean scores for psychological well-being and optimism–pessimism of the elderly population before and after regular intergenerational visits. A statistically significant difference was identified between the pre-test and post-test mean scores of psychological well-being of the elderly ( $t = -7.11$ ,  $p < 0.001$ ). The effect size of the difference between the mean scores ( $d = -0.502$ ) was found to be moderate.

The mean score for optimism on the Optimism–Pessimism Scale for the elderly was 35.90  $\pm$  12.50 prior to the visit and 38.30  $\pm$  12.80 after the visit. A statistically significant difference

was found between the pretest and posttest mean scores of the optimism dimension ( $t = -2.91$ ,  $p = 0.004$ ). This difference was found to have a small effect size ( $d = -0.205$ ).

The mean score for the pessimism dimension was 24.70  $\pm$  12.20 prior to the visit, which decreased to 22.40  $\pm$  12.40 following the visit. A statistically significant difference was observed between the pre-test and post-test mean scores for the pessimism dimension ( $t = 2.60$ ,  $p = 0.010$ ). The effect size ( $d = 0.184$ ) of the difference between the pre-test and post-test mean scores was found to be statistically insignificant.

Table 4 provides a comparison of the pre-test and post-test mean scores of the Psychological Well-Being Scale and Optimism–Pessimism Scale based on the personal characteristics of the elderly individuals. A statistically significant difference was found between the gender of the participants and the mean scores of the Psychological Well-Being Scale and the optimism dimension before and after the visit ( $p < 0.001$ ). A significant difference was observed in the mean scores of psychological well-being before and after the visit, based on the participants' age groups ( $F = 3.14$ ,  $p = 0.032$ ). Further analysis revealed that the mean scores of individuals aged 65–70 in both the pre-test and post-test were higher than those of the group aged 81 years and over.

While no statistically significant difference was found between the presence of continuous medication and the pre-test and post-test mean scores for the Psychological Well-Being Scale and the optimism dimension ( $p > 0.05$ ), a significant difference was observed in the mean pre-test scores for the Pessimism dimension ( $t = 2.106$ ,  $p = 0.036$ ).

A statistically significant difference ( $p < 0.05$ ) was found between the presence of chronic disease and the pre-test mean scores for the optimism and pessimism dimensions; no significant difference was observed in the post-test scores. The pretest results indicated that the elderly without chronic disease exhibited a higher level of optimism compared to the elderly with chronic disease.

There is a significant difference between the perception of feeling old and their pre-test and post-test scores on the scales ( $p < 0.05$ ). Elderly individuals who perceive themselves as younger have higher scores in psychological well-being and optimism, and lower levels of pessimism compared to those who perceive themselves as too old or old.

**TABLE 4** | Comparison of participants' demographic characteristics with mean scale scores from pre-test and post-test measurements.

| Variable       | Optimism–Pessimism Scale       |                                 |                       |                     |                                |                                 |                     |                  |
|----------------|--------------------------------|---------------------------------|-----------------------|---------------------|--------------------------------|---------------------------------|---------------------|------------------|
|                | Psychological Well-Being Scale |                                 |                       |                     | Optimism dimension             |                                 |                     |                  |
|                | Pre-test, <i>M</i> ± <i>SD</i> | Post-test, <i>M</i> ± <i>SD</i> |                       |                     | Pre-test, <i>M</i> ± <i>SD</i> | Post-test, <i>M</i> ± <i>SD</i> | Pessimism dimension |                  |
| Gender         | Female                         | 30.86±17.28                     | 35.77±15.27           |                     | 33.7±13.0                      | 36.2±13.3                       | 25.9±12.3           | 23.7±12.8        |
|                | Male                           | 42.70±10.08                     | 48.21±9.51            |                     | 37.9±11.9                      | 40.3±12.0                       | 23.6±12.1           | 21.2±12.0        |
| Age (year)     |                                | <i>t</i> =−5.863                | <i>t</i> =−6.858      |                     | <i>t</i> =−2.40                | <i>t</i> =−2.30                 | <i>t</i> =1.31      | <i>t</i> =1.42   |
|                | <sup>a</sup> 65–70             | <b><i>p</i>=0.000</b>           | <b><i>p</i>=0.000</b> |                     | <b><i>p</i>=0.017</b>          | <b><i>p</i>=0.023</b>           | <i>p</i> =0.193     | <i>p</i> =0.157  |
|                | <sup>b</sup> 71–75             | 39.40±13.50                     | 44.60±13.20           |                     | 36.70±12.38                    | 38.30±13.13                     | 24.30±12.46         | 23.30±12.97      |
|                | <sup>c</sup> 76–80             | 39.30±15.00                     | 43.40±14.70           |                     | 38.30±11.77                    | 41.30±11.66                     | 21.30±11.74         | 19.70±10.94      |
|                | <sup>d</sup> 81 ve ↑           | 33.20±16.90                     | 40.80±12.50           |                     | 35.40±12.94                    | 40.90±8.57                      | 26.40±11.73         | 20.00±8.65       |
| Marital Status |                                | 30.90±16.80                     | 34.50±15.60           |                     | 31.60±12.88                    | 33.00±14.99                     | 27.10±12.05         | 24.20±14.63      |
|                |                                | <i>F</i> =3.14                  | <i>F</i> =3.78        |                     | <i>F</i> =1.62                 | <i>F</i> =2.62                  | <i>F</i> =1.38      | <i>F</i> =1.54   |
|                |                                | <b><i>p</i>=0.032</b>           | <b><i>p</i>=0.015</b> | <i>d</i> < <i>a</i> | <i>p</i> =0.193                | <i>p</i> =0.058                 | <i>p</i> =0.256     | <i>p</i> =0.213  |
| Child presence |                                | 31.40±14.04                     | 31.87±14.38           |                     | 31.1±9.70                      | 33.60±12.61                     | 25.9±9.70           | 25.2±11.43       |
|                |                                | 37.50±15.19                     | 43.11±13.69           |                     | 36.3±12.7                      | 38.7±12.80                      | 24.6±12.4           | 22.2±12.5        |
|                |                                | <i>t</i> =−1.609                | <i>t</i> =−2.922      |                     | <i>t</i> =−1.55                | <i>t</i> =−1.50                 | <i>t</i> =0.399     | <i>t</i> =0.901  |
|                |                                | <i>p</i> =0.126                 | <b><i>p</i>=0.010</b> |                     | <i>p</i> =0.122                | <i>p</i> =0.136                 | <i>p</i> =0.690     | <i>p</i> =0.369  |
|                | Yes                            | 36.92±14.92                     | 41.56±14.05           |                     | 35.20±11.80                    | 38.40±12.70                     | 23.50±11.10         | 21.60±12.40      |
|                | No                             | 37.10±15.31                     | 42.58±14.05           |                     | 36.20±12.90                    | 38.30±12.90                     | 25.20±12.70         | 22.80±12.50      |
|                |                                | <i>t</i> =−0.082                | <i>t</i> =−0.474      |                     | <i>t</i> =−0.528               | <i>t</i> =0.079                 | <i>t</i> =−0.916    | <i>t</i> =−0.627 |
|                |                                | <i>p</i> =0.935                 | <i>p</i> =0.637       |                     | <i>p</i> =0.597                | <i>p</i> =0.936                 | <i>p</i> =0.361     | <i>p</i> =0.531  |

(Continues)

TABLE 4 | (Continued)

| Variable                          | Optimism–Pessimism Scale                    |                                           |                                           |                                           |                                |                                 |
|-----------------------------------|---------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|--------------------------------|---------------------------------|
|                                   | Psychological Well-Being Scale              |                                           | Optimism dimension                        |                                           | Pessimism dimension            |                                 |
|                                   | Pre-test, <i>M</i> ± <i>SD</i>              | Post-test, <i>M</i> ± <i>SD</i>           | Pre-test, <i>M</i> ± <i>SD</i>            | Post-test, <i>M</i> ± <i>SD</i>           | Pre-test, <i>M</i> ± <i>SD</i> | Post-test, <i>M</i> ± <i>SD</i> |
| Educational background            | <sup>a</sup> Illiterate                     | 26.73 ± 16.48                             | 34.03 ± 16.12                             | 30.30 ± 13.50                             | 35.60 ± 13.30                  | 30.00 ± 11.90                   |
|                                   | <sup>b</sup> Primary Education              | 37.53 ± 14.64                             | 42.93 ± 13.77                             | 35.80 ± 12.20                             | 38.70 ± 12.40                  | 25.00 ± 12.01                   |
|                                   | <sup>c</sup> Secondary Education and higher | 43.86 ± 11.30                             | 46.64 ± 10.11                             | 40.80 ± 11.40                             | 39.40 ± 13.80                  | 19.40 ± 11.00                   |
| Presence of continuous medication |                                             | <i>F</i> = 11.796                         | <i>F</i> = 7.539                          | <i>F</i> = 5.742                          | <i>F</i> = 0.791               | <i>F</i> = 7.080                |
|                                   | Yes                                         | <i>p</i> = 0.100                          | <b><i>p</i> = 0.001</b>                   | <b><i>p</i> = 0.005</b>                   | <i>p</i> = 0.458               | <b><i>p</i> = 0.002</b>         |
|                                   | No                                          |                                           | <i>a</i> < <i>b</i> , <i>c</i>            | <i>a</i> < <i>c</i>                       |                                | <i>c</i> < <i>a</i> , <i>b</i>  |
| Presence of chronic               |                                             | 37.36 ± 15.16                             | 42.60 ± 14.06                             | 35.60 ± 13.10                             | 38.40 ± 12.80                  | 25.90 ± 12.50                   |
|                                   | Yes                                         | 36.28 ± 15.26                             | 41.45 ± 14.00                             | 36.60 ± 11.30                             | 38.20 ± 12.80                  | 21.90 ± 11.00                   |
|                                   | No                                          | <i>t</i> = 0.459                          | <i>t</i> = 0.528                          | <i>t</i> = −0.537                         | <i>t</i> = 0.126               | <i>t</i> = 2.106                |
| Perception of own age             |                                             | <i>p</i> = 0.647                          | <i>p</i> = 0.598                          | <i>p</i> = 0.592                          | <i>p</i> = 0.900               | <b><i>p</i> = 0.036</b>         |
|                                   | Yes                                         | 36.42 ± 15.52                             | 41.84 ± 14.78                             | 34.70 ± 13.10                             | 37.70 ± 13.10                  | 26.00 ± 12.60                   |
|                                   | No                                          | 38.43 ± 14.36                             | 43.20 ± 12.25                             | 38.40 ± 11.00                             | 39.80 ± 12.10                  | 22.00 ± 7.68                    |
| Perception of own age             |                                             | <i>t</i> = −0.896                         | <i>t</i> = −0.686                         | <i>t</i> = −2.075                         | <i>t</i> = −1.08               | <i>t</i> = 2.93                 |
|                                   | <sup>a</sup> Too old                        | <i>p</i> = 0.372                          | <i>p</i> = 0.494                          | <b><i>p</i> = 0.040</b>                   | <i>p</i> = 0.280               | <b><i>p</i> = 0.023</b>         |
|                                   | <sup>b</sup> Old                            | 20.80 ± 14.50                             | 27.70 ± 13.17                             | 24.90 ± 11.17                             | 31.60 ± 13.65                  | 31.70 ± 12.71                   |
| Perception of own age             |                                             | 31.30 ± 16.05                             | 37.70 ± 15.19                             | 31.80 ± 11.29                             | 35.40 ± 12.87                  | 27.90 ± 11.87                   |
|                                   | <sup>c</sup> Middle aged                    | 37.30 ± 12.99                             | 43.90 ± 13.54                             | 35.80 ± 12.24                             | 38.20 ± 13.66                  | 24.10 ± 12.29                   |
|                                   | <sup>d</sup> Young                          | 47.20 ± 7.78                              | 49.40 ± 7.10                              | 43.30 ± 9.48                              | 43.20 ± 9.30                   | 20.40 ± 10.50                   |
| Perception of own age             |                                             | <i>F</i> = 36.1                           | <i>F</i> = 25.30                          | <i>F</i> = 22.00                          | <i>F</i> = 7.80                | <i>F</i> = 6.88                 |
|                                   | <sup>a</sup> Too old                        | <b><i>p</i> &lt; 0.001</b>                | <b><i>p</i> &lt; 0.001</b>                | <b><i>p</i> &lt; 0.001</b>                | <b><i>p</i> &lt; 0.001</b>     | <b><i>p</i> &lt; 0.001</b>      |
|                                   | <sup>b</sup> Old                            | <i>d</i> > <i>c</i> > <i>b</i> , <i>a</i> | <i>d</i> > <i>c</i> > <i>b</i> > <i>a</i> | <i>d</i> > <i>c</i> > <i>b</i> , <i>a</i> | <i>d</i> > <i>a</i> , <i>b</i> | <i>d</i> < <i>a</i> , <i>b</i>  |

(Continues)

TABLE 4 | (Continued)

| Variable                                                     |                                     | Optimism–Pessimism Scale       |                          |  |                          |                          |                          |
|--------------------------------------------------------------|-------------------------------------|--------------------------------|--------------------------|--|--------------------------|--------------------------|--------------------------|
|                                                              |                                     | Psychological Well-Being Scale |                          |  | Optimism dimension       |                          |                          |
|                                                              |                                     | Pre-test, <i>M</i> ±SD         | Post-test, <i>M</i> ±SD  |  | Pre-test, <i>M</i> ±SD   | Post-test, <i>M</i> ±SD  | Pessimism dimension      |
| Length of stay in the nursing home                           | Less than 1 year                    | 38.10±14.70                    | 43.90±13.80              |  | 35.00±14.00              | 38.80±12.00              | 27.40±12.70              |
|                                                              | 1–5 years                           | 35.90±15.00                    | 42.20±14.50              |  | 36.40±12.40              | 38.10±13.90              | 23.70±12.40              |
|                                                              | More than 5 years                   | 37.70±15.60                    | 41.60±13.70              |  | 35.90±12.10              | 38.30±12.10              | 24.40±11.80              |
| Reason for being in a nursing home                           |                                     | <i>F</i> =0.397                | <i>F</i> =0.358          |  | <i>F</i> =0.174          | <i>F</i> =0.036          | <i>F</i> =1.20           |
|                                                              |                                     | <i>p</i> =0.673                | <i>p</i> =0.700          |  | <i>p</i> =0.840          | <i>p</i> =0.964          | <i>p</i> =0.277          |
|                                                              | <sup>a</sup> Willingly              | 41.80±13.20                    | 45.50±12.60              |  | 38.60±12.20              | 41.10±11.60              | 22.60±12.30              |
|                                                              | <sup>b</sup> By Request of Children | 26.10±14.60                    | 32.50±13.50              |  | 30.20±10.90              | 33.00±13.40              | 25.70±11.60              |
|                                                              | <sup>c</sup> Loneliness             | 35.90±15.30                    | 42.00±14.20              |  | 35.10±12.70              | 37.40±13.10              | 26.20±12.20              |
| Status of contact with family (spouse, child etc.)           |                                     | <i>F</i> =11.10                | <i>F</i> =8.32           |  | <i>F</i> =4.44           | <i>F</i> =4.13           | <i>F</i> =1.93           |
|                                                              |                                     | <b><i>p</i>&lt;0.001</b>       | <b><i>p</i>&lt;0.001</b> |  | <b><i>p</i>=0.013</b>    | <b><i>p</i>=0.017</b>    | <i>p</i> =0.148          |
|                                                              | Yes                                 | b< c< a                        | b< a, c                  |  | b< a                     | b< a                     | <i>F</i> =1.64           |
|                                                              | No                                  | 41.50±12.60                    | 45.30±12.00              |  | 39.30±10.80              | 39.80±12.50              | 22.00±10.70              |
| Being visited by immediate circle (family/relatives/friends) |                                     | 31.00±16.30                    | 38.10±15.50              |  | 31.20±13.30              | 36.30±13.00              | 28.40±13.20              |
|                                                              |                                     | <i>t</i> =4.95                 | <i>t</i> =3.61           |  | <i>t</i> =4.62           | <i>t</i> =1.93           | <i>t</i> =−3.65          |
|                                                              | Yes                                 | <b><i>p</i>&lt;0.001</b>       | <b><i>p</i>&lt;0.001</b> |  | <b><i>p</i>&lt;0.001</b> | <i>p</i> =0.055          | <i>t</i> =−2.14          |
|                                                              | No                                  | 41.50±12.30                    | 45.50±11.60              |  | 38.90±10.80              | 40.40±12.00              | <b><i>p</i>=0.034</b>    |
| Presence of nursing home friends                             |                                     | 30.50±16.60                    | 37.60±15.80              |  | 31.60±13.70              | 35.30±13.30              | 20.00±11.50              |
|                                                              |                                     | <i>t</i> =5.11                 | <i>t</i> =3.84           |  | <i>t</i> =4.04           | <i>t</i> =2.87           | 25.90±12.90              |
|                                                              | Yes                                 | <b><i>p</i>&lt;0.001</b>       | <b><i>p</i>&lt;0.001</b> |  | <b><i>p</i>&lt;0.001</b> | <b><i>p</i>=0.005</b>    | <i>t</i> =−4.71          |
|                                                              | No                                  | 43.50±10.39                    | 47.20±8.90               |  | 40.00±10.50              | 41.50±11.10              | <b><i>p</i>&lt;0.001</b> |
|                                                              |                                     | 24.60±15.20                    | 32.90±17.00              |  | 28.00±12.40              | 32.30±13.60              | 20.10±11.20              |
|                                                              |                                     | <i>t</i> =9.28                 | <i>t</i> =7.78           |  | <i>t</i> =7.21           | <i>t</i> =4.85           | 26.90±13.50              |
|                                                              |                                     | <b><i>p</i>&lt;0.001</b>       | <b><i>p</i>&lt;0.001</b> |  | <b><i>p</i>&lt;0.001</b> | <b><i>p</i>&lt;0.001</b> | <i>t</i> =−3.57          |
|                                                              |                                     |                                |                          |  |                          |                          | <b><i>p</i>&gt;0.001</b> |

Note: Bold values, Statistically significant *p* value were shown with bold characters. Abbreviations: *F*, one way anova test; *M*, mean; *p*, significance level <0.05; posthoc, tukey test; SD, standard deviation; *t*, independent sample *t* test.

There is a significant difference in the pre-test mean scores for the Psychological Well-Being Scale and Optimism and Pessimism Scale between elderly individuals who maintain contact with their families, receive visits from close acquaintances, and have friends in the nursing home, and those who do not have such interactions ( $p < 0.05$ ).

## 6 | Discussion

The quality of individuals' experiences in old age is closely related to their psychological well-being and outlook on life (Levy et al. 2022). An increase in the perceived level of social support among elderly individuals is expected to have a positive impact on their mental health and overall well-being (Whear et al. 2023). The objective of this study was to ascertain the impact of regular visits by individuals belonging to Generation Z on the psychological well-being and levels of optimism and pessimism of elderly residents in nursing homes.

The term 'psychological well-being' is defined as a multidimensional concept that is influenced by a number of different factors (Kang and Kim 2022). Factors such as loneliness, familial care support, access to appropriate medical facilities, financial stability, and social engagement can significantly impact the psychological well-being of elderly individuals (Sujini and Bilquis 2018). It has been reported that elderly individuals residing in nursing homes experience lower levels of close relationships, autonomy, and social participation compared to those living with their families (Amonkar et al. 2018), which consequently impacts their psychological well-being (Mishra et al. 2023). The existing literature indicates that there are variations in individuals' levels of psychological well-being based on gender, age, and marital status. It is reported that female, single, and older individuals generally have lower levels of psychological well-being due to increased functional disorders, heightened perceptions of loneliness, and dissatisfaction with perceived social support, among other factors (Mishra et al. 2023; Matud et al. 2020). This study yielded findings that were consistent with those of previous literature, indicating that female, single, and older individuals exhibited lower levels of psychological well-being. It can be concluded that the overall psychological well-being of the participants is at a moderate level. A review of the literature, in parallel with our study, indicates that the psychological well-being of the elderly is generally at a moderate level (Kang and Kim 2022; Ergin et al. 2023; Inel Manav et al. 2021).

The importance of promoting psychological well-being in reducing morbidity and mortality within society is emphasised (Steptoe 2019). Social support can be beneficial in managing stress and illness by fostering healthy living behaviours among the elderly (Behrendt et al. 2023). Additionally, social welfare can be promoted by ensuring that elderly individuals feel psychologically well and by implementing social initiatives aimed at preventing ageism in society. One of the most effective strategies for achieving long-term resolution of age discrimination is the reduction of intergenerational tensions (Levy et al. 2022). Intergenerational contact enhances interaction by creating connections between individuals of varying ages. This can

contribute to ensuring that older adults continue to be productive and esteemed members of society. It also modifies young people's perceptions of older individuals, helping them avoid negative ageist attitudes (Boyano et al. 2022). Boyano et al. (2022) reported that regular visits by students, involving 289 elderly individuals and 91 students, provided a protective effect by delaying functional deterioration among elderly residents in nursing homes. Furthermore, the study indicated that the majority of nursing home residents perceived interactions with students as a rewarding experience. Gualano et al. (2018) also reported that intergenerational programmes positively impact the well-being, depression, self-reported health, and self-esteem of elderly individuals. In this study, it was observed that regular visits had a moderate impact on the psychological well-being levels of the participants. Additionally, it can be stated that regular visits have a more pronounced effect on participants who are older, single, and have a higher level of education.

Optimism or pessimism can affect the quality of life and physical and mental health of older people by changing their expectations about the future. High levels of optimism and low levels of pessimism may promote healthy aging and increase survival in individuals (Craig et al. 2023; Chopik et al. 2015). Craig et al. (2023) found that low social support and loneliness were associated with higher levels of pessimism in their study of 10,146 individuals aged 70 years and over. Additionally, a higher level of education was found to be associated with greater optimism and lower levels of pessimism. This study found that elderly individuals with higher education levels demonstrated significantly reduced pessimism following the visits. In a study conducted by Murayama et al. (2015), it was found that intergenerational visits to a nursing home have a positive effect on the mood of the elderly, reducing the risk of loneliness (Murayama et al. 2015). The findings of this study indicate that regular visits led to an increase in optimism and a decrease in pessimism among elderly individuals.

## 7 | Limitations

A potential limitation of this study is the possibility of selection bias due to the use of a questionnaire. Another limitation of the study is the absence of a specific theme in the regular visits. Additionally, cultural differences should be considered when interpreting the findings of this study.

## 8 | Conclusion

It is crucial for elderly individuals to experience psychological well-being as part of their overall health. To achieve this objective, it is essential to enhance the perceived level of social support among elderly individuals. There is a growing interest in intergenerational programmes, given their potential to benefit both younger and older people, as well as wider society more broadly. The findings of this study indicate that regular intergenerational visits have a beneficial impact on the psychological well-being of the elderly in nursing homes. These visits were associated with an increase in levels of optimism and a decrease in levels of pessimism.

## 9 | Recommendations

Incorporating activities with young people into the daily routine of nursing homes is crucial for enhancing intergenerational relationships. It is recommended that these initiatives be incorporated into national health policies with the objective of preventing discriminatory practices against older persons, which have increased in recent years.

### Author Contributions

S.T.: writing – original draft, conceptualization, project administration, supervision, resources, methodology, visualisation, writing review and editing; F.T.: writing – original draft, conceptualization, supervision, resources, methodology, visualisation, formal analysis, writing review and editing; S.C.: writing – original draft, conceptualization, methodology, investigation, formal analysis, writing review and editing; E.Y.: writing – original draft, investigation, data curation, writing review and editing; A.N.C.: investigation, data curation, writing review and editing; G.B.T.: investigation, data curation, writing review and editing; All authors approved the version to be published and agreed to be accountable for all aspects of the work.

### Acknowledgements

We extend our gratitude to the elderly residents of the nursing home and the volunteer students for their participation in the study.

### Disclosure

The author(s) affirm that the methods used in the data analyses are suitably applied to their data within their study design and context, and the statistical findings have been implemented and interpreted correctly.

### Conflicts of Interest

The authors declare no conflicts of interest.

### Data Availability Statement

The datasets generated and/or analysed during the current study are not publicly available due to privacy reasons but are available from the corresponding author on reasonable request.

### References

- Ahmed Haaek, M., and M. Bes. 2022. "Relationship Between Morality, Happiness, and Social Support Among Elderly People." *Middle East Current Psychiatry* 29, no. 1: 31. <https://doi.org/10.1186/s43045-022-00122-7>.
- Amonkar, P., M. J. Mankar, P. Thatkar, et al. 2018. "A Comparative Study of Health Status and Quality of Life of Elderly People Living in Old Age Homes and Within Family Setup in Raigad District, Maharashtra." *Indian Journal of Community Medicine* 43, no. 1: 10–14. [https://doi.org/10.4103/ijcm.IJCM\\_301\\_16](https://doi.org/10.4103/ijcm.IJCM_301_16).
- Behrendt, D., S. Spieker, C. Sumngern, and V. Wendschuh. 2023. "Integrating Social Support Into Interventions Among the Elderly in Nursing Homes: A Scoping Review." *BMJ Open* 13: e071962. <https://doi.org/10.1136/bmjopen-2023-071962>.
- Boyano, I., S. Nieto, J. A. Serra, et al. 2022. "An Intergenerational Programme Delays Health Impairment in Nursing Home Residents: The Duplo Project." *European Geriatric Medicine* 13, no. 6: 1365–1375. <https://doi.org/10.1007/s41999-022-00662-6>.

- Caliskan, H., and C. Karademir. 2023. "Development of the Adult Form of Optimism and Pessimism Scale (OPS—A): Study of Validity and Reliability." *Afyon Kocatepe University Journal of Social Sciences* 25, no. 4: 1260–1276. <https://doi.org/10.32709/akusosbil.1086981>.
- Chopik, W. J., E. S. Kim, and J. Smith. 2015. "Changes in Optimism Are Associated With Changes in Health Over Time Among Older Adults." *Social Psychological and Personality Science* 6, no. 7: 814–822. <https://doi.org/10.1177/1948550615590199>.
- Craig, H., D. Gasevic, J. Ryan, et al. 2023. "Socioeconomic, Behavioural, and Social Health Correlates of Optimism and Pessimism in Older Men and Women: A Cross-Sectional Study." *International Journal of Environmental Research and Public Health* 20, no. 4: 3259. <https://doi.org/10.3390/ijerph20043259>.
- Diener, E., D. Wirtz, W. Tov, et al. 2010. "New Well-Being Measures: Short Scales to Assess Flourishing and Positive and Negative Feelings." *Social Indicators Research* 97: 143–156. <https://doi.org/10.1007/s11205-009-9493-y>.
- Ergin, E., D. Yildirim, C. C. Yildiz, and S. Y. Usenmez. 2023. "The Relationship of Death Anxiety With Loneliness and Psychological Well-Being in the Elderly Living in a Nursing Home." *Omega* 88, no. 1: 333–346. <https://doi.org/10.1177/00302228221106054>.
- Eskimez, Z., P. Y. Demirci, I. K. Tosun Oz, G. Oztunç, and G. Kumas. 2019. "Loneliness and Social Support Level of Elderly People Living in Nursing Homes." *International Journal of Caring Sciences* 12, no. 1: 465–474.
- Faul, F., E. Erdfelder, A. G. Lang, and A. Buchner. 2007. "G\*Power 3: A Flexible Statistical Power Analysis Program for the Social, Behavioral, and Biomedical Sciences." *Behavior Research Methods* 39: 175–191. <https://doi.org/10.3758/BF03193146>.
- Gualano, M. R., G. Voglino, F. Bert, R. Thomas, E. Camussi, and R. Siliquini. 2018. "The Impact of Intergenerational Programs on Children and Older Adults: A Review." *International Psychogeriatrics* 30, no. 4: 451–468. <https://doi.org/10.1017/S1041610217001861>.
- Inel Manav, A., A. Bozkurt, and E. Coskun. 2021. "Evaluation of Personal Meaning Profile and Psychological Well-Being in the Older People." *Ordu University Journal of Nursing Studies* 4, no. 1: 48–55. <https://doi.org/10.38108/ouhcd.816449>.
- Kang, H., and H. Kim. 2022. "Ageism and Psychological Well-Being Among Older Adults: A Systematic Review." *Gerontology and Geriatric Medicine* 8: 23337214221087023. <https://doi.org/10.1177/23337214221087023>.
- Levy, S. R., A. Lytle, and J. Macdonald. 2022. "The Worldwide Ageism Crisis." *Journal of Social Issues* 78, no. 4: 743–768. <https://doi.org/10.1111/josi.12447>.
- Li, C., S. Jiang, and X. Zhang. 2019. "Intergenerational Relationship, Family Social Support, and Depression Among Chinese Elderly: A Structural Equation Modeling Analysis." *Journal of Affective Disorders* 248: 73–80. <https://doi.org/10.1016/j.jad.2019.01.032>.
- Marsa, R., S. J. Younesi, S. Barekati, M. Ramshini, and H. Ghyasi. 2020. "A Comparative Study on Stress, Anxiety and Depression Between Nursing-Home Elderly Residents and Home-Dwelling Elderly People." *Iranian Journal of Ageing* 15, no. 2: 176–187. <https://doi.org/10.32598/SIJA.15.2.422>.
- Matud, M. P., J. M. Bethencourt, I. Ibáñez, and D. Fortes. 2020. "Gender and Psychological Well-Being in Older Adults." *International Psychogeriatrics* 32, no. 11: 1293–1302. <https://doi.org/10.1017/S1041610220000824>.
- Mishra, B., J. Pradhan, and S. Dhaka. 2023. "Identifying the Impact of Social Isolation and Loneliness on Psychological Well-Being Among the Elderly in Old-Age Homes of India: The Mediating Role of Gender, Marital Status, and Education." *BMC Geriatrics* 23, no. 1: 684. <https://doi.org/10.1186/s12877-023-04384-1>.

- Moeini, B., M. Barati, M. Farhadian, and M. H. Ara. 2018. "The Association Between Social Support and Happiness Among Elderly in Iran." *Korean Journal of Family Medicine* 39, no. 4: 260–265. <https://doi.org/10.4082/kjfm.18.0026>.
- Murayama, Y., H. Ohba, M. Yasunaga, et al. 2015. "The Effect of Intergenerational Programs on the Mental Health of Elderly Adults." *Aging & Mental Health* 19, no. 4: 306–314. <https://doi.org/10.1080/13607863.2014.933309>.
- Stephoe, A. 2019. "Happiness and Health." *Annual Review of Public Health* 40, no. 1: 339–359. <https://doi.org/10.1146/annurev-publhealth-040218-044150>.
- Sujini, S. P., and A. Bilquis. 2018. "A Study on Psychological Well-Being of Elderly Living in Institutional and Non-Institutional Settings." *International Journal of Pure and Applied Bioscience* 6, no. 6: 492–496. <https://doi.org/10.18782/2320-7051.7146>.
- Telef, B. B. 2013. "The Adaptation of Psychological Well-Being Into Turkish: A Validity and Reliability Study." *Hacettepe University Journal of Education* 28, no. 3: 374–384.
- Turkish Statistical Institute (TUIK). 2024. "Elderly People With Statistics, 2023." <https://data.tuik.gov.tr/Bulten/Index?p=Elderly-Statistics-2023-53710#:~:text=Ya%C5%9Fl%C4%B1%20n%C3%BC-fusun%20toplamlam%20n%C3%BCfus%20i%C3%A7indeki,10%2C2'ye%20y%C3%BCkseldi>.
- von Elm, E., D. G. Altman, M. Egger, S. J. Pocock, P. C. Gøtzsche, and J. P. Vandenbroucke. 2014. "The Strengthening of Observational Studies in Epidemiology (STROBE) Statement: Guidelines for Reporting Observational Studies." *International Journal of Surgery* 12, no. 12: 1495–1499. <https://doi.org/10.1016/j.ijsu.2014.07.013>.
- Whear, R., F. Campbell, M. Rogers, et al. 2023. "What Is the Effect of Intergenerational Activities on the Wellbeing and Mental Health of Older People?: A Systematic Review." *Campbell Systematic Reviews* 19, no. 4: 1355. <https://doi.org/10.1002/cl2.1355>.
- WHO. 2021. "Global Report on Ageism." <https://www.who.int/publications/i/item/9789240>.
- WHO. 2022. "Ageing and Health." <https://www.who.int/news-room/fact-sheets/detail/ageing-and-health>.
- Young, T., S. Macinnes, A. Jarden, and R. Colla. 2022. "The Impact of a Wellbeing Program Imbedded in University Classes: The Importance of Valuing Happiness, Baseline Wellbeing and Practice Frequency." *Studies in Higher Education* 47, no. 4: 751–770. <https://doi.org/10.1080/03075079.2020.1807491>.
- Zhao, X., D. Zhang, M. Wu, et al. 2018. "Loneliness and Depression Symptoms Among the Elderly in Nursing Homes: A Moderated Mediation Model of Resilience and Social Support." *Psychiatry Research* 268: 143–151. <https://doi.org/10.1016/j.psychres.2018.07.011>.

## Supporting Information

Additional supporting information can be found online in the Supporting Information section.