

Adolescents' Familiarity with Ageism and Their Attitudes towards Negative Stereotypes about Older People

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ABSTRACT

Attitudes towards negative stereotypes about older people have their roots in childhood, develop through adolescence and lead to ageism. The current study investigated how many adolescents have heard of ageism and if their age affects their attitude towards negative stereotypes about older people. In the year 2022, 188 secondary school students (aged 15–19, Mean 16.9, SD = 1.37) participated in an online survey about their familiarity with ageism and attitude towards negative stereotypes about older people. Out of all 188 respondents, only 35 of those with an older relative (18.6%) were familiar with ageism ($p=0.039$). Of these 35 respondents, 11 of them (31.4%) learned about ageism at school, 5 (14.3%) in the media, 4 (11.4%) at home and 4 (11.4%) on the Internet. Further, the majority, i.e. from 33.9% to 59.6% of younger respondents (aged 15 - 17) and 35% to 59.5% of older ones (aged 18 - 19) expressed a neutral attitude towards negative stereotypes about older people. Furthermore, 8.3% to 44.0% of younger and even 10.1% to 50.6% of older respondents agreed with negative stereotypes about older people. A higher proportion of younger respondents agreed than older ones (28.4 % vs. 17.7 %) agreed with statement that older people accept innovations ($p=0.032$). Due to the insufficiently small and unrepresentative sample of the study population, the findings of the research can only be generalized to the population of students of the two secondary schools that participated in research, and to the population of Slovenian adolescents only conditionally. Already in the early period of adolescence it is necessary to carry out preventive activities to reduce ageism, such as quality intergenerational contacts combined with formal and informal educational programs about ageism and aging, in which older people with a positive view of aging would actively participate.

Keywords

Older people, Ageism, Negative stereotypes, Adolescents' attitude.

Introduction

The increase in the population over 65 is associated with negative stereotypes about the older people, which develop through adolescence and lead to ageism [1]. Butler used for the first time the term ageism, prejudice by one age group towards other age groups [2]. Ageism refers to the stereotypes (how we think), prejudice (how we feel) and discrimination (how we act) directed towards people on the basis of their age [1]. A unique feature of ageism is that age represents a category that we will all presumably become members of someday. So it seems strange that we are prejudiced against a group to which we ourselves will belong in the future.

For the most part, research lumps older people into one group and conceptualizes anyone over 65 as older person [3]. This approach often fails to accurately represent the rapidly growing, diverse, and healthy older population because it does not differentiate between the still active young-old and the potentially more impaired old-old [3]. Also Pirtošek (2020) emphasizes that age is not a binary category, yes or no and gives an example as just like someone is Dutch or a skier, he stated that two people are not old, they are not young, they have e.g. 66 and 63 years of age [4].

Views on aging and aging stereotypes are generated in early childhood and continue to develop throughout the entire lifespan [5-15]. Negative stereotypes about the older people take root already in the early years of life through three important sources such as

family models, models that children and adolescents acquire in the process of education, and models offered by the media [16,17]. The first generalized judgments about the social world around us are formed under the influence of parents and other authorities [7]. Hoffman and Komadt (2022) also emphasized the importance of family aspects for the development of adolescent's view on aging [7]. Balazs (2013) showed that young children seem to have the most extreme prejudice against older people [8]. Opposite, results of Davidovic, et al. indicate that majority of children have positive perception and attitude about older people, and they concluded that ageism is adopted later in life [12].

Even the mass media as key tellers of stories about ageing and older people can be a source of negative stereotypes and ageism [16,17]. Tomanič Trivundža analyzed the coverage of the Slovenian media in order to determine the presence of ageism in the news using the term ageism in the report to denote a set of negative stereotypes about the older people [17]. Overt examples of ageism were detected in only three of the 206 analyzed contributions, namely the stereotype of the maladjustment of the older people (they do not understand the modern world), which was applied to a specific professional group of older judges [17]. Here, older judges are shown as a group that does not can keep up with the challenges of modern society, as an unadapted and non-innovative group with the "old" views, problems and solutions. Anyway, changing the media focus on aging would be very influential on society, that's why the media should stop display aging as negative and focus on how aging can be a positive phase of life that should be supported by society [17]. On the other hand, we must not neglect the importance of language in social digital media in the spread of ageism among young people. Gendron, et al. conducted a qualitative study of a twitter assignment for 236 health professional students who partnered teams with older people living in the community [16]. Twelve percent of tweets were found to contain linguistic ageism across eight themes related to: assumptions and judgments, older people as different, uncharacteristic traits, old as negative, young as positive, infantilization, internalized aging, and internalized microaggression [16]. This demonstrates that ageistic language is so engrained in our day-to-day world that it is nearly invisible [16]. That is why adolescents should have the continuous possibility of formal and informal education about aging and ageism, in order to be able to actively participate in the formation of an older people-friendly society.

Goriup and Lahe also emphasized the importance of integrating gerontology content in all stages of education [6]. Steitz and Verner reported that although adolescents could make frequent contacts with the older people as a way to better inform themselves about aging and the older people, they are very misinformed or uninformed about aging and older adults [9]. In reviewing 63 eligible studies from this field, Burnes, et al. found that low-cost methods such as feasible strategies involving education and quality intergenerational contact can serve as the basis of effective interventions to reduce ageism [18].

The study of Teater and Chonody explored stereotypes and ageist beliefs of youth transitioning from middle childhood into adolescence (age 11-13 years) (N = 69) in the southwest of England. More positive stereotyping was positively correlated with more positive attitudes toward older adults. Contact with older adults and age that one considers "old" were significant in predicting attitudes toward older people. The results suggested that time matters, in terms of contact with an older adult in shaping youths' attitudes and stereotypes. Intergenerational and educational programs that seek to address aging myths and increase contact between youth and older adults were discussed as ways to improve attitudes amongst youth transitioning from middle childhood into adolescence [10].

Može found out that both the young and the old Slovenian people predominantly still hold negative and stereotypical attitudes to the older people and aging, but there is a trend towards more positive attitudes [11], therefore it is necessary that both the adolescents and the older people listen to each other, they maintain quality contacts and accept each other [19-27].

When choosing the research content, we were driven by the desire to find out whether adolescents even know the term ageism and what is their attitude towards negative stereotypes about the older people.

Method

Participants

In the period from 31/03/2022 to 27/05/2022, a questionnaire with guaranteed anonymity was sent via e-mail to 539 students from two high schools in Savinjska Region in Slovenia. 188 completed questionnaires were returned. Sample of the study included 168 females (89%) and 20 males (10.6%) with a total 188 participants with a mean age of 16.9 ranging from 15 to 19 (SD=1.37). 147 (78.2%) students came from rural and 41 (21.8%) from urban environment. The response rate (n = 188) in relation to the sample size of the target population of both schools was 34.9%, and was adequate in relation to the size of population.

Data Collection Method

In the research, we used our own questionnaire, slightly modified from the questionnaire of Marchetti, et al. which contained 31 statements concerning the older people's mood, traditionalism, frailty, attitude to technology, wisdom and sociability (Cronbach's alpha 0.875) [13]. Students, were asked to express themselves about stereotypical statements about the older people on a 3-point Lickert type scale (1 = I don't agree, 2 = I neither agree nor disagree, 3 = I agree). In the demographic part of the survey, they indicated their gender, age, whether their permanent residence is in a rural or urban environment, which of the two schools they attend, whether they have older relatives and whether they live with them in a joint household. In the research, which refer to the sociodemographic variable represented by the age of adolescents The respondents were divided into two groups, the younger one, which included adolescents aged 15 to 17 years (n = 109), and the older one, which included adolescents aged 18 to 19 years (n =

79). For a more detailed presentation of the results in the article, we focused on the differences in the adolescent perception of four groups of negative stereotypes about the older persons, namely their mood, traditionalism, frailty and attitude to technology, first among all respondents and then separately among younger and older adolescents.

The rating of the mood of the older people was obtained by first summing all 4 evaluations of the statement into a common variable, which has a range of values from 4 to 12, where a higher rating means a more negative attitude towards the mood of the older people. We also tested the correlation of the assessment of the traditionalism of the older people with socio-demographic variable, which refers to the adolescent age. First of all, we added all 11 evaluated statements into a common variable, which has a range of values from 11 to 33, with a higher score indicating a more negative assessment of the traditionalism of the older people.

Before testing the association of the assessment of the frailty of the older people with socio-demographic variables, we first summed all 3 evaluated statements of this group into a common variable, which has a range of values from 3 to 9, where a higher score means a more negative assessment of the frailty of the older people.

Also regarding the assessment of the attitude of the older people towards technology in connection with a sociodemographic characteristic related to the age of adolescents, we first added all 4 assessed statements into a common variable, which has a range of values from 4 to 12, whereby a higher assessment means a more negative assessment.

Ethical Consideration

In March 2022 the Commission of the Republic of Slovenia for Medical Ethics assessed that research is ethically acceptable (No. 0120-610/2021/10). In conducting the research, the researchers followed the ethical guidelines on non-experimental research and survey was conducted in accordance with the principles of the Declaration of Helsinki.

Data Analysis

The results were presented in the form of frequencies and percentages, in the bivariate analysis we used only non-parametric tests (Mann-Whitney U test, chi-square test, Spearman's rank correlation coefficient), because the distribution of the variables deviates from the normal. When the assumptions for performing the chi-square test are not fulfilled, we used the Kullback 2I-test (Likelihood ratio) instead of the chi square statistic. We compiled the common variables by dimensions in such a way that we summed up the individual statements of the set, and in the event that there are negative and positive statements in the set, we recoded the positive statements before summing. SPSS (version 23.0) was used for statistical analysis. Differences with $p < 0.05$ were considered statistically significant.

Results

The research sample consisted of 188 students, and 21.3% were 15 years old, 21.3% were 16 years old, 15.4% were 17 years

old, 29.3% were 18 years old and 12.8% were 19 years old. The average age of the respondents was 16.9 years (SD 1.37). 93.6 % (n = 176) of students defined as older people those over 65 years of age. 146 respondents, or 77.7%, had already observed a negative attitude towards the older people. Considering the age of the respondents, 75% of younger (15-17 years) and 81.0% of older adolescents (18-19 years) had already noticed a negative attitude towards the older people ($p > 0.05$). Of the sample, female students represented 89.4% (n = 168), and 94.7% (n = 178) of students had older people relatives, mostly grandparents (96.6%, n = 172).

The results are presented in two parts. The first part shows students' familiarity with the term ageism in connection with demographic variables, and the source of information about ageism. In the second part, students' attitudes towards four groups of different negative stereotypes about the older people are shown.

Students' familiarity with ageism

Table 1: Knowledge of the term ageism and demographic comparisons (chi-square test).

Respondents		Do you know what ageism is? (n=188)				chi square or Likelihood ratio	p value
		Yes		No			
		f	f %	f	f %		
Gender	Male	6	30.0%	14	70.0%	1.714	0.190
	Female	29	17.3%	139	82.7%		
	Total	35	18.6%	153	81.4%		
Age (year)	Younger (15-17)	20	18.3%	89	81.7%	0.012	0.912
	Older (18-19)	15	19.0%	64	81.0%		
	Total	35	18.6%	153	81.4%		
With older people relative	Yes	35	19.7%	143	80.3%	4.247	0.039*
	No	0	0.0%	10	100.0%		
	Total	35	18.6%	153	81.4%		

* Association between variables is statistically significant at $p < 0.05$.

Table 1 shows that only 35 individuals or 18.6% of all respondents stated that they know the concept of ageism, of which 20 are younger and 15 older adolescents ($p=0,912$). The analysis of the relationship between knowledge of the concept of ageism and socio-demographic variables showed that among adolescents who do not have an older relative, no one knows this concept ($p=0.039$).

Table 2: From what source did adolescents get information about ageism

		f	f %
Do you know what ageism is? (n=188)	Yes	35	18,6 %
	No	153	81,4 %
Where did you hear about ageism?	In school	11	31,4%
	In the media (TV)	5	14,3%
	On the Internet	4	11,4%
	In this survey	4	11,4%
	At home (parents, grandparents)	4	11,4%
	I do not remember	10	28,6%

Table 2 shows that almost a third (31.4%) of the respondents became familiar with ageism at school, a seventh (14.3%) in the media, an eighth (11.4%) on the Internet, an eighth (11.4%) in this survey and also an eighth (11.4%) from parents and grandparents. A good quarter of respondents (28.6%) do not remember their source of information about ageism.

Students' Attitudes towards Four Groups of Negative Stereotypes

The results in Table 3 show that the majority, i.e. from 33.9% to 59.6% of younger (aged 15 to 17) and 35% to 59.5% of older respondents (aged 18 to 19), expressed a neutral attitude towards negative stereotypes about older people.

Looking at the results in more detail, it can be seen that in all four sections discussed (mood, traditionalism, frailty and attitude towards technology) respondents also agreed with the negative stereotype. Further, 8.3% to 44.0% of younger and even 10.1% to 50.6% of older respondents agreed with negative stereotypes about the older people with slightly higher tendency among older adolescents.

In some statements, more than a third of the respondents agreed that older people cannot accept changes, interfere in the lives of young people, like to criticize, they are too connected to the past, they have bad hearing and poor memory, they are easily injured, they are not in favor of digital media and refuse to use them.

Regarding the attitude towards the mood of the older people, a good fifth of the surveyed students expressed the opinion that the older people are irritable (24.7%), quick to anger (20.2%) and keep complaining (22.9%), and strenuous and fluid (9,2%). Regarding traditionalism, almost half of them believed that the older people like to criticize (47.3%) and are too connected to the past (41.8%), while a third believed, do not understand young people (31.7%), but like to interfere in their lives (33.6%). A statistically significant difference between younger and older respondents was found only in the statement that the older people accept innovations namely 28.4% of younger and only 17.7% of older adolescents agreed with the statement that the older people accept innovations ($p < 0.032$). Regarding the frailty of the older people, more than a third of the respondents expressed the opinion that the older people are vulnerable due to poor hearing (42.2%), memory (38.4%) and frequent injuries (47.5%). Regarding the attitude towards technology, a good third of the respondents believed that the older people are not in favor of digital media (37.9%), and they also reject it (33.8%), while a good fifth (22.8%) of the respondents believed that the older people do not approve of the use of digital media by youth and less than a fifth (18.55%) of respondents believed that the older people use digital media and social networks.

Surprisingly, in two negative stereotype statements (the first belongs to the group of statements about traditionalism, and the second to the group of attitudes of the older people towards technology), younger adolescents supported negative stereotypes

in a higher percentage than older adolescents, namely that the older people do not think broadly (29.4% vs. 24.1%; $p = 0.073$) and that the older people do not approve of the use of digital media by adolescents (26.6% vs. 19.0%; $p = 0.061$), but the statistical difference was in the cases of both statements only marginally significant.

Discussion

In the current research, we investigated the adolescents' familiarity with ageism and their attitude towards the negative stereotypes about older people. The research largely matches the findings of other foreign and Slovenian research in this field. The questionnaire was comprehensible to the students, as it contained measures of the attitude of adolescents towards negative stereotypes based on the values and ideas of modern adolescents about the older people through their vocabulary, as already used by Marchetti et al. [13].

One of the clearest findings of this study is that the concept of ageism is known only to adolescents with older relatives. Namely, it turned out that only 18.6% adolescents (35 out of a total of 188 respondents - secondary school students) knew about ageism, and only those with older relative. The finding is comparable to the findings of Goriup and Lahe that only one-fifth of Slovenian secondary school students aged 15 to 19 years has good knowledge of aging [6].

Even if the concept of ageism seems relatively new, the invisibility of the older people and negative stereotypes about the older people deeply rooted in the history of humanity and society [28]. Ageism is an expression and is the cause of social injustice towards the older people. Findeisen et al. see ageism as a process of systematically used stereotypes that describe the older people as senile, mentally rigid, rigid in behavior, knowledge, skills [29]. Ageism allows the younger to the older they see themselves as different from themselves and therefore simply no longer identify with the older person. Ageism must first be detected and eliminated from the legislation, public communication, everyday practice, policy planning, including the politics of the silver economy. Ageism refers only to the older people, it is known in all societies, in all areas of life. It will not disappear on its own. Therefore, it is important that all generations, especially adolescents, recognize it. An important role in eliminating ageism should be played by the media, including the Internet, since a quarter of our respondents (25.7%) were educated about ageism in the media and on the Internet. Modern mass media namely significantly influence the perception of certain social groups (16, 17). Journalistic standards require adherence to the principle of language tolerance, avoid words and expressions that contribute to the formation of negative stereotypes [17].

Wu found out that stereotypical older people age representation appears to be prominent in different contexts and across the various types of social media under examination, and he further recommends that evidence-based policy recommendations for media producers are necessary to inspire more thoughtful and reflective media representations of older people and later life [30].

Table 3: Attitude towards the older people and the age of the respondents (chi square test).

N=188		Age												Chi square or Likelihood ratio	p value
		Younger students (15-17 years old) (n=109)						Older students (18- 19 years old) (n=79)							
		I don't agree		I neither agree nor disagree		I agree		I don't agree		I neither agree nor disagree		I agree			
		f	f %	f	f %	f	f %	f	f %	f	f %	f	f %		
Mood	They are irritable.	16	14,7%	71	65,1%	22	20,2%	13	16,5%	43	54,4%	23	29,1%	2,486	0,289
	They keep complaining.	36	33,0%	48	44,0%	25	23,0%	21	26,6%	40	50,6%	18	22,8%	1,054	0,590
	They are strenuous and fluid.	58	53,2%	42	38,5%	9	8,3%	36	45,6%	35	44,3%	8	10,1%	1,085	0,581
	They get angry quickly.	44	40,4%	43	39,4%	22	20,2%	30	38,0%	32	40,5%	17	21,5%	0,119	0,942
Traditionalism	They cannot accept change.	29	26,6%	46	42,2%	34	31,2%	12	15,2%	37	46,8%	30	38,0%	3,579	0,167
	They don't think big.	41	37,6%	36	33,0%	32	29,4%	21	26,6%	39	49,4%	19	24,1%	5,231	0,073
	They don't understand young people.	26	23,9%	47	43,1%	36	33,0%	19	24,1%	36	45,6%	24	30,4%	0,164	0,921
	They interfere in the lives of young people.	28	25,7%	45	41,3%	36	33,0%	22	27,8%	30	38,0%	27	34,2%	0,224	0,894
	They like to criticize.	20	18,3%	41	37,6%	48	44,0%	11	13,9%	28	35,4%	40	50,6%	1,028	0,598
	They are not interested in the entertainment and cultural life of young people.	38	34,9%	48	44,0%	23	21,1%	30	38,0%	29	36,7%	20	25,3%	1,079	0,583
	They don't trust young people.	42	38,5%	48	44,0%	19	17,4%	38	48,1%	28	35,4%	13	16,5%	1,848	0,397
	They are too connected to the past.	15	13,8%	47	43,1%	47	43,1%	16	20,3%	31	39,2%	32	40,5%	1,411	0,494
	They understand modern life.	31	28,4%	65	59,6%	13	11,9%	26	32,9%	42	53,2%	11	13,9%	0,782	0,676
	They keep up with the times.	29	26,6%	60	55,0%	20	18,3%	27	34,2%	39	49,4%	13	16,5%	1,256	0,534
	They accept innovations.	14	12,8%	64	58,7%	31	28,4%	21	26,6%	44	55,7%	14	17,7%	6,915	0,032*
	Frailty	They are hard of hearing.	11	10,1%	53	48,6%	45	41,3%	5	6,3%	40	50,6%	34	43,0%	0,833
They have a hard time remembering		13	11,9%	51	46,8%	45	41,3%	4	5,1%	47	59,5%	28	35,4%	4,207	0,122
They get damaged quickly.		17	15,6%	45	41,3%	47	43,1%	6	7,6%	32	40,5%	41	51,9%	3,158	0,206
Attitude towards technology	They are averse to digital media.	14	12,8%	51	46,8%	44	40,4%	13	16,5%	38	48,1%	28	35,4%	0,723	0,697
	They refuse to use digital media.	15	13,8%	52	47,7%	42	38,5%	19	24,1%	37	46,8%	23	29,1%	3,864	0,145
	They disapprove of the use of digital media by young people.	21	19,3%	59	54,1%	29	26,6%	27	34,2%	37	46,8%	15	19,0%	5,564	0,061
	They use digital media and social networks.	37	33,9%	55	50,5%	17	15,6%	21	26,6%	41	51,9%	17	21,5%	1,712	0,425

* Association between variables is statistically significant at $p < 0.05$.

In terms of age, our findings suggest that the tendency to perceive older people in negative stereotypical way occurred in the both age group of adolescents, but it is slightly more pronounced among older adolescents. Regarding the frailty of the older people, more than a third of the respondents expressed the opinion that the older people are vulnerable due to poor hearing (42.2%) and memory (38.4%) and frequent injuries (47.5%). These findings are quite consistent with Može's findings, that younger Slovenian respondents (aged 20 to 34) attributed slowness to older people in 50%, and illness in 34% [11]. We must realize that frailty is recognized as one of the most important global health challenges as the population is aging worldwide. Frailty is an age-related syndrome characterized by a decline in functioning across multiple physiological systems, and accompanied by an increased vulnerability to stressors [20]. Older adults with frailty are at increased risk of adverse health outcomes and death. In Slovenia, Jazbar et al. evaluated the prevalence and incidence of frailty among the population of older adults (≥ 65 years). Additionally, the aim was to compare the results to other European countries. The prevalence and 4-year incidence of frailty among older adults were evaluated using data from the Survey of Health, Ageing and Retirement in Europe (SHARE). The age-standardized prevalence of frailty in Slovenia in the study was 14.9% (95% CI: 13.3-16.5), which is similar to the European average prevalence of 16.4 (95% CI 16.0- 16.8). In Slovenia, 42.5% (39.8-45.2) of older adults were pre-frail, comparable to the 44.5% (43.9- 45.2) of pre-frail older adults in Europe. The study results could benefit the development and implementation of frailty management programs in Slovenia. However, these results place Slovenia among countries with lower frailty prevalence, but the overall prevalence of frailty will likely increase in the following years mainly due to population aging [1]. Current science describes frailty as reversible and preventable syndrome, wherefore early frailty identification is essential part of frailty management [20]. Current guidelines in frailty management at individual level recommend appropriate physical activity [20], whereby adolescents who are aware of health problems in older age can help the older people. On the other hand, Chinese authors emphasize the long-term negative effect of unfavorable socioeconomic status and worse health condition in childhood and adolescence, which can increase the risk of late-life frailty amongst older adults [32]. In Slovenia, the mentioned risk of age-related frailty could be further reduced by carefully implementing the prevention program of Slovenian healthy schools, which have been facilitating and strengthening a healthy lifestyle among pupils and students for 30 years [33].

Based on the findings of the present research, we can conclude that a statistically significantly higher percentage of younger adolescents than older adolescents agree with the statement that the older people accept innovations. This finding is consistent with the finding of Teater et al., that preadolescents in South West England (aged 11–13, N = 69) express more positive than negative stereotypes about the elderly, which is positively correlated with a positive attitude towards older adults [10]. Namely, in our research as much as 28.4% of younger and only 17.7% of older adolescents agreed with the statement that the older people accept

innovations ($p < 0.032$). This can probably be explained by the fact that at the age of middle adolescence (14 – 17 years of age), adolescent prefrontal lobe of the brain is not yet mature, because it usually matures in a person's 20s. Consequently, in the current era of progress, middle adolescents (in our research we called them younger adolescents), for example, probably think that if traditionalism is really disappearing, then the older people approve of innovations. This liberal view of the younger respondents is also in the European trend, since in Europe for decades there have been various initiatives and schemes that enable the coexistence of the older people with the youth for the mutual satisfaction and benefit of both. Among the offers, we also find opportunities for young people to stay in homes for the older people and in buildings with serviced apartments in Vienna and the surrounding area, where for a symbolic contribution for a room or apartment, young people spend a few hours a week helping or socializing with older residents [24]. In this way, the older people can transfer experiences to young people and reduce their fear of death and the negative stereotypes that drive ageism [14].

Surprisingly, more younger than older adolescents are convinced of the stereotypical statement that the older people do not think broadly, but this is only a marginal statistical difference ($p = 0.073$). It is also surprising that we found a marginal statistical difference in the negative stereotypical statement that the older people do not approve of the use of digital media by adolescents, which is supported by a larger number of younger adolescents compared to older adolescents ($p = 0.061$). However, we must not forget the fact that at age of late adolescence (18 – 21 years of age) teens generally have completed physical development, and they may become more focused on the future and base decisions on their hopes and ideals [31]. However, many reestablish an "adult" relationship with their ancestors, considering them more an equal from whom to ask advice and discuss mature topics with. This fact is in line with the finding of our research that more older (18 -19 years of age) adolescents compared to younger ones (15 -17 years of age) believe that older people think broadly and approve of the use of digital media by young people.

On the other hand, a surprising finding of the research is that a statistically significant difference was found only in the statement that the older people accept innovations. Namely, as much as 28.4% of younger and only 17.7% of older adolescents agreed with mentioned statement ($p < 0.032$). This can probably be explained by the fact that at the age of middle adolescence (14 – 17 years of age), the frontal lobe of the brain is not yet mature, because it usually matures in a person's 20s [31]. Consequently, in the current era of progress, middle adolescents (in our research we called them younger adolescents), for example, think that if traditionalism is really disappearing, then they approve innovations.

It has been suggested by some researchers that the characteristics of contact with the older people that may be important include cooperation, quality and sufficiently frequent contacts with the older people, and stereotype disconfirming [23,24]. Levy and MacDonald (2017) pointed out that even the educational programs

of health workers are also too oriented towards a chronological view of age, which strengthens ageism, and must therefore be overcoming and updated [25]. Research by Kranz et al. (2021) explored the effects of an intergenerational encounter program on cross-generational age stereotyping [26]. Based on a biographical-narrative approach, participants (secondary school students and nursing home residents) were invited to share ideas about existential questions of life (e.g., about one's core experiences, future plans, and personal values). Therefore, the dyadic life story interview had been translated into a group format (the Life Story Encounter Program, LSEP), consisting of 10 90-min sessions. LSEP participants of both generations showed more favorable cross-generational age stereotyping also 3 months after the program end which could be partially explained by two program benefits, the feeling of comfort with and the experience of learning from the other generation.

In the following, we list certain shortcomings of our research. The research was conducted at the end of the covid-19 epidemic, which may have influenced the lower response of students. The size of the sample (n = 188) is adequate in relation to the size of the target population (n = 539), but it does not provide enough data to be generalizable to other groups of adolescents, but can be applied to the population of students from the two high schools that participated. However, the findings of the research can be the basis for further research with a larger and more diverse sample, which would contribute to a better understanding of the topic.

Conclusion

Based on the findings of the present research, we can conclude that less than one-fifth of adolescents are familiar with ageism, and only those who have an older relative. The tendency to perceive older people in negative stereotypical way occurs among adolescents, especially in late adolescence. If we want adolescents to receive enough knowledge about the old age and aging, professional media negative stereotypes about the older people should be replaced by a realistic and optimistic portrayal of aging. In addition, local self-government in cities and in rural areas should promote intergenerational informal and formal educational programs on aging and ageism for children and adolescents, in which the older people with a positive view of aging would actively participate. In this way, instead of stereotypical wrinkled hands and aged faces, adolescents would meet active older people who can share their experiences for a quality life.

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