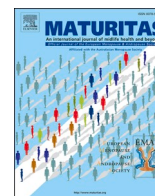




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Original Article

Ageism towards older and younger people in the wake of the COVID-19 outbreak

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ABSTRACT

Objectives: The COVID-19 pandemic has provided a rich environment for ageist attitudes towards both older and younger people. However, publications on ageism during the outbreak have been mostly non-empirical and have concentrated on ageist beliefs directed towards older people. To overcome these limitations, we examined empirically the prevalence and the determinants of ageism towards older and younger people in the wake of COVID-19.

Study design: A cross-sectional study using an online survey was conducted with 503 Israeli adults (51.9% male, 79.5% Jews, mean age 47 years).

Main measures: We used a structured questionnaire that measured the following: COVID-19 ageism towards older people, COVID-19 ageism towards younger people, stereotyping, the experience of discrimination, perceived fears about contracting COVID-19, subjective knowledge about COVID-19, and sociodemographic characteristics.

Results: Overall, participants reported a relatively low level of COVID-19 ageism towards older people but a significantly higher level of COVID-19 ageism towards younger people. Hierarchical regressions revealed that negative age stereotypes were the most important determinants of both types of ageism. Sociodemographic variables (including age and majority/minority) were significant determinants only for COVID-19 ageism towards older people. That is, older and Jewish participants reported lower levels of this type of ageism.

Conclusions: Our findings demonstrate that negative age-related stereotypes have played a central role in ageist beliefs towards both older and younger people during the COVID-19 crisis. It is recommended that the public and scientific media start disseminating messages aimed at reducing rather than increasing negative stereotypes directed towards younger and older people.

1. Introduction

"COVID-19 virus has deepened prejudice against older people" [1]

"Scapegoating young people for Britain's rising COVID-19 virus rates is a poor strategy" [2]

These recent headlines from *The Guardian* newspaper denote one of the main problems elicited by the COVID-19 crisis: ageism.

1.1. Ageism: definition and determinants

Ageism is a complex and prevalent phenomenon in most cultures and

is associated with negative consequences in different contexts such as the workplace, the healthcare and welfare systems, and others [3]. Although the term ageism was first defined as "prejudice by one age group toward other age groups" [4, p. 243], the bulk of the research conducted has concentrated on assessing discrimination towards older people [5]. Studies assessing ageism towards younger people are few, and have mostly focused on ageist experiences in the work environment [6–8]. Similar to other types of discrimination (sexism or racism), ageism is conceptualized as multidimensional and including cognitive (positive and negative stereotypes), affective (prejudice), and behavioral (discrimination) aspects [5]. In an effort to diminish the factors contributing to ageism, many studies have examined its determinants.

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As found in a recent systematic review regarding ageism towards older people [9], the main determinants include psychological factors such as aging anxiety and fear of death, positive and negative stereotypes, and contact with older people.

1.2. Ageism in the wake of COVID-19

As stated, ageism varies by the context in which it occurs [10], and the COVID-19 reality seems to have provided a rich environment for its activation as reflected in the titles above. The first article, published in April 2020, reflects ageist beliefs directed towards older people, most probably because the scientific and media discourse has singled out older people as the main high-risk group to contract the virus and to suffer from its consequences [11]. A vast number of commentaries, editorials, and non-empirical publications have argued against characterizing older people during the outbreak as a homogeneous group [12–14], as needing special treatment and even segregation [15], and as being targets for discriminating triage decisions [11,16,17].

The second article, published in September 2020, reveals the development of ageist beliefs directed towards younger people, mostly because of their purported responsibility for the resurgence of the virus. Although such articles have drawn less attention than have articles on ageism towards older people, a few published commentaries and editorials have addressed the subject of ageist beliefs directed towards younger people during COVID-19 [18,19].

Despite the importance for the general public of these publications, empirical research is urgently needed to attain a broader understanding of COVID-19 ageism. Only four studies have been published on the topic to date, and all of them in relation to ageism towards older people. Two of the studies, conducted during the COVID-19 outbreak in Israel and among samples of older adults aged 50 and over ($n = 888$) and 60 and over ($n = 243$) [20 and 21, respectively], showed that ageism was associated with anxiety symptoms during the pandemic. The third study's aim was to identify the presence of ageist content in a representative sample of tweets posted during a 10-days period at the time of the pandemic [22]. Its results showed that, although the majority of the tweets contained personal information and jokes, as much as a quarter in ageist content.

Despite the importance of these studies, it should be noted that they did not examine the prevalence and determinants of COVID-19 ageism towards both older and younger people. Indeed, to the best of our knowledge only one study – conducted in Spain - has examined this topic, using a questionnaire specifically developed for this context [23]. Based on a large sample of 840 participants (ages 18–84), this study showed that the bias towards older people was consistently higher than the bias towards younger people. Despite its importance, it should be noted that the scores for both types of ageism were not derived from separate measures, but by calculating the bias in each item from the two poles (–2 and 2) to the neutral center point (0). As stated by the authors themselves, this scoring method is based on "a hypothetical bias in the positioning of the response towards the old-age stereotypes" (p. 5).

1.3. Aim of the study

Trying to overcome the limitations in the literature on ageism in the wake of COVID-19, the overall aim of this study was to assess laypersons' COVID-19 ageist beliefs towards older and younger people. Our specific research questions were: 1. What is the prevalence of COVID-19 ageism towards older and younger people? 2. What are the determinants of both types of ageism?

To examine these questions, our study relied on micro-level theories of ageism [10]. More specifically based on this perspective of ageism, stereotyping measures attributed to older and younger people, and experienced age discrimination were included as determinants of COVID-19 ageism. Perceived fear about contracting COVID-19, and subjective knowledge about COVID-19 were examined for two main

reasons. First, to reflect the uniqueness of the pandemic context; but most importantly because studies in the area of attitudes in general, and in the area of stigmatic attitudes in particular [24,25] found both these concepts to be central in the formation of negative attitudes. Finally, associations with participants' sociodemographic characteristics were examined. Our research questions were studied among a sample of Israeli adults.

1.4. COVID-19 in Israel

The COVID-19 pandemic broke out in Israel in mid-February 2020. Until September 20, 2020, 187,902 people were infected with the virus, 1256 died, and two general lockdowns were conducted. During lockdowns, most economic activity was halted, and the healthcare system was confronted with priority-setting dilemmas regarding the provision of health services to the population. However, the recommendations of an Israeli committee established to deal with these questions stipulated that there should be no discrimination on anything (including age) other than a medical basis [26].

2. Methods

2.1. Participants and procedure

A cross-sectional design was used with a nationwide non-probability sample of 503 participants aged 18 and over, recruited from a comprehensive internet survey panel through a major Israeli internet panel company (PanelView) with extensive experience in academic surveys. Potential respondents were invited to participate in an online survey for a limited period (September 15 until September 20, 2020). To create a representative sample of the population, once quotas by gender, age, and majority/minority were reached for each parameter, the survey was closed. Respondents received small redeemable rewards for their participation. The majority of the participants were male, Jewish, and married. Their mean age was 47 (range 19–89), and had an average of 14 years of education (range 2–26) (Table 1).

2.2. Measures

We used a structured questionnaire including the following measures:

2.2.1. Dependent variables

Our dependent variables examined the cognitive dimension of ageism.

COVID-19 ageism towards older people was assessed using 11 items from North & Fiske's scale [27], translated into Hebrew and adapted for the COVID-19 pandemic by Bergman and colleagues (2020). An example item is, "Doctors spend too much time treating old people sick with COVID-19." All items were rated on a Likert-type scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. An overall index was calculated by averaging the items (Cronbach's alpha = 0.86).

COVID-19 ageism towards younger people was assessed using 10 items similar to the ones used for older people but relevant to younger people. An example item is, "Doctors spend too much time treating younger people sick with COVID-19." All items were rated on a Likert-type scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. An overall index was calculated by averaging the items (Cronbach's alpha = 0.81).

2.2.2. Independent variables

These included stereotyping measures, experienced discrimination, perceived fears about contracting COVID-19, subjective knowledge about COVID-19, and sociodemographic characteristics.

Stereotyping measures: Based on Ramirez & Palacios-Espinosa [28], participants were asked to what extent they endorse five positive (e.g., nice, happy, open to change) and five negative (e.g., stubborn,

Table 1
Study’s main variables and bivariate analyses.

Variable	Sample mean (SD)	Sample%	Population ³ mean	Population ³ %	Bivariate analyses ¹ for COVID-19 ageism towards	
					older people	younger people
COVID-19 ageism towards older people	1.98 (0.072)	11.7 ²			–	$r = 0.43^{**}$
COVID-19 ageism towards younger people	3.01 (0.77)	54.3 ²			$r = 0.43^{**}$	–
Age	47.17 (18.78)		44.81 (16.31)		$r = -0.26^{**}$	$r = 0.07$
Gender (male)		51.9		50.3	$t = 0.97$	$t = 0.80$
Education (years)	14.53 (2.01)		14.26 (1.97)		$r = -0.08$	$r = -0.02$
Majority/minority (Jewish)		79.5		77.8	$t = 5.79^{**}$	$t = 0.91$
Marital status (married)		66.3		65.08	$t = 2.31^*$	$t = 1.00$
Positive stereotypes for older people	3.14 (0.68)				$r = -0.09^*$	$r = 0.05$
Negative stereotypes for older people	2.73 (0.84)				$r = 0.40^{**}$	$r = 0.25^{**}$
Positive stereotypes for younger people	3.58 (0.65)				$r = -0.06$	$r = 0.01$
Negative stereotypes for younger people	3.50 (0.83)				$r = 0.03$	$r = 0.34^{**}$
Experienced age discrimination	1.78 (0.98)				$r = 0.28^{**}$	$r = 0.12^{**}$
Perceived fear of contracting COVID-19	2.83 (0.98)				$r = 0.10^*$	$r = 0.12^{**}$
Subjective knowledge about COVID-19	3.77 (0.98)				$r = 0.01$	$r = 0.17^{**}$

¹ Pearson correlations for the bivariate associations with continuous variables and t-tests for dichotomous variables.

² Denotes percentage of scores from 3 to 5.

³ Reference about age: Annual Statistical, Israel Central Bureau of Statistics (2020), Reference about Education and Marital Status: Social Survey 2019, Israel Central Bureau of Statistics (2021).

** $p < .01$.

* $p < .05$.

Table 2
Hierarchical linear regressions for COVID-19 ageist attitudes towards older and younger people¹.

	Ageism towards older people	Ageism towards younger people
Adjusted R²	.09	–
Age	–0.13**	–
Majority/minority (Jewish/non-Jewish)	.16**	–
Marital status	–0.02	–
Adjusted R²	.13	.14
Positive stereotypes for older people	–0.07	–
Negative stereotypes for older people	.32**	.14**
Positive stereotypes for younger people	–	–
Negative stereotypes for younger people	–	.28**
Adjusted R²	.04	.00
Experienced age discrimination	.19**	.07
Adjusted R²	.00	.03
Perceived fear of contracting COVID-19	.03	.08
Subjective knowledge about COVID-19	–	.15**
Overall adjusted R²	.26	.17

¹ Numbers in the table are standardized betas.

** $p < .01$

* $p < .05$.

impatient, egotistical) stereotypes for older and younger adults. Answers were rated on a 5-point Likert-type scale, ranging from 1 = *never* to 5 = *very often*. Four overall indices were calculated by averaging the items for older and younger adults separately. The internal reliability for the positive and negative stereotype indices for older people were Cronbach’s alpha = 0.72 and 0.80, respectively, and for younger people, Cronbach’s alpha = 0.72 and 0.83, respectively.

Experienced age discrimination: Similar to Bratt et al. [6], two items examined how often participants felt that someone showed a lack of respect (such as ignoring or patronizing them) because of their age, or treated them badly (such as abusing them, or denying them services) because of their age. Answers were rated on a 5-point Likert-type scale, ranging from 1 = *never* to 5 = *very often*. An overall index was calculated by averaging both items (Spearman correlation = 0.66, $p < .001$).

Perceived fear of contracting COVID-19: Similar to previous research [29], perceived fear was assessed with a single question: “How much do you fear contracting COVID-19?” Answers were rated on a 5-point Likert-type scale, ranging from 1 = *not at all likely* to 5 = *very likely*.

Subjective knowledge about COVID-19 was assessed with a single question: “How much do you know about COVID-19?” Answers were rated on a 5-point Likert-type scale, ranging from 1 = *not much at all* to 5 = *very much*.

Sociodemographic characteristics: These included gender (male, female), age, number of years of education, marital status (married, not married), majority/minority (Jewish, non-Jewish), and perceived income (below average, average, and above average).

2.3. Statistical analyses

The data were cleaned, coded, and analyzed using SPSS version 25.0. Descriptive statistics (percentages, means, and standard deviations) were used to describe the sample and the main variables. Pearson/Spearman correlations and t-tests were used to examine bivariate relationships between the dependent and independent variables. Finally, Ordinary Least Squares (OLS) hierarchical regressions were conducted in order to examine correlates of ageism towards older and younger people. In the first step, we included background variables. In the second step, stereotyping measures were entered, followed by experienced age discrimination. In the last step, COVID-19 variables were entered. Only variables that were statistically significant in the bivariate analyses were entered into the regression equations. We tested for normality of the distribution and for multicollinearity. The results indicated that these assumptions were not a concern in our model. The skewness and kurtosis coefficients were between –2 and +2 as required for normality, and the variance inflation factor (VIF) values did not exceed 2.3 for any variable [30]. A p value of < 0.05 was considered statistically significant for all the analyses.

3. Results

Table 1 shows that participants reported a relatively low level of COVID-19 ageism towards older people but a significantly higher level of COVID-19 ageism towards younger people ($t_{(502)} = -28.88$, $p < .001$). Bivariate analyses showed that higher levels of ageism towards older people in the wake of COVID-19 were associated with being younger, non-Jewish, and not being married. Increased levels of COVID-19 ageism towards older people were associated with lower levels of

positive stereotypes towards this age group, and with higher levels of stereotyping towards younger people. Higher levels of experiencing age discrimination were significantly and positively associated with increased ageism towards older people. Finally, higher levels of ageism toward older people were associated with increased fear of contracting the virus.

No statistically significant associations were found between participants' reports of ageism towards younger people in the wake of COVID-19 and their sociodemographic characteristics. Similar to the findings for ageism towards older people, higher levels of ageism were significantly associated with higher levels of negative stereotypes towards older people as well as towards younger people, and with increased reports about experienced age discrimination. Finally, higher levels of knowledge about the virus and fear of contracting it were associated with increased ageist beliefs towards this age group.

Hierarchical regression analyses showed that younger age and being non-Jewish (compared to Jewish) were associated with increased COVID-19 ageism towards older people. These variables explained 9% of the variance in this dependent variable (Step 1). Adding stereotyping measures increased the explained variance by 13%, with higher levels of negative stereotypes attributed to older people being associated with increased ageism towards this age group (Step 2). Increased levels of experienced age discrimination were also associated with increased ageism towards older people, adding 4% to the explained variance (Step 3). Finally, variables related to COVID-19 did not contribute to the overall explained variable (26%).

Seventeen percent of the total variance in COVID-19 ageism towards younger people was explained by the study's independent variables. None of the sociodemographic variables were significantly associated with the dependent variable, but similar to the previous analysis, stereotyping measures were the main determinants of ageism towards younger people, explaining 14% of the variance. Higher levels of negative stereotypes towards older and younger people were positively and significantly associated with this type of ageism. Experiences of age discrimination were not significantly associated with the dependent variable for younger people. Finally, the contribution of COVID-related variables (perceived fear and subjective knowledge about the virus), was very modest, with higher levels of subjective knowledge significantly associated with higher levels of COVID-19 ageism towards younger people.

4. Discussion

Previous publications on ageism during the COVID-19 outbreak have been mostly non-empirical and have concentrated on ageist beliefs directed towards older people. Moving beyond this focus, we examined the level and determinants of COVID-19 ageism towards both older and younger people. Our findings showed that the level of COVID-19 ageism towards older people was modest, whereas the ageism reported towards younger people was significantly higher. Several methodological, cultural, and contextual explanations might be provided for this discrepancy.

Methodologically, whereas we used separate items to assess ageist beliefs towards older and towards younger people, in Garcia-Soler's study ageist beliefs towards younger people were derived from items phrased in regard to older people. Moreover, our measures assessed ageism in the wake of COVID-19 using mostly items that were phrased negatively (see Appendix A), potentially encouraging participants to express higher rates of disagreement with the statements, that is, lower levels of ageism [24]. Culturally, recent findings have shown that ageism towards older people is relatively low and towards younger people relatively high in countries providing high levels of support to their older population [6]. Israel was rated higher than Spain (18th and 25th, respectively, out of 96 countries) in the AgeWatch Index, a measure reflecting the structural help given by a society to its older population [31] and perhaps explaining the differences in results between both

studies.

Finally, the difference between the studies' findings might stem from contextual reasons related to the particular COVID-19 phase in each country, rather than to enduring, persistent patterns. At the time the surveys were conducted, Spain was exiting its first wave and recording low levels of morbidity. Israel, however, was undergoing a second, more aggressive wave of the crisis, and preparing itself to enter a full lockdown for the third time. Similar to many other countries, younger people in Israel were blamed as the ones causing the resurgence of the virus by "... letting down their guard during the northern hemisphere summer" [32], which might explain the relatively high level of ageism reported towards this age group in our study.

Hierarchical regressions revealed that negative age stereotypes were the most important determinants of both types of COVID-19 ageism. This is not surprising given that, as stated above, negative attitudes or stereotypes are a central dimension of the concept of ageism as viewed by individual-level theories [5,10]. However, whereas only negative stereotypes towards older people were associated with COVID-19 ageism towards this age group, both negative stereotypes towards older and younger people were associated with ageism towards younger ones. This finding might be the result of "stereotype-asymmetry," meaning the tendency of ascribing more negative stereotypes to older than to younger people [10]. Alternatively, as the media, the public, and the research literature during the current pandemic have negatively portrayed older people more frequently than they have younger people, to activate COVID-19 ageist attitudes, there is need for the individual to hold higher levels of negative stereotypes both towards older and younger people [10]. Experiences of age discrimination were significantly associated, but only in the equation for ageism towards older people. This might be a result of the low levels of knowledge and awareness about ageism towards younger people, which might have prevented participants to report or to be aware of such experiences.

Finally, COVID-19 variables contributed only 3% to the variance of ageism towards younger people; and not at all to ageism towards older people. Moreover, the statistically significant contribution of these variables emanated exclusively from the perceived knowledge about COVID-19. A possible explanation for these results is the differences in the levels of ageism, which were significantly higher towards younger than towards older people. Additionally, as stated in the Introduction, the role of younger people in the spread and the impact of the pandemic in Israel, was discerned and disseminated much later than the role that older people played during the same period; which might explain the increased contribution of knowledge on attitudes towards younger people.

Sociodemographic variables were significant determinants for COVID-19 ageism towards older people only, with older age being associated with lower levels of this type of ageism. Although evidence about the relationship between ageism and age in general is inconclusive [9], García-Soler and colleagues [23] reported a similar finding in relation to ageism in the wake of COVID-19. This relationship may be due to the fact that for older people this type of ageism might be conceptualized as self-directed, a phenomenon that might be especially harmful in the healthcare context [33], and especially during the COVID-19 crisis where morbidity and mortality rates are clearly greater among older people. Finally, similar to other types of stigma [34], non-Jewish participants – that is, those who belong to a minority group in Israel – reported higher levels of ageism towards older people. This might be a consequence of Jewish participants being significantly older than non-Jewish ones in our sample (mean age = 50.2 and 35.5, for Jewish and non-Jewish respectively, $t_{(501)} = 7.5, p < .001$).

4.1. Limitations of the study

First, the use of an online survey and non-probability sampling may have resulted in a sample that does not reflect the actual patterns of the general population. However, as noted in Table 1, our sample was

almost identical in its main socio-demographic characteristics to the Israeli population aged 18 and over. Moreover, online surveys today are one of the most common methods used, especially during the COVID-19 pandemic. Second, we used structured validated measures; however, we still relied on self-reported data. Although this limitation might result in an increased social desirability bias, we believe the anonymity of the survey safeguarded the trustworthiness of the reports. Third, we used a cross-sectional design; therefore, causality cannot be inferred. Finally, our study examined the cognitive dimension of COVID-19 ageism (stereotypes) only. Future studies should examine the emotional and behavioral aspects as well.

4.2. Conclusions and implications

Despite these limitations, the current study presents new evidence regarding the extent and determinants of ageism – towards both older and younger people – during the COVID-19 crisis. Its findings have conceptual and practical implications. Conceptually, it adds to the relatively small number of studies assessing ageism towards younger age groups in general and during the current pandemic in particular. The findings also demonstrate that negative age-related stereotypes play a central role in ageist beliefs specifically associated with the COVID-19 context.

Identifying the prevalence and determinants of COVID-19 ageism towards older and younger people is critical at these times, especially because of the negative consequences associated with any type of ageism [3]. Thus, we recommend that the public and scientific media start disseminating messages aimed at reducing rather than increasing ageism. These might include avoiding the portraying of older as well as younger people as homogeneous groups. It should be clearly stated that not all older people are vulnerable and frail; and that older age on itself does not increase the person's susceptibility to COVID-19, as younger age on itself does not decrease the adherence to preventive measures. Such efforts might not only reduce negative stereotypes directed towards younger and older people, but might also improve interaction, social cohesion, and solidarity between age groups during these difficult times. Moreover, in light of the increased ageism towards older people found among both younger people and non-Jewish people, special attention should be paid to these groups, including the development of intervention programs aimed at increasing knowledge and reducing ageistic beliefs geared to these populations' needs and attributes. Finally, the relatively low percentage of the variance explained in our study for both types of COVID-19 ageism, suggests the need to further include other variables that might expand the understanding of this phenomenon.

Appendix A. Items assessing COVID-19 ageism towards older and younger people

COVID-19 ageism towards older people

Doctors devote too much time to treating older people who are sick with COVID-19.

Older people constitute too heavy a burden on the health system.

Sometimes older people are too heavy a burden on their families.

Older people are to blame for public transportation being closed to younger people, due to their fear that they will be infected on trains and buses.

If not for the fear of infecting older people with the virus, all the commotion about COVID-19 would not have occurred to such an extent.

Older people are to blame for the fact that, due to the fear of infecting them, younger people can no longer move around public places.

As older people are afraid to be infected, younger people can no longer work to the extent that they did before the start of the epidemic.

There is no need to close the whole country for such a limited number of people, who in any case do not have many years left to live.

Most older people do not follow the instructions of the Health Ministry and the government regarding personal hygiene and use of disinfectants.

Most older people do not follow the instructions of the Health Ministry and the government regarding physical and social distancing.

(continued on next page)

In closing, the present study demonstrates for the first time that COVID-19 ageism is directed towards older people, and even more towards younger ones. This is an important finding as it sheds light on younger people as being not less affected by ageism than older ones. Thus, we suggest to make an explicit effort to respect the rights and attend to the unique needs of younger persons at the time of the crisis. This might be attained by increasing their engagement in decisions that matter to them, or by making a sincere effort to use a positive discourse when describing their behavior at the time of the pandemic. Furthermore, the current study underscores the need to examine this topic urgently before such ageism translates into discrimination in different contexts, such as health, work, and others.

Contributors

Perla Werner initiated the design of the study, conducted data analysis, and wrote the first draft of the paper.

Hanan AboJabel participated in study design and manuscript writing.

Aviad Tur-Sinai participated in study design and manuscript writing.

All authors saw and approved the final version.

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Ethical approval

The study's protocol was approved by the Ethics Committee of the University of Haifa (number 383/20).

Provenance and peer review

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Research data (data sharing and collaboration)

There are no linked research data sets for this paper. Data will be made available on request.

Declaration of competing interest

The authors declare that they have no competing interests.

(continued)

Older people expect the government to care mainly for their needs during the COVID-19 crisis.

COVID-19 ageism towards younger people

Doctors devote too much time to treating younger people who are sick with COVID-19.

Younger people constitute too heavy a burden on the social security system, such as unemployment compensation.

Sometimes younger people are too heavy a burden on their families.

Younger people are to blame for the fact that older people have to fear being infected with COVID-19.

If younger people would follow the hygiene rules, regarding wearing masks and distancing, all the commotion about COVID-19 would not have occurred to such an extent.

As younger people have not stopped going to public places, older people have to fear being infected with COVID-19.

There is no reason to endanger an entire country because younger people want to have a good time.

Most younger people do not follow the instructions of the Health Ministry and the government regarding personal hygiene and use of disinfectants.

Most younger people do not follow the instructions of the Health Ministry and the government regarding physical and social distancing.

Younger people expect the government to care mainly for their needs during the COVID-19 crisis.

References

- [1] Harris J., COVID-19 virus has deepened prejudice against older people, *The Guardian*. (2020). <https://www.theguardian.com/commentisfree/2020/apr/26/p/rejudice-older-people-COVID-19virus>. (Accessed October 28, 2020).
- [2] Reicher S., Scapegoating young people for Britain's rising rates is a poor strategy, *The Guardian*. (2020). <https://www.theguardian.com/commentisfree/2020/sep/09/scapegoating-young-people-britain-COVID-19virus-rates>. (Accessed October 28, 2020).
- [3] A. Officer, V. de la Fuente-Nunez, A global campaign to combat ageism, *Bull. World Health Organ.* 96 (4) (2018) 295–296, <https://doi.org/10.2471/blt.17.202424>.
- [4] R.N. Butler, Age-ism: another form of bigotry, *Gerontologist* 9 (4) (1969) 243–246, https://doi.org/10.1093/geront/9.4_part_1.243.
- [5] T.N. Iversen, L. Larsen, P.E. Solem, A conceptual analysis of ageism, *Nord. Psychol.* 61 (3) (2009) 4–22, <https://doi.org/10.1027/1901-2276.61.3.4>.
- [6] C. Bratt, D. Abrams, H.J. Swift, Supporting the old but neglecting the young? The two faces of ageism, *Dev. Psychol.* 56 (5) (2020) 1029–1039, <https://doi.org/10.1037/dev0000903>.
- [7] A.L. Chasteen, M. Horhota, J.J. Crumley-Branyon, Overlooked and underestimated: experiences of ageism in young, middle-aged, and older adults, *J. Gerontol. B Psychol. Sci. Soc. Sci.* (2020), <https://doi.org/10.1093/geronb/gbaa043>.
- [8] M. Raymer, M. Reed, M. Spiegel, R.K. Purvanova, An examination of generational stereotypes as a path towards reverse ageism, *The Psychologist-Manager Journal* 20 (3) (2017) 148–175, <https://doi.org/10.1037/mgr0000057>.
- [9] S. Marques, J. Mariano, J. Mendoca, W. De Tavernier, M. Hess, L. Naegele, et al., Determinants of ageism against older adults: a systematic review, *Int. J. Environ. Res Public Health* 17 (7) (2020) 2560, <https://doi.org/10.3390/ijerph17072560>.
- [10] P. Voss, E. Bodner, K. Rothermund, Ageism: relationships between age stereotypes and age discrimination, in: L. Ayalon, C. Tesch-Romer (Eds.), *International Perspectives on Aging*, 2018, pp. 11–31, https://doi.org/10.1007/978-3-319-73820-8_2.
- [11] M.D. Landry, G. van den Bergh, K.M. Hjelle, D. Jalovcic, H.K. Tuntland, Betrayal of trust? The impact of the COVID-19 global pandemic on older persons, *J. App. Gerontol.* 39 (7) (2020) 687–689, <https://doi.org/10.1177/0733464820924131>.
- [12] L. Ayalon, There is nothing new under the sun: ageism and intergenerational tension in the age of the COVID-19 outbreak, *Int. Psychogeriatr.* 32 (10) (2020) 1221–1224, <https://doi.org/10.1017/s1041610220000575>.
- [13] S. Fraser, M. Lagacé, B. Bongué, N. Ndeye, J. Guyot, L. Bechard, et al., Ageism and COVID-19: what does our society's response say about us? *Age Ageing* 49 (5) (2020) 692–695, <https://doi.org/10.1093/ageing/afaa097>.
- [14] A. Rahman, Y. Jahan, Defining a “risk group” and ageism in the era of COVID-19, *J. Loss Trauma* 25 (8) (2020) 631–634, <https://doi.org/10.1080/15325024.2020.1757993>.
- [15] F. Previtali, L.D. Allen, M. Varlamova, Not only virus spread: the diffusion of ageism during the outbreak of COVID-19, *J. Aging Soc. Policy* 32 (2–5) (2020) 506–514, <https://doi.org/10.1080/08959420.2020.1772002>.
- [16] M. Cesari, M. Proietti, COVID-19 in Italy: ageism and decision making in a pandemic, *J. Ame. Med. Dir. Assoc.* 21 (5) (2020) 576–577, <https://doi.org/10.1016/j.jamda.2020.03.025>.
- [17] C.C. Colenda, C.F. Reynolds, W.B. Applegate, P.D. Sloane, S. Zimmerman, A. B. Newman, et al., COVID-19 pandemic and ageism: a call for humanitarian care, *Gerontologist* 60 (6) (2020) 987–988, <https://doi.org/10.1093/geront/gnaa062>.
- [18] J.L. Andrews, L. Foulkes, S.J. Blakemore, Peer influence in adolescence: public health implications for COVID-19, *Trend. Cogn. Sci.* 24 (8) (2020) 585–587, <https://doi.org/10.1016/j.tics.2020.05.001>.
- [19] C. Efuribe, M. Barre-Hemingway, E. Vaghefi, A.B. Suleiman, Coping with the COVID-19 crisis: a call for youth engagement and the inclusion of young people in matters that affect their lives, *J. Adolesc. Health* 67 (1) (2020) 16–17, <https://doi.org/10.1016/j.jadohealth.2020.04.009>.
- [20] E. Cohn-Schwartz, L. Ayalon, Societal views of older adults as vulnerable and a burden to society during the COVID-19 outbreak: results from an Israeli nationally representative sample, *J. Gerontol. B Psychol. Sci. Soc. Sci.* (2020), <https://doi.org/10.1093/geronb/gbaa150>.
- [21] Y.S. Bergman, S. Cohen-Fridel, A. Shrira, E. Bodner, Y. Palgi, COVID-19 health worries and anxiety symptoms among older adults: the moderating role of ageism, *Int. Psychogeriatr.* 32 (11) (2020) 1371–1375, <https://doi.org/10.1017/s1041610220001258>.
- [22] M.R. Jimenez-Sotomayor, C. Gomez-Moreno, E. Soto-Perez-de-Celis, COVID-19 virus, ageism, and Twitter: an evaluation of Tweets about older adults and COVID-19, *J. Am. Geriatr. Soc.* 68 (8) (2020) 1661–1665, <https://doi.org/10.1111/jgs.16508>.
- [23] Á. García-Soler, P. Castejón, S. Marsillas, E. del Barrio, L. Thompson, P. Díaz Veiga, Ageism and COVID-19: a study of social inequality through opinions and attitudes about older people in the COVID-19 virus crisis in Spain, *Int. Long Term Care Policy Netw.* (2020) 1–13. <https://ltccovid.org/wp-content/uploads/2020/08/COVID-and-ageism-an-attitudes-survey-in-Spain.pdf>.
- [24] S. Shiovitz-Ezra, L. Ayalon, J. Brodsky, I. Doron, Measuring ageism based on knowledge, attitudes and behavior: findings from an Israeli pilot study, *Ageing Int.* 41 (3) (2016) 298–310, <https://doi.org/10.1007/s12126-016-9253-7>.
- [25] P. Werner, H. AboJabel, M. Maxfield, Conceptualization, measurement and correlates of dementia worry: a scoping review, *Arch. Gerontol. Geriatr.* 92 (2020), 104246, <https://doi.org/10.1016/j.archger.2020.104246>.
- [26] Ministry of Health, Position paper: the subject of priority setting of seriously ill COVID - 19 patients during the COVID - 19 pandemic, in: *A joint committee of the National Bioethics Committee, the Ethics Committee of the Israeli Medical Association and the Ministry of Health*, 2020.
- [27] M.S. North, S.T. Fiske, A prescriptive intergenerational-tension ageism scale: succession, identity, and consumption (SIC), *Psychol. Assess* 25 (3) (2013) 706–713, <https://doi.org/10.1037/a0032367>.
- [28] L. Ramirez, X. Palacios-Espinosa, Stereotypes about old age, social support, aging anxiety and evaluations of one's own health, *J. Soc. Issue.* 72 (1) (2016) 47–68, <https://doi.org/10.1111/josi.12155>.
- [29] P. Werner P, A. Tur-Sinai. Prevalence and correlates of forgone care among adult Israeli Jews: a survey conducted during the COVID-19 outbreak, Manuscript submitted for publication. (2020).
- [30] A. Field, *Discovering Statistics Using SPSS*, Sage Publications, London, 2013.
- [31] Global AgeWatch Index. (2020). <https://countryeconomy.com/demography/global-agewatch-index>. (Accessed November 11, 2020).
- [32] World Health Organization, WHO warns young people COVID-19 may hit hard. (2020). www.voanews.com/covid-19-pandemic. (Accessed August 2, 2020).
- [33] J.M.S. São José, C.A.F. Amado, S. Ilinca, S.C. Buttigieg, A.T. Larsson, Ageism in health care: a systematic review of operational definitions and inductive conceptualizations, *Gerontologist* 59 (2) (2017) e98–e108, <https://doi.org/10.1093/geront/gnx020>.
- [34] O. Eylem O, L. de Wit, A.V. Strayen AV, L. Steubl, Z. Melissourgaki, G.T. Danisman, et al., Stigma for common mental disorders in racial minorities and majorities: a systematic review and meta-analysis, *BMC Public Health* 20 (2020) 879, <https://doi.org/10.21203/rs.3.rs-15675/v3>.