Assessment of the attitudes toward aging among children who live with the elderly

Avaliação da atitude das crianças que residem com idosos em relação à velhice

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Abstract

Objective: To evaluate the attitude of children who live with seniors with non-transmissible chronic diseases toward aging and the related sociodemographic variables.

Methods: This cross-sectional study included 48 children aged seven to ten years. We used the following instruments: sociodemographic questionnaire and attitude scale for children in relation to aging. This instrument includes four domains and evaluates the attitude toward aging on a scale ranging from 1 (more positive attitude) to 3 (more negative attitude).

Results: Mean score was 1.79 ± 0.19. Between domains, the domain showing the lowest mean value was the Persona domain (1.70 ± 0.33). The highest value was seen in the Agency domain (1.84 ± 0.40). Variables that showed a relation ($p<0.05$) with attitudes were family income, degree of kinship and time of contact daily with senior and the type of non-transmissible chronic disease of the elderly.

Conclusion: Children had more positive than negative attitudes toward aging.

Resumo

Objetivo: Avaliar a atitude em relação à velhice de crianças que residem com idosos com doenças crônicas não transmissíveis e as variáveis sociodemográficas relacionadas.

Métodos: Trata-se de um estudo transversal, desenvolvido com 48 crianças entre sete e dez anos de idade. Foram utilizados: questionário sociodemográfico e a Escala de Atitudes em Relação à Velhice para Crianças, que avalia as atitudes em relação à velhice em uma escala de 1 (atitude mais positiva) a 3 (atitude mais negativa) e possui quatro domínios.

Resultados: A pontuação média foi $1,79\pm0,19$ e entre os domínios, a menor média foi no Persona ($1,70\pm0,33$) e a maior foi na Agência ($1,84\pm0,40$). Variáveis que apresentaram relação ($p<0,05$) com as atitudes foram renda familiar, grau de parentesco e tempo diário de convivência com o idoso e tipo de doença crônica não transmissível do idoso.

Conclusão: As crianças apresentaram atitudes mais positivas do que negativas em relação à velhice.

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Conflict of interest: none reported.

Introduction

Changes in demographic and epidemiologic profiles and the vulnerability of elderly people to developing diseases can be observed worldwide as the population become older.[1]

Among diseases that most affect elderly people are non-transmissible chronic diseases, which constitute a new and important challenge for public health.[2] Non-transmissible chronic diseases characterized as permanent and irreversible can lead to incapacity and dependency, negatively affecting an individual patient's life and interfering in how patients interact with those living with them.[3]

In addition to these changes, another factor that has been drawing the attention of researchers is family configuration; increase in life expectancy has been the motivating factor for longer intergenerational relationships in which children live with their grandparents for a longer time.[4]

This new form of family integration has led to the need to simultaneously adapt to members that make up a family, and children often cannot understand the heterogeneity present in aging. In this context, a model that must be highlighted is the promotion of intergenerational solidarity that can accommodate the ambivalent, positive, and negative aspects, all of which vary according to the family environment, individual experiences of each family member, and the connection established among generations.[5]

A study evaluated whether grandparents have their adult grandchildren as frequent contacts in their support network, and whether this frequency is related to the intensity of contact that grandchildren had with their grandparents during childhood. The study found that adult grandchildren who had an intense relationship with grandparents during childhood were more present in the grandparents' support network during adulthood. Researchers concluded that children who have an intense relationship with grandparents in childhood have a higher probability of keeping a positive relationship with grandparents in the adult lives and become an important source of support of care for their grandparents.[5]

Studies of intergenerational relationships have demonstrated that it is in childhood that the relationship between grandparents and grandchildren is established, because in this phase of life children spend more time with grandparents.[5,6] In Germany, a study investigated the relationship between grandparents and grandchildren in the family context and showed that the relationship established between both grandparent and grandchild is influenced by social, personal, and behavioral variables and by the values of other family members.[4]

Attitudes present cognitive and emotional components, positive or negative, that guide the tendency to action. These attitudes develop gradually during childhood through the child's life experiences and are influenced by the environment in which the child lives.[5-7]

Most studies on intergenerational relationship have investigated the views of grandparents, adult parents, and adolescent grandchildren; few have addressed younger age groups, such as children, who also deserve attention and integrate intergenerational relations.[5-8]

Evaluating attitudes on aging in children who live with elderly family members and analyzing the conditions that affect life with these elderly people and can lead to differences in attitudes toward elders are important in learning how children view aging. Such research can generate results that could support an intervention plan to promote intergenerational solidarity in the family environment.

Therefore, this study aimed to assess attitudes toward aging among children who live with elderly family members with non-transmissible chronic disease and to analyze sociodemographic variables that can be related to the development of these attitudes.

Methods

This cross-sectional study involved 48 children who live with elderly relatives and registered at the Family Health Unit in the urban area of the municipality of São Paulo State, southeast Brazil.

We included children aged seven to ten years old who lived with at least one elderly person aged ≥60 years who had a non-transmissible chronic disease. We identified 75 children, 27 of whom were excluded for the following reasons: moved out of the region covered by the Family Health Unit (n=2); not at home after two visits at two different times (n=9); elderly person died and the child was no longer living with that person (n=2)l and lack of consent for participation from the responsible adult (n=14). The final sample consisted of 48 children who were interviewed.

To collect data we created a sociodemographic characterization form that included child's name, address, sex, age, and educational level; number of family members at home; child's religion and race; health insurance; family monthly income; degree of kinship with elder who lived with the child; and time of regular contact and length of contact with elderly family member daily.

During analyses, data were grouped as follows: family income was divided into three categories (up to 1 times the minimum wage; 1 to 3 times the minimum wage; >3 times the minimum wage); daily time of contact was grouped as ≥5 hours a day and <5 hours a day; and time spent living together was categorized as ≥5 years and <5 years.

Data on elders who lived with children were obtained from medical records of the Family Health Unit and comprised name, sex, age, type, and time and number of nontransmissible chronic diseases. To analyze data on elderly persons, we divided age into five categories (60-64 years, 65-69 years, 70-74 years, 75-79 years and 80 years or older). Type of non-transmissible chronic disease was categorized as conditions affecting the circulatory system and conditions affecting other systems. For duration of non-transmissible chronic disease, the categories were <1year and 5-10 years. The number of chronic diseases was categorized as one disease, two diseases, and three or more diseases.

To assess children's attitudes on aging, Todaro's scale was applied. The scale is composed of 14 bipolar items; children must choose the best option in answering "The elderly are:". The scale is divided into the following four domains:

- Cognition: related to ability to solve problems, information and agility;
- Agency: related to autonomy and welfare of the aged person;
- Persona: reflecting the social image of elderlies;
- Social relations: related to social integration of elderly.

Scores for this analysis are 1, a more positive attitude; 2, a neutral attitude; and 3 (the maximum score), a more negative attitude. Scale items for which positive poles were not located correctly at one point were adjusted according to the author's guidance. We chose this instrument because it has good internal consistency when applied to children of the age included in this study; the instrument is also easy to administer for the assessment of children's attitudes toward aging.

Data were tabulated using a Microsoft Excel spreadsheet and subsequently imported into the Statistical Package for Social Science (SPSS) program, version 11.5. Data were analyzed using a descriptive statistical approach (simple frequency), measure of central tendency (mean), and variability (standard deviation - sd). For correlations between variables, we used non-parametric tests, the Kruskal-Wallis test for analysis among three or more independent groups, and the Mann-Whitney test for analysis among two independent groups. For all tests the significance level used was 5% ($p<0.05$).

Development of this study followed national and international ethical standards for research on human subjects.

Results

Children were equally distributed concerning sex (50% female, n=24; 50% male, n=24). Most children were 7 or 9 years old (29%; n=14 each), and 37% (n=18) were in their 3rd year of primary school. On average, five family members lived in each child's house, and the average family income was 2.6 times the minimum wage ($x_{min.}=0.5$; $x_{max.}=9$). The religion most reported was Catholi-

cism (58%; n=28). Most subjects reported not have private health insurance (81%; n=38).

The predominant family relationship of the child with the elderly person was grandchild-grandfather (90%; n=43). Children reported spending more than five hours daily with his/her grandfather (81%; n=39) and lived with the elderly family member for more than five years (87.5%; n=42).

Most of the elderly people who lived with the children (82%; n=37) were woman, most of whom were 60 to 64 years old (36%; n=16), had two types of non-transmissible chronic disease (47%; n=21), and had been diagnosed with their condition more than 10 years earlier (42%; n=19). For type of chronic disease, we adopted the International Classification of Diseases, Tenth Revision (ICD10), to systematize the elderly relatives' diseases. The most prevalent non-transmissible chronic diseases were of the circulatory system (35.2%; n=25) and the musculoskeletal system and conjunctive tissue (21%; n=15).

We used the Todaro scale (described above) to assess attitudes toward aging. The children's mean score was 1.79 points ($\pm$0.19; $x_{min.}$=1.4; $x_{max.}$=2.2).

The scale domain with the lowest mean score was the Persona domain (1.70$\pm$0.33); the highest mean score was for the Agency domain (1.84$\pm$0.40). The Social Relations and Cognition domains had mean scores of 1.80$\pm$0.38 and 1.83$\pm$0.31, respectively.

Of the items that make up the scale domain, those with lower scores were "Cool/Boring" (1.2$\pm$0.53) and "Valorized/Maltreated" (1.35$\pm$0.55); those with higher scores were "Openhanded/Stingy" (2.3$\pm$0.66) and "Safe/Unsafe" (2.8$\pm$0.73).

The children's mean scores on the scale, according to sociodemographic variables, showed significant mean values for the following variables: Age and Social Relations domain (p=0.05), in which the children aged seven years had more negative attitudes. The number of family members at home was significantly related to the Persona domain (p=0.03), i.e., children living with up to five persons presented a more negative attitude. A significant correlation was found between family income

and social relationship domains (p=0.03), i.e., children whose family had a monthly income of up to 1 times the minimal age had a more negative attitude toward aging, as described in table 1.

In the analysis of means of children in Scale, with identification data of elderly who lived with the child, significant values were identified in comparison between general scale and daily time that child spend with the elderly. Children who spend more than five hours daily with elderly people had more negative attitudes (p=0.01). More negative attitude on the general scale were also identified in the variable concerning the elderly person's age (p=0.04), in which children who live with elders aged 70-74 years had more negative attitudes. The variable degree of family relationship was significantly correlated (p=0.02) with the Cognition domain, where more negative attitudes in children were found, especially among those who were great-grandchildren, as shown in table 2.

When we correlated the attitude of children and non-transmissible chronic disease in elderly relatives, we did not find significant differences in time and number of non-transmissible chronic diseases.

To correlate children's attitudes toward aging and type of non-transmissible chronic disease identified by the elderly relative, the children were divided into two groups: group 1 consisted of children who live with an elderly person with a non-transmissible chronic disease of the circulatory system (this system featured the most non-transmissible chronic diseases among elderly people), and group 2 consisted of children who live with elders who have non-transmissible chronic disease in other systems.

Children in group 1 had a mean of 1.80 points, and children in Group 2 had a mean of 1.78 points. However, when compared to means, no significant results were found. Table 3 shows results of this composition as well as comparison between two groups for the four domains of the scale.

Among domains of scale, a significant correlation was seen for children in group 2 who had more negative results for the Cognition domain than children of group 1 (p=0.03).

Table 1. Mean score and comparison of Todaro's scale for assessment of children attitude toward aging, based on sociodemographic variables of the children

Variable	Mean Scale	p-value	Cognition p-value	Agency p-value	Persona p-value	Social relationship p-value
Gender		0.39	0.36	0.08	0.19	0.31
Male	1.81					
Female	1.79					
Age		0.87	0.52	0.42	0.11	0.05*
7 years old	1.80					
8 years old	1.81					
9 years old	1.79					
10 years old	1.73					
Year at school		0.95	0.52	0.92	0.21	0.10
1st and 2nd yea	1.80					
3rd year	1.81					
4th year	1.80					
5th year	1.73					
Nº persons at home		0.12	0.13	0.14	0.03*	0.13
2 to 3	1.81					
4 to 5	1.81					
6 to 7	1.79					
8 to 9	1.68					
10 to 11	1.75					
Family income		0.79	0.20	0.12	0.44	0,03*
Up to 1 min wage	1.81					
1 to 3 min wage	1.82					
>3 min wage	1.76					
Religion		0.25	0.46	0.3	0.19	0.30
Catholic	1.81					
Protestant	1.73					
Spiritist	1.93					
None/Non-specified	1.93					
Ethnic		0.09	0.17	0.96	0.38	0.43
White	1.83					
Black	1.68					
Parda	1.78					
Private health insurance		0.24	0.42	0.45	0.41	0.15
Yes	1.76					
No	1.80					

*significance level of 95% (p<0.05)

Table 2. Mean score and Todaro's scale comparison for assessment of children attitudes toward aging, based on identification data of elderly

Variable	Mean Scale	*p-value*	Cognition *p-value*	Agency *p-value*	Persona *p-value*	Social relationship *p-value*
Elderly gender		0.15	0.24	0.30	0.02*	0.16
Male	1.67					
Female	1.85					
Both	1.74					
Degree of family relationship with elder		0.44	0.02*	0.49	0.37	0.24
Grandchild	1.79					
Great-grandchild	1.80					
Length of time living with the elder		0.22	0.34	0.42	0.26	0.08
< 5 years	1.75					
≥ 5 years	1.80					
Total time of daily regular contact		0.01*	0.13	0.34	0.08	0.10
< 5 years	1.70					
≥ 5 years	1.83					
Age of the elderly relative living at child's home		0.04*	0.51	0.49	0.02*	0.17
60-64 years old	1.79					
65-69 years old	1.75					
70-74 years old	1.95					
75-79 years old	1.72					
80 or more years old	1.93					
Time of chronic disease of elderly relative		0.26	0.34	0.63	0.31	0.51
< 1 year	1.73					
5 - 10 years	1.82					
Amount of chronic diseases		0.18	0.20	0.51	0.54	0.09
1	1.77					
2	1.78					
3 or more	1.87					

*level of significance of 95% ($p < 0.05$)

Table 3. Result of comparisons (Mann-Whitney) between results of scale of children's attitudes toward aging and domains for groups 1 and 2

	Scale	Cognition	Agency	Persona	Social relationship
Mann-Whitney U test	266	198.5	252	219	279
p-value	0.34	0.03*	0.23	0.07	0.44

*level of significance of 95% ($p < 0.05$)

Discussion

A limitation of this study was the small number of participants: only 48 children. Our results cannot be generalized because interviews were done only with children age 7 to 10 years from the area covered by the Family Health Program from the municipality of São Paulo. However, the results show that it is important to understand the attitudes toward aging among persons from different ages.

Investigating children's attitudes toward aging enables us to broaden the knowledge on what younger generations think about aging. This expanded knowledge strengthens the partnership between health professionals and children in developing educational activities that seek to demystify negative stereotypes concerning aging and promote gerontological education with methods that stimulate solidarity between generations in the family environment, taking into consideration specifics of each phase of life.

Most children in the study spend more than five hours daily with the elderly family members and have lived with them for more than five years. These

data show the importance of grandparents in their grandchildren's education. This finding also agrees with a longitudinal study that assessed factors associated with delivering support to grandparents for their grandchildren; that study showed that grandparents have an intense relationship with their grandchildren, emphasizing that regular contact between grandparents and grandchildren positively influences the mental health of elderly people.[9]

Most elderly persons in our study were women and were considered to be in the young age range for elders. These data show the feminization of aging and agree with other studies that also found a greater prevalence of women in senior populations.[10,11]

In the literature, studies point out the prevalence of non-transmissible chronic disease among aging population, with a predominance in women.[12-14] In our study, most/ elderly persons had had two types of non-transmissible chronic disease (47%) for more than ten years. Such data clarify the need for prevention of chronic diseases among populations of different ages, once that current study involved seniors who were considered young, and with time of non-transmissible chronic disease that reveals that the disease developed during adulthood. Therefore, actions must improve quality of life in the population, especially because non-transmissible chronic disease can lead to functional and cognitive dependence.

The study data agree with other studies reporting a high prevalence of non-transmissible chronic disease of the circulatory system (especially hypertension) in aged populations, particularly among women.[15-17]

The mean general score for attitude toward aging among children who live with elderly relatives with chronic disease was 1.79, representing more a positive attitude in relation to aging. We found a more negative attitude in the Agency domain, which evaluates items regarding the elderly person's fitness; a more positive attitude was seen in the Persona domains, which reflect the social image of elders.

A literature review on intergenerational interventions that sought to reduce the prejudice toward aging showed that in one of the studies analyzed, children described seniors as ugly, tired and sick, showing discomfort when questioned about their own aging. This research also focuses attention on the importance of understanding what children think about elders; such an understanding is needed to plan interventions that seek to change negative attitudes toward aging. This research also emphasizes the importance of contact among children and elders as a starting point for such changes.[6]

In our study, we found more negative attitudes among children who lived with elders who had non-transmissible chronic disease in other systems. This is an important finding for planning of educational intervention because it shows attitudes toward aging constructed in childhood are influenced by different contexts in which children are included. One important factor was that only for Cognition domain did the children in group 2 achieve more negative attitudes compared with group 1.

Although significant differences were found compared with the type of chronic disease affecting the elderly relative living with the children, other variables can have an influence, such as among children who live with more than one senior at home.

In the analysis of daily time of regular contact between children and elders, we noted that children who spend more time with seniors also had more negative attitudes toward aging. However, at homes where other people lived together, attitudes of children were more positive. Living with more family members seems to favor the relationship between children and grandparents; however, when regular contact exceeds five hours daily, the child's view can become negative.

Studies show that, regarding intergenerational relations between grandparents and grandchildren, more significant than frequency and amount of contact between children and grandparents is the quality of intergenerational relations that is established and the context in which this occurs. The latter can have positive or negative influences on the development of attitudes toward aging that the children are developing and can strengthen bonds and intergenerational solidarity.[5-7]

For this reason, further studies involving different audiences can broaden the knowledge of vari-

ables that affect development of attitudes toward aging. They can also improve quality of intergenerational relationships and benefit different research areas and professional performance, given the increase in life expectancy and intensification of time of regular contact between grandparents and grandchildren in the family environment.

Conclusion

Attitudes toward aging presented by children were more positive than negative. A more negative attitude was seen in the Agency domain and a more positive attitude was seen in the Persona domain. Sociodemographic characteristics that were significantly correlated with attitudes scale toward aging for children were family income and social relationship domains; degree of family relationship with aged person and Cognition domain; time daily with regular contact; and age of the senior with general score of the scale. Concerning characteristics of non-transmissible chronic diseases presented by seniors, we observed that children who live with elders with chronic disease in noncardiac systems had a more negative attitude in the Cognition domain.

Collaborations
Oliveira NA; Luchesi BM and Pavarini SCI contributed to the conception of the project, analysis and interpretation of data, drafting the manuscript, critical review of intellectual content and approval of final version to be published. Inouye K and Barham EJ contributed with conception of the project, critical review of intellectual content and approval of final version.

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