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Predictors of Fear of Dementia Among Adults

Direct Original Research

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Abstract

Introduction: Previous work has examined fear of dementia among younger adults;[8] however, less is known about such associations across age. Thus, the current study expanded on such work by assessing objective knowledge, personal experiences, and allophilia as predictors of subjective fear of developing dementia.

Methods: Data from 300 adults (Mean age = 39.7) who completed measures of objective knowledge, personal experiences with persons with dementia, allophilia attitudes towards persons with dementia, and dementia fear. We examined a path model and tested age as a multigroup factor.

Results: The model fit the data well, , χ^2 (DF = 1) = 0.45, p = .50; *AGFI* = .99; *RMSEA* = .00. Post hoc multigroup analyses with age revealed different processes contributing to dementia fear for those younger than and older than age 40 years.

Conclusions: Our results speak to the need to examine different predictors of dementia fear for different age groups. Additional investigations of moderators of dementia fear are needed in order to develop interventions to support potential caregivers across the life span.

Key Words: Moderated Regression, Allophilia, Dementia Fear.

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Introduction

Kinney and colleagues summarize the contributions of social contact theory and terror management theory in relation to fear of dementia.[8] They rightly argue that viewing persons with dementia as an "out-group" to be feared puts the older adult at risk of being isolated.[3] MetLife published a widely-cited finding that fear of dementia was second only to fear of developing cancer.[7] This fear of dementia has far-reaching implications for the global aging population. As the number and percentage of older adults increases across the world,[5] it is imperative that we find ways to encourage and support young adults to enter fields serving older adults, as well as ways to support families as they face potential challenges of aging.[10]

Specific examinations of ageism suggest that personal experience and objective knowledge influence attitudes toward older adults in general, and persons with dementia, in particular.[1,11] Recently, the Positive Education about Aging and Contact Experiences (PEACE) model was offered to guide intergenerational contact through objective knowledge and attitudes.[9] In the current study, we examined the contributions of the two contributors in the PEACE Model, knowledge and allophilia (i.e. positive attitudes), to fear of dementia. Thus, the purpose of the current study was to examine the associations among objective knowledge (e.g. known facts of dementia)[4], personal contact, positive feelings toward persons with dementia, and one's own fear of developing dementia.

Scientific Methods

Data for these analyses are provided by 300 adults who were registered Amazon's Mechanical Turk (MTurk) workers with verified, elite status. Although 324 adults passed our attention and validity checks previously used,[1] 24 did not respond to the items related to experience with persons with dementia. Thus, those 24 were not included in the current analyses. Participants received $3.00 for completing the survey which took on average about 22-minutes, approximately equivalent to minimum wage. Institutional review board approval was obtained; each participant indicated their consent to participate using an anonymous online form.

Participants

Of the 300 participants in the current analyses, 54.3% identified as male, 45.3% as female, and 0.3% as nonbinary. Average age was 39.7 years (SD = 12.4; range 20 to 70 years). Although only 7.1% identified as Hispanic, the sample was racially diverse, with 82.3% identifying as white, non-Hispanic, 9.3% as Black non-Hispanic, and the remaining 8.4% as bi- or multiracial. Education ranged from 9-24 years, with a mean of 15.1 years (SD = 2.2); thus, 99% of participants had at least a high school diploma or GED and 55% had earned a 4-year degree or higher. Approximately one-third (34.7%) were single, never married; 56.7% were currently married or partnered; 7% were divorced or separated; and 1.7% were widowed.

Protocol

Participants completed the scales online and in the following order: ageism,[1] attitudes[8] toward dementia, fear of dementia[4], objective knowledge[4] about dementia, personal experience with dementia, and demographics. Each is discussed below. Other measures, not included in the current analyses, were asked in the survey.

We used the 11-item dementia fear measure as the main dependent variable.[4] A sample item is, "Even though my memory is good, I am still afraid of developing dementia." Responses range from Never (1) to Always (5). The mean-item score for the sample was 2.18 (SD = 0.9; Cronbach's alpha = .95). We used the 16 items from the Allophilia scale to assess one's liking for persons with dementia.[9] A sample item includes, "In general, I have positive attitudes about persons with dementia." Responses are rated on a 6-point scale from Strongly Disagree (1) to Strongly Agree (6). Item-mean for the scale was 4.0 (SD =1.0; alpha = .96). We used 20 factual to assess Objective Knowledge about dementia.[4] Responses could include, "Yes, I believe this," "I am not sure," and "No, I do not believe this." A total correct score was calculated, with a mean of 10.1 correct (SD = 3.4; KR20 = .67). Finally, we developed two self-report items asking participants to what extent they had ever helped care for a family member (1 to 10) or family friend (1 to 10) who had dementia. The item mean for this 2-item Personal Experience scale was 2.9 (SD = 2.5; alpha = .51). Pearson and Spearman correlation coefficients among these measures, along with sample means, are shown in Table 1.

Statistical Analyses

We tested the associations shown in Figure 1 using a path analysis, implemented in SPSS AMOS v. 28.0.0 (IBM, 2021).[6] Maximum likelihood procedures were used to simultaneously estimate all paths of the model; we used the covariance matrices. In a path analysis, a non-significant chi square suggests a good fit of the model to the data. However, minor differences between the tested model and the underlying model often result in statistically significant chi square values in samples larger than 200.[2] Thus, we used additional indices of fit, including the adjusted goodness of fit index (AGFI), for which values greater than .95 are preferred, and the root mean square error of approximation (RMSEA) for which values less than .08 are considered to be acceptable.[2] In addition, we examined each path in the model and evaluated its standardized beta using the critical ratio (CR). CRs >1.96 are significant at the $p < .05$ level.

	Age	Sex	Educ.	Fear	Allophilia	Knowledge	Experience
Age	1.0	.12*	-.11	-.01	-.03	.2188	.04
Sex (1 = male; 2 = female)		1.0	-.08	.02	.12*	.21**	.07
Years of Education			1.0	.04	-.01	.11	-.03
Dementia Fear				1.0	-.06	.05	.32**
Allophilia					1.0	.10	.26**
Objective Knowledge						1.0	.04
Personal Experience							1.0
Mean	39.7	1.5	15.1	2.2	4.0	10.4	2.9
SD	12.4	0.5	2.2	.90	1.0	3.4	2.5

Table 1. Sample Means, Standard Deviations and Correlations ; Note: coefficients with sex are Spearman rho; all other coefficients are Pearson r ; Alt-text: A table of means, standard deviations, and correlations.

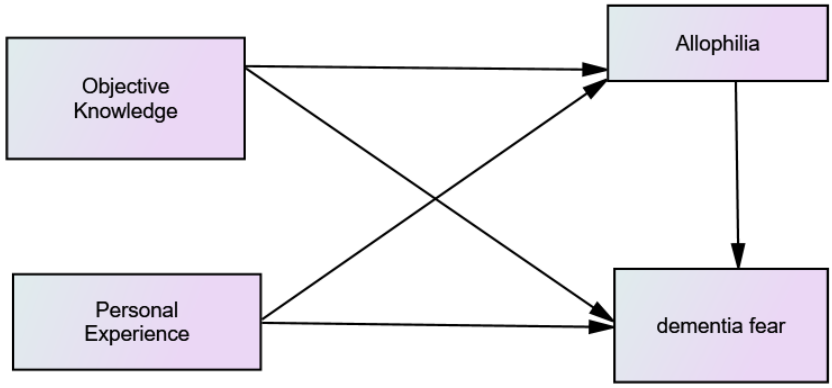

Figure 1. Tested Model
Alt-text: a figure depicting the tested path model

Results
Results of the model testing are presented in Table 2. The model fit the data well, χ^2 (DF = 1) = 0.45, p = .50; *AGFI* = .99; *RMSEA* = .00. Although the model fit the data well, a relatively small percentage of variance was accounted for in dementia fear (R^2 = .124) and allophilia (R^2 = .07). Specific paths emerged as significant, with personal experience having a direct effect on allophilia (β = .26, p < .001) and a direct effect on dementia fear (β = .36, p < .001). Higher allophilia was associated with less dementia fear, β = -.16, p = .005. In contrast, objective knowledge did not relate significantly to either allophilia (β = .07, p = .23) or dementia fear (β = .05, p = .40).

Regression Path			β	b	SE(b)	CR	p
Objective Knowledge	→	Allophilia	.067	.019	.016	1.21	.227
Personal Experience	→	Allophilia	**.261**	.102	.022	4.69	< .001
Objective Knowledge	→	Dementia Fear	.045	.012	.014	.84	.403
Personal Experience	→	Dementia Fear	**.357**	.130	.020	6.37	<.001
Allophilia	→	Dementia Fear	**-.157**	-.146	.052	-2.79	.005

Table 2. Results of the Path Analysis (N = 300)
Alt-text: a table of standardized and unstandardized beta weights and Critical Ratios

Post Hoc Moderation Analysis
We also examined whether age moderated these associations by conducting a multigroup analysis of the model shown in Figure 1. We divided our sample into two age groups, including 179 younger adults ages 20 to 39 years (Mean age = 31.0, SD = 4.5) and 121 midlife and older adults ages 40 to 70 years (M age = 42.6, SD = 8.4). The model fit the data well, χ^2 (DF = 2) = 2.25, p = .33; *AGFI* = .96; *RMSEA* = .02. As shown in Table 3, however, different associations emerged for the two age groups. Among younger adults, significant paths emerged between personal experience and both allophilia (β = .19) and dementia fear (β = .45). Allophilia reduced dementia fear (β = -.24). The equation accounted for very little variance in allophilia (R^2 = .04) but adequate amounts of variance in dementia fear (R^2 = .22).

In contrast, the only significant path to emerge among middle-aged and older adults was that between personal experience and allophilia (β = .36). Approximately 14% of the variance in allophilia was explained for middle-aged and older adults, whereas the equation accounted for about 5% of the variance in dementia fear among them.

Regression Paths for Adults 20 to 39 years (n = 179)			β	b	SE(b)	CR	p
Objective Knowledge	→	Allophilia	.033	.009	.020	.45	.651
Personal Experience	→	Allophilia	**.192**	.075	.029	2.62	.009
Objective Knowledge	→	Dementia Fear	.016	.004	.017	.243	.808
Personal Experience	→	Dementia Fear	**.447**	.166	.025	6.61	< .001
Allophilia	→	Dementia Fear	**-.239**	-.226	.064	-3.52	< .001
R^2 Allophilia = .04; R^2 Fear = .22							
Regression Paths for Adults 40 to 70 years (n = 121)			**β**	**b**	**SE(b)**	**CR**	**p**
Objective Knowledge	→	Allophilia	.121	.041	.029	1.43	.152
Personal Experience	→	Allophilia	**.356**	.139	.033	4.21	< .001
Objective Knowledge	→	Dementia Fear	.146	.044	.027	1.62	.104
Personal Experience	→	Dementia Fear	.171	.060	.033	1.80	.072
Allophilia	→	Dementia Fear	.001	.001	.086	.014	.989
R^2 Allophilia = .14; R^2 Fear = .05							

Table 3. Age-moderated path results.
Alt-text: a table depicting standardized and unstandardized beta weights and Critical Ratios for two age groups

Discussion

According to the PEACE model, objective knowledge and positive personal experiences can promote allophilia and reduce fear of out-groups, including persons with dementia.[9] However, much of this research has been conducted with college students.[8] We investigated the associations among objective knowledge, personal experiences, allophilia and dementia fear among an age-diverse sample of adults. Across age, personal experience both increased allophilia and increased fear of dementia. Allophilia was associated with decreased fear of dementia. This apparent contradiction with personal experience increasing positive attitudes and increasing fear is clarified by our post hoc analyses. When the model was examined by age groups, a different pattern emerged in which middle-aged and older adults' allophilia was predicted by personal experience. No other significant paths emerged for adults over age 40 years. In contrast, although adults younger than age 40 also exhibited a significant path between personal experience and allophilia, other paths emerged. Specifically, for younger adults, allophilia was associated with less fear of dementia. Fear of dementia, however, was also predicted by personal experience. It is note-worthy that objective knowledge did not influence the constructs in the model. Indeed, we agree with others that formal knowledge may be a necessary but insufficient means to reduce fear of dementia.[8-9] Expanding on the PEACE model, we caution educators and others who seek to decrease fear of dementia among college students to be especially mindful of the kinds of experiences those students encounter.[9]

Conclusions

Given the results of our post hoc analyses, we encourage researchers to examine other potential moderators of dementia fear and to examine the existing model for age differences.

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