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Effect of Socio-demographic Variables on Successful Aging of Elderly in Pakistan

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Abstract

The present study was intended to determine the role of socio-demographic variables on the successful aging of the elderly in Pakistan. It was hypothesized that demographic variables (age, gender, presence of a spouse, monthly household income, earning independently, self-rated health, and social participation) would predict successful aging in Pakistani elderly. The current study also explores the interaction effect of age and demographic variables influencing the successful aging of the Pakistani elderly. An interview-based survey design was used to collect the data. The sample comprised 475 older adults with a distribution of 258 males and 275 females with an age range of 50 to 100 years. The study's findings showed that younger older age, earning independently, and perceiving a satisfactory health status are the significant predictors of successful aging. Moreover, the younger and middle-aged elderly who participate in social gatherings has better successful aging than those who do not participate.

Key Words: *Age, Gender, Self-Rated Health, Successful Aging, Social Participation.*

Introduction

Aging is a multidimensional process during which individuals perceive to be aging successfully at one time while poorly at other times (Hsu & Jones, 2012). Sometimes, they perceive they are aging successfully at one domain while poorly at other domains (Østbye, 2006). This subjective conceptualization of aging gained immense popularity in the last decade when the objective criteria of successful aging presented by Rowe and Kahn (1997) received criticism for its biomedical focus (Katz & Calasanti, 2015). Thus, the psychosocial model of successful aging involves focusing on the multiple aspects of life simultaneously (Jopp & Smith, 2006).

According to the psychosocial model, the ability to adapt and cope with life changes, physical, psychological, and social resources are essential predictors of successful aging (Tkatch et al., 2017). Many studies have highlighted subjective health as a determining factor of successful aging in different socioeconomic groups (Yilmaz & Çağlayan, 2016). The dynamic phenomenon of successful aging, on the one hand, is associated with one's overall life experiences that have an influence on subjective health in later life, and on the other hand, is linked with later life experiences. This life-course perspective helps to identify the possible role of one's life experiences and social conditions on one's successful aging (Blane,

2006; Kuh, 2007). This perspective significantly emphasizes different socio-demographic factors that contribute to one's process of overall aging. Similarly, numerous studies have confirmed the importance of other demographic variables like income, ability to engage socially, and self-rated health as the significant correlates of successful aging (Carver & Buchanan, 2016; Cho et al., 2015; Katz & Calasanti, 2015; Kim & Park, 2017).

Literature Review

Successful aging is an extensively studied concept gloat associated with a wide variety of factors. In Pakistan, although much work has been done on aging (Ashiq & Asad, 2017; Ilyas & Muazzam, 2015; Jalal & Younis, 2014; Mohyuddin & Rehman, 2016), quality of life (Abbas et al., 2021; Tanveer & Batool, 2019) and well-being (Gul & Dawood, 2015; Khawaja & Shahid, 2020) of elderly but scarce literature is available on healthy aging, active aging, and successful aging. The present study intended to determine the role of demographic variables that influence the successful aging among younger, middle-aged, and older-aged elderly.

Literature suggests that age, income, marital status, and self-rated health are significant predictors of successful aging in the elderly (Carver & Buchanan, 2016; Kim & Park, 2017). Mixed literature is available regarding age as a predictor of successful aging, as some studies suggested that successful aging declines as the individual ages (Katz & Calasanti, 2015). In contrast, some found better successful aging with age (Jeste et al., 2013), but some reported no significant relationship between age and successful aging (Lin et al., 2016; Tanveer & Batool, 2019); while proposing that rather than age being active and independent at any age is closely associated with successful aging (Knight, & Ricciardelli, 2003). Similarly, we have mixed findings regarding gender, marital status, and social participation as predictors of successful aging (Cho et al., 2015; Katz & Calasanti, 2015). But the most consistent predictor of successful aging is subjective health. Findings reported that perceiving being healthy is a crucial predictor of successful aging. These findings suggest the importance of cultural variation in defining the phenomenon of successful aging.

In Pakistan, older adults are not perceived as burdensome for the family; instead, they are considered a blessing, and family members consider serving and caring for older adults their obligation and responsibility. According to Cheng et al. (2015), there is no concept of old age as burdensome in Asian families; however, from the elderly perspective, they prefer to be actively involved in daily life activities (Yu & Yau, 2015). A vast. literature on successful aging has emphasized the belief that this phenomenon is an individual achievement, ignoring the social context. So it is essential to evaluate the role of these socio-demographic variables in the successful aging of adults. Therefore, it was hypothesized that demographic variables (age, gender, presence of a spouse, monthly household income, earning independently, self-rated health, and social participation) will predict successful aging among the Pakistani elderly; and there will be a significant interaction of age and demographic variables (age, gender, presence of a spouse, monthly household income, earning independently, self-rated health, and social participation) influencing the successful aging of the Pakistani elderly.

Research Question

1. What is the role of demographic variables (age, gender, presence of a spouse, monthly household income, earning independently, self-rated health, and social participation) in predicting successful aging among the Pakistani elderly?

Method

The study was an interview-based survey design, and the data was collected using snowball sampling techniques from different areas of Lahore and Gujranwala, Pakistan.

Sample

The sample comprised 475 older adults with a distribution of 258 males and 275 females with an age range of 50 to 100 years (*M*=66.14, *SD*=13.17). Only those older adults were included in the study who were living in a joint family system. The demographic details of the sample are demonstrated in Table 1.

Table 1: Demographic Characteristics of the Sample (N=475)

Variables	Categories	*f*	%
Age	Younger elderly (<59 years)	189	39.8
	Middle-aged elderly (60-79years)	177	37.3
	Older aged elderly (>80 years)	109	22.9
Gender	Males	258	54.3
	Females	217	45.7
Marital Status	With spouse	304	64.0
	Without spouse	171	36.0
Earning	Yes	202	42.5
	No	263	55.5
Monthly Income	Less than 60k	131	27.6
	Greater than 60k	96	20.2
Social Participation	Yes	406	85.5
	No	65	13.7
Subjective Health	Satisfied	46	9.7
	Neutral	101	21.3
	Dissatisfied	327	68.8

Instruments

Along with a detailed demographic sheet, each family member has to respond on the following instruments.

Successful Aging Scale (SAS)

The Successful Aging Scale developed by Reker (2009) is a 14 item scale. The scale comprised three subscales measuring healthy lifestyle, adaptive coping, and engagement with life on a 7 point Likert-type ranging from strongly disagree to agree (1 – 7) strongly. Alpha reliability coefficients of the original composite scale and its components were high, ranging from .72 to .84. Higher scores on the SAS represent high successful aging. The scale was the first time translated (in Urdu) using the back translation method (Beaton, Bombardier, Gullemin, & Ferraz, 2000) after taking permission from the author. Psychometric properties were established on all three populations separately. Item 1 of the healthy lifestyle scale was deleted due to negative corrected item-total correlation, which improved the reliability

of subscales. Alpha reliability coefficient was high for the study sample for all populations, as indicated in Table 2.

Table 2: Psychometric properties of Successful Aging Scale (N=475)

Variables	*M*	*SD*	*k*	*α*	*Range*		*skew*	*kurt*
					Potential	*Actual*		
Successful Aging	71.18	10.37	13	.85	19-90	13-91	-1.56	3.95
Healthy lifestyle	17.85	2.84	3	.80	3-21	3-21	-1.99	5.68
Adaptive coping	22.11	3.81	4	.70	4-28	4-28	-1.19	2.45
Engagement with life	27.98	5.06	5	.82	5-35	5-35	-1.52	3.07

Socio-demographic Variables

Other socio-demographic variables include age, gender, marital status, monthly income, earning independently, social participation, and self-rated health. Three age categories, including younger elderly, middle-aged elderly, and older-aged elderly, were included in the study with an age distribution of 1=50 – 60 years, 2=60-80 years, and 3=80 to 100 years, respectively. Gender was coded 1 as male and 2 as female, marital status as 1=spouse alive or 2=spouse dead, earning independently, and social participation was coded as 1=yes and 2=no. Monthly income was distributed in two categories, including income 1=less than 60 thousand PKR or 2=greater than 60 thousand PKR. Lastly, self-rated health was used as a single comprehensive indicator of successful aging and stated as 'Are you satisfied with your current health' and coded as 1= satisfied, 2=neither satisfied nor dissatisfied, 3=dissatisfied.

Procedure

After getting ethical clearance from the Board of Advanced Studies and Research, the author of the scale was approached to seek permission. The sample was recruited personally from different areas of Lahore and Gujranwala, Pakistan. They were briefed about the research purpose and informed that they could withdraw from the study anytime, and the obtained information will be used for research purposes only. It took 10 months to collect data, and participants took 5 to 10 minutes to complete the questionnaire. After data collection, data were analyzed using SPSS v23.

Results

Firstly the psychometric properties of the scale were computed as depicted in Table 2. Table 2 shows the mean, standard deviation, range of scale, Cronbach's alpha, skewness and kurtosis of successful aging scale and its three subscales, including healthy lifestyle, adaptive coping, and engagement with life. It was found that the overall alpha reliability of the scale and its subscales were satisfactory, ranging from .70 to .85.

A chi-square test was run on the socio-demographics across three age groups (less than 59 years, 60 – 79 years, greater than 80 years). Findings show that the three age groups are statistically different in terms of gender $\chi 2(2) = 23.97$, presence of spouse $\chi 2(2) = 170.05$, earning independently $\chi 2(2) = 107.94$, monthly income $\chi 2(2) = 27.15$, participation in social gatherings $\chi 2(2) = 11.15$, and subjective health satisfaction $\chi 2(4) = 14.80$ with $p<.05$ as indicated in Table 3.

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Table 3: Demographic Characteristics of the Sample (N=475)

		Younger elderly 50 – 69 years		Middle aged elderly 70 – 89 years		Older aged elderly 80 – 100 years		χ^2	*df*	*p*
Variables	Categories	*n*	%	*n*	%	*n*	%			
Gender	Males	127	26.74	74	15.58	57	12.00	23.97	2	.000
	Females	62	13.05	103	21.68	52	10.94			
Marital Status	With spouse	187	39.36	80	16.84	37	7.79	170.05	2	.000
	Without spouse	2	.42	97	20.42	72	15.16			
Earning	Yes	133	28.60	50	10.75	19	4.09	107.94	2	.000
	No	50	10.75	126	27.09	87	18.71			
Monthly Income	Less than 60k	53	23.35	52	22.91	26	11.45	27.15	2	.000
	Greater than 60k	72	31.72	18	7.93	6	2.64			
Social Participation	Yes	149	31.63	160	33.97	97	20.59	11.15	2	.004
	No	38	8.07	16	3.40	11	2.34			
Subjective Health	Satisfied	12	2.53	17	3.59	17	3.59			
	Neutral	30	6.33	43	9.07	28	5.91	14.80	4	.005
	Not satisfied	147	31.01	117	24.68	63	13.29			

Pearson product-moment correlation was calculated to determine the relationship between socio-demographic variables with successful aging and subscales, as shown in Table 4.

Table 4: Correlation between socio-demographic variables and successful aging scale and subscales (N=475)

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
1. Age	-	.14**	.56**	-.13**	.45**	-.33**	-.17**	-.24**	-.15**	-.27**	-.26**
2. Gender		-	.26**	-.16**	.66**	-.23**	-.18**	-.07	-.07	-.13**	-.13**
3. Mar_Sta			-	-.04	.40**	-.29**	-.12*	-.13**	-.07	-.20**	-.18**
4. Soc_Part				-	-.15**	.09	-.03	.03	-.01	-.01	.00
5. Earn					-	-.29**	-.17**	-.19**	-.13**	-.24**	-.23**
6. Mon_Inc						-	-.01	.04	.09	.06	.08
7.Sub_Health							-	.23**	.17**	.29**	.27**
8. HLS								-	.61**	.73**	.84**
9. AC									-	.69**	.85**
10.EwL										-	.93**
11.SA											-

Note: Mar_Sta= Marital Status (1=spouse alive & 2 = spouse not alive), Soc_Part = Participation in social gathering (1=Yes, 2=No), Earn= Do you earn (1=Yes, 2=No), Mon_Inc = monthly income (1=less than 60k, 2=greater than 61k), Sub_health = Subjective health satisfaction (1=not satisfied, 2=Not satisfied nor dissatisfied, 3=satisfied), HLS= health life style, AC = Adaptive coping, Ewl = Engagement with life, SA=Successful Aging.
**p<.05, **p<.001*

Findings indicate that successful aging is related with younger older age (r=-.26 p<.01), male gender (r=-.13, p<.01), presence of spouse (r=-.18, p<.01), earning independently (r=-.23, p<.01), and subjective health satisfaction (r=.27, p<.01). In contrast, it is not related to participation in social gatherings and monthly income (p>.05). Likewise, a healthy lifestyle is associated with younger old age (r=-.24, p<.01), presence of spouse (r=-.13, p<.01), earning independently (r=-.19, p<.01), and self-rated health(r=.23, p<.01); and is not related with gender, participation in social gatherings, and monthly income (p>.05). Similarly, adaptive coping is associated with younger older age (r=-.15, p<.01), earning independently (r=-.13, p<.01), and subjective health satisfaction (r=.17, p<.01). In contrast, it is not associated with gender, the presence of a spouse, participation in social gatherings, and monthly income (p>.05). Moreover, engagement with life is related with younger older age (r=-.27 p<.01), male gender (r=-.13, p<.01), presence of spouse (r=-.20, p<.01), earning independently (r=-.24, p<.01), and subjective health satisfaction (r=.29, p<.01); whereas it is not related with participation in social gatherings and monthly income (p>.05).

A multiple regression analysis was run to determine the predictive relationship between socio-demographic variables and successful aging, as shown in Table 5. Socio-demographic variables that were found to be related to successful aging and its subscales in Table 4, including age, gender, and presence of a spouse, earning independently and self-rated health, were entered as predictors.

Table 5: Regression Analysis predicting Successful Aging and subscales by socio-demographics in older adults (N=475)

	SA		*HLS*		*AC*		*EwL*	
	B	*β*	*B*	*β*	*B*	*β*	*B*	*β*
Constant	69.77		17.33		21.17		27.02	
Age	-1.97	-.15**	-.55	-.15**	-.43	-.09	-.89	-.14**
Gender	.34	.02	.38	.07	.18	.02	.27	.03
Marital Status	-.63	-.03	.05	.01	.23	.03	-.64	-.06
Earning	-2.52	-.12*	-.80	-.14**	-.71	-.09	-1.28	-.13*
Subjective Health	3.64	.24**	.85	.20**	.89	.16*	1.97	.26**
R^2	.14		.10		.05		.16	
F	41.31**		10.61**		4.73**		16.95**	

Note: Mar_Sta= Marital Status (1=spouse alive & 2 = spouse not alive), Earn= Do you earn (1=Yes, 2=No), Sub_health = Subjective health satisfaction (1=not satisfied, 2=Not satisfied nor dissatisfied, 3=satisfied), HLS= health life style, AC = Adaptive coping, Ewl = Engagement with life, SA=Successful Aging
**p<.05, **p<.001*

Findings showed that the overall model was significant F(5,458)=41.31, p<.001 and explained 14% of the variance in successful aging. The findings showed that young older age (β=-.15, p<.001), earning independently (β=-.12, p<.001), and subjective health satisfaction (β=.24, p<.001) are significant predictors of successful aging. Similarly, all these socio-demographic variables were entered as predictors of subscales of successful aging. All the three models with subscales of successful aging were found to be significant, with 10% explained variance in a healthy lifestyle (F(5,458)=10.61, p<.001), 5% explained variance in adaptive coping (F(5,458)=4.73, p<.001), and 16% explained variance in engagement with life (F(5,458)=16.95, p<.001). Findings showed that young older age, earning independently, and subjective health satisfaction are significant predictors of a healthy lifestyle (β=-.15, -.14, .20; p<.001 respectively) and engagement with life (β=-.14, -.13, .26; p<.05 respectively); whereas only subjective health satisfaction was found to be a significant predictor of adaptive coping (β=.16, p<.05).

Two-way ANOVA was performed to determine the main and interaction effect of age, and other socio-demographic variables on successful aging demonstrated in Table 6.

Table 6: Main and Interaction Effect of Socio-demographic Variables on Successful Aging

Variables	*Successful Aging*		
	F	*p*	*Partial* η^2
Age	16.54	.00	.066
Gender	3.39	.07	.007
Age*Gender	.39	.67	.002
Age	1.37	.26	.012
Income	1.08	.30	.005
Age*Income	.61	.54	.006
Age	4.51	.01	.019
Mar_Stat	.64	.42	.001
Age*Mar_Stat	.67	.51	.003
Age	7.77	.00	.032
Soc_Part	.01	.92	.000
Age* Soc_Part	3.08	.04	.013
Age	7.11	.00	.030
Earn	8.49	.00	.018
Age*Earn	1.69	.19	.007
Age	11.87	.00	.049
Health	12.58	.00	.051
Age*Health	1.30	.27	.011

A 3 (age) x 2 (gender) ANOVA indicates significant mean differences among three age groups (F(2, 469)=16.54, p<.05), and no significant mean differences between males and females (p>.05) on level of successful aging. Moreover, no interaction effect was found for age groups and gender. Post hoc comparisons (Tukey's HSD) indicated that younger elderly have better successful aging than the middle-aged and older-aged elderly. Similarly, middle-aged elderly have better successful aging than older-aged elderly.

A 3 (age) x 2 (income) ANOVA indicated no significant main effect of age groups (p>.05) and income groups (p>.05) on the level of successful aging. Moreover, no interaction effect was found for age and income (p>.05). Furthermore, a 3 (age) x 2 (marital status (presence or absence of spouse)) ANOVA indicated no main effect of marital status (p>.05) and no interaction effect of age and marital status (p<.05) on successful aging.

Additionally, a 3 (age) x 2 (social participation) ANOVA indicated no main effect of social participation (p>.05) but significant interaction effect of age and social participation (F(2, 469)=3.08, p<.05) on successful aging. Multiple comparisons indicated that younger and middle-aged elderly who participate in social gatherings have better successful aging than those who do not participate, but older-aged elderly who do not participate in social gatherings have better successful aging.

A 3 (age) x 2 (earning independently) ANOVA indicated a significant main effect of age groups (F(2, 469)=7.11, p<.05), and earning independently (F(2, 469)=8.49, p<.05), on levels of successful aging, but no interaction effect was found for age and earning (p>.05). Furthermore, a 3 (age) x 3 (subjective health

satisfaction) ANOVA indicated a significant main effect of age groups (F(2, 469)=11.87, p<.05), and self-rated health (F(2, 469)=12.58, p<.05), on levels of successful aging, but no interaction effect was found for age and subjective health satisfaction (p>.05) as shown in Table 7.

Table 7: Mean and standard deviation of Successful Aging on each group of socio-demographic factor (N=475)

		Successful Aging					
		Younger elderly 50 – 69 years		Middle aged elderly 70 – 89 years		Older aged elderly 80 – 100 years	
Variables	Categories	*M*	*SD*	*M*	*SD*	*M*	*SD*
Gender	Males	74.68	7.46	71.23	13.10	68.75	13.18
	Females	74.05	6.05	68.83	9.71	66.44	10.61
Marital Status	With spouse	74.39	7.01	70.23	12.55	68.22	13.89
	Without spouse	82.00	1.41	69.52	10.16	67.36	11.03
Earning	Yes	74.71	7.33	72.42	10.74	72.79	10.63
	No	74.10	6.38	68.81	11.41	67.08	11.60
Monthly Income	Less than 60k	74.72	6.87	71.23	12.36	71.00	10.35
	Greater than 60k	74.32	7.71	72.94	7.74	75.00	8.88
Social Participation	Yes	74.79	6.41	70.16	10.87	67.34	11.92
	No	73.13	8.94	65.81	14.46	72.91	9.40
Subjective Health	Not Satisfied	71.67	9.52	61.00	7.98	60.29	14.52
	Neutral	72.30	8.11	68.14	10.00	68.71	8.41
	Satisfied	75.14	6.44	71.74	11.48	69.00	12.15

Discussion

The first aim of the current study was to investigate the predictive role of socio-demographic variables in the successful aging of the elderly. The study's findings showed that younger older age, earning independently, and perceiving a satisfactory health status are the significant predictors of successful aging. An increase in age is negatively related to successful aging is in accordance with the findings of Bowling and Iliffe (2011) that suggests that scores on the successful aging scale decreased as the age increased. The probable explanation is the increased dependence on others, impaired quality of life, increased financial issues and reduced autonomy. However, these findings contradict Jeste and colleagues (2013) results, who found that successful aging improves with age. This contradiction might be associated with sample characteristics. In Pakistan, the elderly are generally supposed to live and depend on their children rather than old homes (Chen et al., 2015), and this dependency might reduce their successful aging. As the second predictor of successful aging in the current study came out to be earning independently. Though the monthly income was not found to be related to successful aging but earning independently does. This suggests that being independent in earning and not depending on children for basic needs provide a sense of autonomy to the elderly and thus improves their successful aging (Tanveer & Batool, 2019). Thirdly, perceiving good self-rated health is a significant predictor of successful aging, and this finding is in accordance with the literature. Results show that one might have some physical or cognitive impairment but perceive good health, a major marker of successful aging. Self-rated health status is related to one's personal beliefs and experiences that might not depict ones' actual health condition, but it highlights the assumption that successful aging is a subjective phenomenon. These

findings also suggest that improved self-rated health is related to better well-being which is a major correlate of successful aging and is strongly associated with one's subjective evaluation of one's life. Elderly with serious physical medical conditions might experience good self-rated health as indicated by the 'disability paradox' (Albrecht, 1999), which proposes that successful aging is more concerned with adaptation and acceptance to changing circumstances than merely the absence of diseases (Inui, 2003).

Moreover, it was found that gender, monthly income, and social participation did not predict successful aging. These findings contradict the past findings (Depp & Jeste, 2006; Rinaldi et al., 2018) that found female gender as a predictive and income as a protective factor of successful aging. The probable explanation of this finding is that gender and income appeared to be predictors when successful aging was taken as an objective construct, whereas in our study the successful aging has been taken as a subjective phenomenon. Moreover, the explanation for social participation was also found not to be a significant predictor of successful aging, the probable reason might be that elderly in the present study were living in joint families who already are involved with their family members all the time and for them participating in social gatherings might not appear to be a significant indicator of successful aging.

The study's second aim was to understand the interaction effect of age with other socio-demographic variables, including gender, presence/absence of a spouse, earning independently, monthly income, self-rated health, and social participation. Findings show that only age and social participation has a significant interaction effect but no main effect on successful aging which is contradictory to past findings by de Leon (2005) who suggest that significant main effect of social participation. Results suggest that younger and middle-aged elderly who participate in social gatherings have better successful aging than those who do not participate, but older-aged elderly who do not participate in social gatherings have better successful aging. The explanation for these unique findings is that the older-aged elderly are involved with their grandchildren, which is a source of their greater well-being and improved successful aging, whereas younger and middle-aged, elderly being physically active, found it relaxing to participate in social gatherings outside their tiresome routine.

Conclusion

The current study attempts to understand the role of socio-demographic variables in predicting the successful aging of the elderly. Findings suggest that younger old age, earning independently, and self-rated health predict successful aging.

Implications

It is recommended that interventions be planned to improve the subjective health of individuals to increase successful aging. Moreover, healthcare professionals and family therapists should focus on the socio-demographic variables to ensure better successful aging of the elderly.

Limitations and Suggestion

The current study only includes those elderly living in joint families, which might be a limitation, so future studies should consist of elderly living in nuclear families. However, the current study uses subjective criteria only to measure general health, which might be a limitation. Future studies should use both objective and subjective indicators to determine health which will serve as a basis for comparing the two. Moreover, the sample was collected from Lahore and Gujranwala only, which might not be a national repetitive, so future studies should use a more comprehensive data collection technique.

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