



ORIGINAL ARTICLE

Mediating and Moderating Effects in Ageism and Depression among the Korean Elderly: The Roles of Emotional Reactions and Coping Responses

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Abstract

Objectives: This study evaluated the relationship between ageism and depression, exploring the stress-mediating and stress-moderating roles of emotional reactions and coping behaviors.

Methods: Data were from the 2013 Ageism and Health Study ($n = 816$), a cross-sectional survey of urban and rural community-dwelling seniors aged 60–89 years in South Korea. Participants with at least one experience of ageism reported on their emotional reactions and coping responses. The measure yielded two types of coping: problem-focused (taking formal action, confrontation, seeking social support) and emotion-focused (passive acceptance, emotional discharge).

Results: Although ageism was significantly associated with depressive symptoms ($B = 0.27, p < 0.0001$), the association was entirely mediated by emotional reactions such as anger, sadness, and powerlessness. Problem-focused coping, especially confrontation and social support, seemingly reduced the impact of emotional reactions on depression, whereas emotion-focused coping exacerbated the adverse effects.

Conclusion: These findings support the cultural characterization explanation of ageism and related coping processes among Korean elderly and suggest that regulating emotional reactions may determine the efficacy of coping with ageism.

1. Introduction

Ageism may be a fundamental determinant of health and access to adequate resources, depending on the cultural values and social traditions that shape social inequality and health disparities [1,2]. Indeed, ageism, as a negative social behavior of systematic stereotyping

and prejudiced beliefs of young-group members toward old-group victims [1], can be a primary social stressor contributing to deteriorating health and well-being among the elderly [1,3,4]. There are strong theoretical grounds to support the ageism–mental health link [2,5–7], and several decades of research have been devoted to understanding the concomitant stress-coping

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processes that regulate the negative consequences of discriminatory experiences [1,3,4,8,9].

Stress process and discrimination literature contends that emotional reactions and coping responses, as central aspects of the stress-coping process, can be a potential pathway that alleviates or exacerbates the psychological toll of discriminatory experiences; while the stressful experience of discrimination evokes emotional reactions indirectly affecting the psychological problems, the psychological provocation of discrimination and emotional reactions, in turn, may be noticeably regulated by personal coping responses [8,10–12]. The main purpose of this study is to find empirical evidence to support a theory-based hypothesis of the link between ageism, emotional reactions, coping, and psychological health in an Asian context. In particular, drawing from stress-coping theories, we seek to examine the experiences of ageism among Korean elderly, focusing on how differences in emotional reactions and coping behaviors contribute to variability in psychological consequences.

2. Materials and methods

2.1. Participants

Data for this study were drawn from the 2013 Ageism and Health Study, a cross-sectional survey of community-dwelling elderly people aged 60–89 years in South Korea. In order to achieve a balanced view of urban and rural areas, survey participants were recruited from Seoul and remote towns and villages in the province of Chungbuk. The city of Seoul has 31 senior welfare centers (*noinbogjiwkan*) situated across its 25 administrative districts (*gu*). After randomly selecting five administrative districts, one senior welfare center within each selected district was chosen to take part in the study. In Chungbuk, survey participants were recruited from senior welfare centers in two rural towns and community senior facilities (*gyungrodang*) in smaller villages. Efforts were also made to ensure a balanced representation across sexes, age groups, and socioeconomic levels. After obtaining oral consent from each participant, face-to-face interviews were conducted by trained interviewers. A modest incentive was offered to participants.

2.2. Depressive symptoms

The Center for Epidemiologic Studies Depression (CES-D) scale was used to assess depressive symptoms experienced by participants during the week prior to the interview. The original 20-item scale was designed to measure four depressive symptomatology domains including depressive mood, somatic symptoms, social withdrawal, and positive affect. While the CES-D scale has been widely used for research purposes, a cultural response bias on the positive affect items (e.g., happy, high self-esteem, and joy in life), inflating the CES-D

score, was found for certain Asian groups, including Koreans [13]. In the present study, we excluded the four positive items. Each of the remaining items was rated on a 4-point Likert scale, ranging from 0 for rarely or none of the time (< 1 day) to 3 for most or all of the time (5–7 days a week). Cronbach α of the 16-item CES-D scale was 0.918.

2.3. The Palmore Ageism Scale

The Palmore Ageism Scale [6,14,15] was utilized to identify participants' experiences of unfair treatment due to age. The 20-item scale was developed to measure experiences of ageism including prejudice (stereotypes and attitudes) and discrimination (personal acts and institutional policies) [14]. Scale items included typical experiences of ageism such as the following: being told jokes poking fun at the elderly; being ignored, insulted, patronized, or treated with less dignity and respect; denied a position, promotion, employment, or medical treatment; victimized by a criminal; or having one's house vandalized. A 3-point Likert scale, coded as never (scale = 0), once (scale = 1), and twice or more (scale = 2), was used to calculate the frequency of experiencing ageism. The total summed scores of the 20 items were computed, with higher scores indicating more frequent experiences of ageism. The internal consistency reliability of the scale (Cronbach α) was 0.83.

2.4. Emotional reactions and coping responses

Based on previous analyses of perceived discrimination [11,12,16], respondents who reported at least one incident of ageism were asked how they felt about the incidents. Emotional reactions were tapped through 16 items including feeling hurt, angry, sad, frustrated, humiliated, discouraged, terrified, foolish, or ashamed. Each item was coded on a 5-point scale indicating how long the emotion lasted, ranging from 0 for never happened and 1 for a few minutes to 3 for a few hours and 4 for until now. Cronbach coefficient α for the scale was 0.901. Of the 20 items, 13 were fitted by five factors within two types of responses—problem-focused and emotion-focused coping. First, problem-focused coping responses were: (1) taking formal action (2 items: reported it to the media, broadcast, or news); (2) confrontation (3 items: protested verbally or talked or reasoned with the offender); and (3) seeking social support (2 items: talked to family, relatives, or friends to find advice). Second, emotion-focused coping responses included: (1) passive acceptance (4 items: took it as a fact of life, or pretended I did not know I was offended); and (2) emotional discharge (2 items: yelled or cried, expressed anger). Each coping response was scored on a 5-point scale ranging from never = 0 to always = 4. The combined five-factor solution accounted for 64.6% of the total variance in coping scores. Internal consistency coefficients ranged from 0.627 to 0.851. A

confirmatory factor analysis verified that five-factor model statistics showed to be an acceptable model fit (goodness of fit index; 0.931; comparative fit index 0.913; normed index 0.915; non-normed index 0.910; RMSEA 0.049; Chi-square test < 0.0001). Internal consistency coefficients (Cronbach α) of subscales ranged from 0.627 to 0.851, and factor loadings ranged from 0.72 to 0.86. The five summed coping response scores were obtained by adding the scores of the items of each factor.

2.5. Other covariate measures

Potential covariates of depressive symptoms included demographic factors (age, sex, marital status), socio-economic status (education, economic status), study site (city, rural), and chronic diseases. Chronological age (60–89 years) was entered into the models as a continuous variable. Marital status was coded as currently married and not married (never married, divorced, separated, and widowed). Education was classified into three levels: no formal education or elementary school (0–6 years), middle school (7–9 years), and high school or more (≥ 12 years). We also assessed self-rated economic status. Participants were asked to use a 10-point visual analogue scale, ranging from 1 to 10, to indicate their subjective rating of current economic status, with a higher score representing better economic status. Eight self-reported chronic episodes (hypertension, diabetes, cancer, arthritis, chronic obstructive pulmonary disease, liver and heart diseases, and stroke) were collected based on whether the participants had ever been diagnosed with the conditions. *Yes* was defined as having each chronic disease. A continuous variable was created by summing the number of chronic conditions.

2.6. Statistical analysis

Chi-square tests were applied to estimate the proportion of demographic and socioeconomic variables. Means and standard deviations were calculated for age, ageism, emotional reactions, and coping responses. An independent groups *t* test was conducted between participants who had experienced ageism ($n = 390$) and those who had not ($n = 422$), with age, economic status, chronic diseases, and depressive symptoms. A multiple regression model was used to estimate the relationships between ageism, emotional reactions, coping responses, and depression. After adjusting for potential covariates, first, we tested the main (direct) effect of ageism on depressive symptoms. Second, the mediation effect of emotional reactions on the ageism–depression link was tested using a bootstrap procedure outlined by Hayes [17]. Third, before testing direct and indirect roles of coping methods, initially we checked for multicollinearity among the five coping methods.

The correlations among the five coping responses ranged from 0.139 to 0.987. After centering coping

variables, tolerance and variance inflation factors (ranged from 1.55 to 74.32) still indicated the presence of multicollinearity. Thus, the main effects of the five coping methods were tested, individually. Finally, we tested the moderating effects of problem-focused and emotion-focused coping on the relationship between ageism, emotional reactions, and depressive symptoms by incorporating interaction effects.

The central mediating and moderating variables, emotional reactions and coping responses (problem-focused and emotion-focused), were applicable only to those who had experienced ageism; these are conditionally relevant variables (CRVs) [11,12,18]. These CRVs were used in regression analyses as interactions between the dummy variable of ageism ($D_A = 1$ if one or more experience of ageism, $D_A = 0$ if no experience of ageism) and deviation scores for each emotional reaction and coping factor. The following equation shows the simplest form of regression model with depressive symptoms (*Dep*) regressed on ageism (continuous variable, *A*), and the CRV of emotional reactions ($E - \bar{E}$) D_A .

$$Dep = b_0 + b_1A + b_2(E - \bar{E})D_A$$

As CRVs, the moderating effects of five types of coping responses were tested separately by the interaction terms of ageism by coping and emotion by coping.

3. Results

Table 1 shows the characteristics of sociodemographic factors, ageism, and coping resources, according to the experience of ageism. Among the total 812 respondents aged 60–89 years, almost half (48.1%) had experienced one or more incidents of ageism. Respondents who lived in metropolitan areas were more likely to report experiences of ageism than those who lived in rural areas (55.0% vs. 38.0%, $p < 0.0001$). Men (48.5%) and women (47.6%) experienced similar levels of ageism. Respondents with partners were less likely to report ageism experiences than those without partners. Those who had completed high school or more education (50.2%) seemed to experience higher levels of ageism than those with elementary or no education (46.2%). More than 70% of respondents who experienced ageism had one or more chronic diseases such as hypertension, diabetes, heart disease, arthritis, and stroke. The proportion was 67.1% among those who did not report ageism. The mean number of chronic diseases was marginally higher among participants who had experienced ageism than among those who had not ($p = 0.052$).

The mean age was similar for respondents with ageism experiences and those without (72.6 years vs. 73.1 years). The mean scores of economic status were

Table 1. Demographic and socioeconomic characteristics, emotional reactions, and coping responses according to ageism experience, 2013 ($n = 812$).

		Ageism $n = 390$ (48.1)	No ageism $n = 422$ (51.9)	p
Sex	Male	193 (48.5)	205 (51.5)	0.796
	Female	197 (47.6)	217 (51.4)	
Survey site	Urban	264 (55.0)	216 (45.0)	<0.0001
	Rural	126 (38.0)	206 (62.0)	
Marital status	Married	199 (45.5)	238 (54.5)	0.125
	Not married	191 (50.9)	184 (49.1)	
Formal education	High school or more	156 (50.2)	155 (49.8)	0.333
	Middle school (7–9 y)	99 (47.4)	110 (52.6)	
	Elementary school or none	135 (46.2)	157 (53.7)	
Chronic disease	Yes	280 (71.8)	283 (67.1)	0.144
	No	110 (28.2)	139 (32.9)	
Continuous measures		Mean (SD)	Mean (SD)	
Age (y)		72.6 (6.2)	73.1(6.6)	0.314
Economic status		3.76 (1.67)	3.85 (1.75)	0.396
Chronic health		1.27 (1.14)	1.12 (1.10)	0.052
Depression		8.81 (9.09)	6.52 (8.18)	0.033
Ageism		5.06 (4.40)		
Emotional reactions		7.57 (8.57)		
Coping responses				
Problem-focused coping	Taking formal action	0.30 (0.92)		
	Confrontation	1.75 (2.14)		
	Seeking social support	1.71 (1.90)		
Emotion-focused coping	Passive acceptance	5.32 (4.87)		
	Emotional discharge	0.31 (0.88)		

Data are presented as n (%). SD = standard deviation.

below the average of 4.0 in both samples (3.76 vs. 3.86). Respondents who reported ageism had significantly higher risks of depressive symptoms (mean = 8.81) than those who did not (mean = 6.52, $p = 0.033$). Among those who experienced ageism, the overall mean \pm standard deviation scores for the 20-item ageism and 16-item emotional arousal scales were 5.1 ± 4.4 and 7.57 ± 8.57 , respectively. Regarding each coping response, the mean scores were 0.30 ± 0.92 for taking formal action, 1.75 ± 2.14 for confrontation, 1.71 ± 1.90 for seeking social support, 5.32 ± 4.87 for passive acceptance, and 0.31 ± 0.88 for emotional discharge.

Table 2 shows findings on the main effects of sociodemographic factors and ageism on depressive symptoms (Step 1), and the mediating effects of emotional reactions on the association between ageism and depressive symptoms (Step 2). As reported in Step 1, older age, living in cities, being female, having elementary school or no education, lower economic status, and having chronic diseases were significantly associated with increased levels of depressive symptoms. Controlling for these sociodemographic covariates and chronic conditions, an increase in experiences of ageism was significantly associated with increased depressive symptoms ($B = 0.27$, $\beta = 0.12$,

$p < 0.0001$). After the addition of emotional reactions (Step 2), the direct impact of ageism on depressive symptoms virtually vanished, decreasing from 0.27 to -0.02 (confidence interval, -0.26 – 0.19 ; $p = 0.784$), while the indirect effect was 0.40 (confidence interval, 0.27 – 0.53 ; $p < 0.0001$). Furthermore, the emotional reactions added in Model 2 significantly improved the prediction of depressive symptoms ($\Delta R^2 = 0.04$).

Table 3 presents the main effects of the five coping strategies (Step 3) and their moderating effects by extending the main effect model (Step 4). To avoid potential multicollinearity problems, each coping strategy was examined separately (Models 1–5). After controlling for all potential covariates, we found that confrontation and social support coping were more likely to reduce the risk of depressive symptoms ($B = -0.34$, $\beta = -0.06$; $B = -0.44$, $\beta = -0.07$, $p < 0.05$, respectively); however, emotion-focused coping, such as passive acceptance and emotional discharge, showed no evidence of an association with depressive symptoms (Step 3).

In Step 4, two-way interactions between ageism, emotional reactions, and coping added incremented approximately 2–3% of the variance in depressive symptoms ($\Delta R^2 = 0.02$ – 0.03). The results of the two-way interaction tests between ageism and coping

Table 2. A hierarchical multiple regression analysis predicting depressive symptoms from ageism and emotional reactions.

Variables	<i>B</i>	<i>SE_b</i>	β	<i>p</i>	<i>F</i>	<i>aR</i> ²	ΔR ²	ΔF
Step 1								
Age	−0.11	0.05	−0.08	*	17.35	0.15	0.02	13.53 [‡]
Survey site (ref = urban)								
Rural	−2.55	0.61	−0.14	‡				
Sex (ref = male)								
Female	1.32	0.64	0.08	*				
Marital status (ref = married)								
Not married	0.36	0.67	0.02					
Education (ref = high school or more)								
Middle school (7–9 y)	0.24	0.67	0.02					
Elementary school or none	4.15	1.00	0.16	‡				
Economic status	−0.52	0.18	−0.10	†				
Chronic disease	1.60	0.26	0.21	‡				
Ageism	0.27	0.07	0.12	‡				
Step 2								
Ageism	−0.02	0.09	−0.01		20.24	0.19	0.04	38.85 [‡]
Emotional reactions	0.34	0.05	0.24	‡				

* $p < 0.05$, † $p < 0.01$, ‡ $p < 0.001$, *B* = unstandardized coefficients; *SE_b* = standard error; β = standardized coefficients; *aR*² = adjusted R-square; ΔR ² = changes in R-square; ΔF = changes in F statistics.

(ageism by coping) showed that none of the coping strategies significantly buffered the ageism–depression link (see β s). Regarding the moderation effect of each coping strategy on the link between emotional reactions and depressive symptoms, as shown in the second row, the negative coefficient for the interaction of confrontation and social support coping by emotional reactions ($B = -0.04$, $\beta = -0.10$, $p < 0.1$; $B = -0.05$, $\beta = -0.09$, $p < 0.1$, respectively) suggests that problem-focused coping buffers the link between emotional reactions and depressive symptoms (Models 2 and 3). Contrarily, emotion-focused coping strategies—passive acceptance and emotional discharge—exacerbated the adverse mental health consequences of emotional reactions ($B = 0.02$, $\beta = -0.09$, $p < 0.05$; $B = -0.02$, $\beta = 0.15$, $p < 0.05$, Models 4 and 5).

Figures 1 and 2 depict the moderating effects of problem-focused coping and emotion-focused coping on the link between emotional reactions and depressive symptoms. We contrasted elderly with no coping strategies to those with yes coping strategies in terms of the slopes of emotional reactions on depressive symptoms. As shown, although the effect size is relatively small, problem-focused coping (confrontation and seeking social support) seems to buffer the link between depression and emotional reactions, while emotion-focused coping (passive acceptance and emotional discharge) intensifies it.

4. Discussion

The primary goal of this study was to examine the nature of the relationship between ageism and

depressive symptoms by investigating the mediating role of emotional reactions and the moderating roles of diverse coping strategies on the ageism–mental health link. Our findings based on a sample of Korean elderly strongly support the association between ageism and depressive symptoms, in agreement with North American evidence [7,19]. Ageism seems to be less common in the Asian community (48.1%); however, it has been identified as a critical stressor inflicting psychological harm on the older population. Our analysis also confirmed the association suggesting that emotional reactions not only exhibit a significant association with depressive symptoms ($B = 0.34$, $p < 0.0001$), but also seem to be a critical mechanism linking ageism to depressive symptoms. This finding empirically corroborates the cognitive appraisal theory of stress, in which negative emotions may be evoked during the primary appraisal process of dealing with stressful events [8,9]. This finding is consistent with empirical results reported on the mental health effects of racial/ethnic discrimination and the mediation effect of emotional reactions on this link among Asian refugees and Korean immigrants in Canada [11].

Our study results on how coping methods are adopted by Korean elderly suggest that Korean elderly are more likely to adopt passive acceptance coping methods in response to stressful events, reflecting Asian values, which emphasize community harmony and unity [20,21]. Problem-focused coping (i.e., confrontation and social support) seemed to have beneficial effects, diminishing depressive symptoms, whereas emotion-focused coping (i.e., passive acceptance and emotional discharge) did not play a vital role in reducing psychological problems among Korean elderly. While our finding is in line with a meta-analysis showing the

Table 3. A hierarchical multiple regression analysis prediction depressive symptoms from ageism, emotional reactions (ER), and problem-focused and emotional-focused coping, and their interactions.

	Problem-focused coping												Emotion-focused coping							
	Taking formal action (Model 1)				Confrontation (Model 2)				Seeking social support (Model 3)				Passive acceptance (Model 4)				Emotional discharge (Model 5)			
	<i>B</i>	<i>SE_b</i>	β	<i>p</i>	<i>B</i>	<i>SE_b</i>	β	<i>p</i>	<i>B</i>	<i>SE_b</i>	β	<i>p</i>	<i>B</i>	<i>SE_b</i>	β	<i>p</i>	<i>B</i>	<i>SE_b</i>	β	<i>p</i>
Step 3																				
Ageism	-0.02	0.09	-0.01		0.01	0.09	-0.01		-0.01	0.09	-0.01		-0.03	0.09	-0.01		-0.05	0.10	-0.02	
ER ^a	0.34	0.06	0.25	§	0.36	0.06	0.26	§	0.36	0.06	0.26	§	0.34	0.05	0.24	§	0.34	0.05	0.24	§
Coping	-0.40	0.45	-0.03		-0.34	0.20	-0.06		-0.44	0.22	-0.07	†	0.02	0.09	0.01		0.05	0.08	0.03	
F	18.46				18.60				18.81				18.38				18.43			
aR ²	0.19				0.19				0.20				0.19				0.19			
ΔR ²	0.00				0.00				0.01				0.00				0.00			
ΔF	1.04				0.23				3.83 [†]				0.05				0.46			
Step 4																				
Ageism [†] Coping	0.03	0.09	0.04		0.03	0.05	0.057		0.03	0.06	0.05		-0.01	0.02	-0.03		-0.01	0.02	-0.02	
ER [†] Coping	0.04	0.05	0.05		-0.04	0.02	-0.10	*	-0.05	0.03	-0.09	*	0.02	0.01	0.09	†	0.02	0.01	0.15	†
F	9.01				9.21				9.48				9.07				9.23			
aR ²	0.21				0.22				0.22				0.21				0.22			
ΔR ²	0.02				0.02				0.03				0.02				0.03			
ΔF	0.62				3.08				2.95*				2.36				3.63			

^aER: Emotional Reactions. * $p < 0.1$; [†] $p < 0.05$; [‡] $p < 0.01$; [§] $p < 0.001$; ^{||}All interaction terms were estimated in separate models according to coping methods. The coefficients of the interaction terms ageism*coping and ER*coping were estimated by extending the corresponding models (3A–3E) after controlling for age, study site, sex, marital status, education, economic status, ageism, emotional reactions, and coping. *B* = unstandardized coefficients; *SE_b* = standard error; β = standardized coefficients; aR² = adjusted R-square; ΔR² = changes in R-square; ΔF = changes in F statistics.

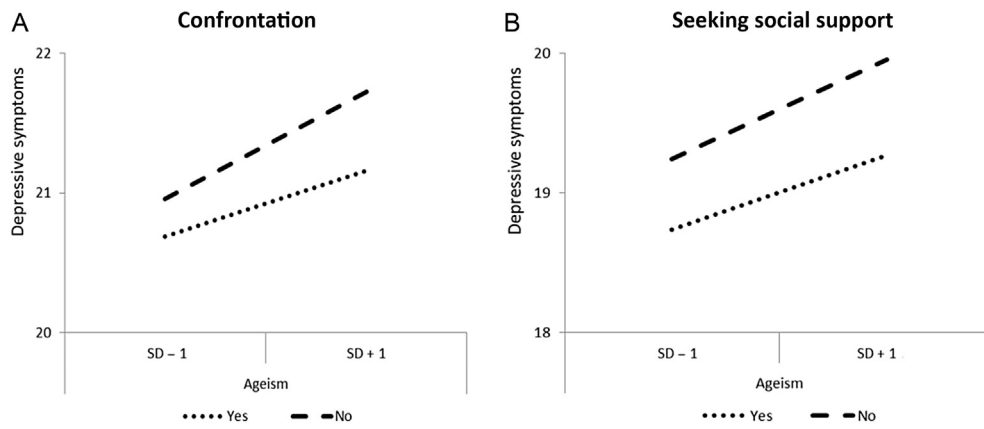


Figure 1. Relationships between emotional reactions and depressive symptoms at the high and low levels of problem-focused coping. The moderating effects of (A) confrontation (high, $B = 0.24$; low, $B = 0.38$) and (B) seeking social support (high, $B = 0.27$; low, $B = 0.36$) on the relationship between emotional reaction and depressive symptoms. The low and high problem-focused coping effects are depicted artificially with standard scores 1 standard deviation below ($SD - 1$) and above ($SD + 1$) the mean, respectively.

efficacy of problem-focused coping among patients with depressive and bipolar disorder [22], another review of North American literature suggests cultural coping patterns that mainly rely on emotion-focused coping is more common among Asian Americans [23], and substantial subgroup differences are found in coping efficacy.

Our findings support the stress-moderating effects of coping, despite small effect sizes for coping responses (Figure 1). While emotion-focused coping methods appeared to exacerbate the link between depressive symptoms and ageism-induced emotions, problem-focused coping methods were more likely to buffer this relationship. In contrast to earlier empirical evidence from Southeast Asian refugees presented by Noh et al [11], passive acceptance or emotional

discharge coping strategies in this study did not have any effect in reducing the ageism–health link, but were even counter-productive in buffering the psychological toll of ageism-induced emotions among Korean elderly. Contrarily, problem-focused coping methods, especially confrontation and seeking social support, seemed to serve a protective function for those at psychological risk of emotional reactions, which aligns with the assertion that problem-focused coping may be the most effective coping mode when Korean immigrants face discrimination [12]. Interestingly, neither emotion-focused nor problem-focused coping strategies directly played a role in the relationship between ageism and depressive symptoms, but coping methods were likely to influence the symptoms of ageism-induced emotions. This result implies that

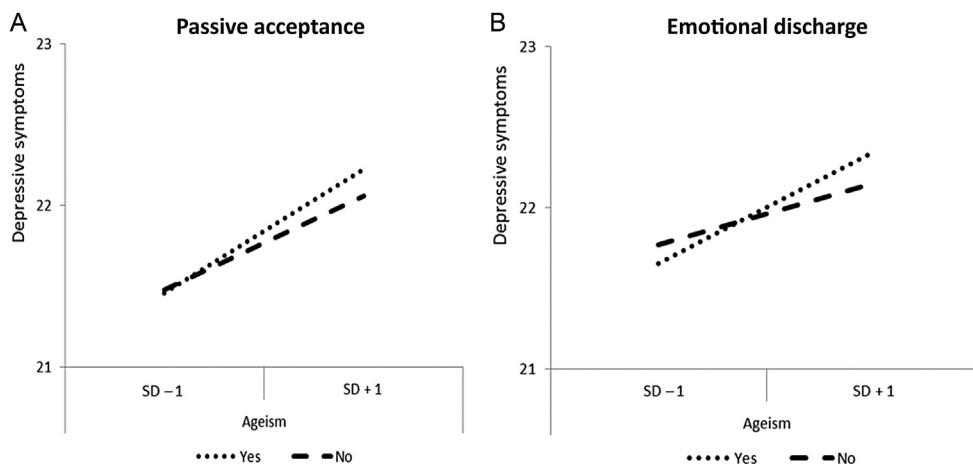


Figure 2. The relationships between emotional reactions and depressive symptoms at the high and low levels of emotion-focused coping. The moderating effects of (A) passive acceptance (high, $B = 0.38$; low, $B = 0.29$) and (B) emotional discharge (high, $B = 0.35$; low, $B = 0.19$) on the relationship between emotional reaction and depressive symptoms. The low and high emotion-focused coping effects are depicted artificially with standard scores 1 standard deviation below ($SD - 1$) and above ($SD + 1$) the mean, respectively.

emotional reactions are a significant factor to consider in understanding the stress process of ageism among Korean elderly.

In our study, Korean elderly living in urban areas were significantly more exposed to ageism than those living in rural areas (Table 1), but no urban–rural differences were found in the link between ageism and depressive symptoms (results not shown). As an Asian ethical and philosophical system, Confucianism stresses filial piety, prescribing that young people respect, obey, and care for their elders [24,25]. However, the *cultural change* theory suggests that the advent of industrial society and rapid demographic shifts have caused a dramatic change in traditional Asian values towards a devaluation of the rich life experience and knowledge of the elderly, leading to a rise in ageism and its related mental health problems [26,27]. Once exposed, however, both urban and rural elderly seemed to suffer the same levels of psychological repercussions.

Some degree of caution is needed in interpreting the results of this preliminary study. First, the data were collected through a convenience sampling method, so results cannot be generalized to the whole of Korean society. However, a quota sampling method was used to ensure a balanced representation across sexes, age groups, and urban and rural areas. Second, these data were collected in a cross-sectional survey, which cannot prove causality. It is speculated that ageist attitudes and behaviors among therapists or professionals may be highly correlated with poor services to the elderly. While an earlier critical review found limited empirical evidence of ageism among health care providers [28], our study suggests that elderly persons with chronic diseases were more likely to report experiences of ageism than those without chronic diseases. Indeed, previous ageism research found that older adults were least likely to experience ageism in the health services [15,29]. Future longitudinal research is essential to understanding this causal process of ageism. Finally, due to the limited variables in this present study, it was impossible to directly test the cultural characterization and cultural change explanations on the link between ageism and depressive symptoms among Korean elderly. Nonetheless, to the best of our knowledge, this study presents the first empirical evidence on several important hypotheses regarding ageism, depressive symptoms, and coping strategies in the ageism–health link in an Asian context.

In conclusion, our findings imply that emotional reactions seem to mediate the psychological impact of ageism entirely, and problem-focused coping, in turn, moderates the psychological risk of emotional reactions among Korean elderly. Future longitudinal study is needed to understand better the mechanisms and pathways of the stress-process of ageism according to various sociocultural contexts.

Conflicts of interest

All authors of this paper declare that they have no conflicts of interest.

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