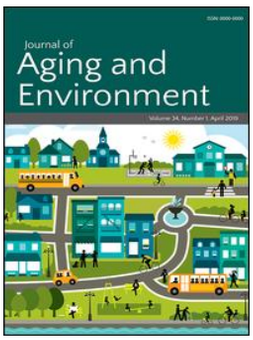

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Protective Factors for Life Satisfaction in Aging Populations Residing in Public Sector Old Age Homes of Pakistan: Implications for Social Policy

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ABSTRACT

Aging people in Pakistan are a growing population who face a shortage of old age home facilities. There is critical need to develop state-run old age homes for poor older people but to plan them while identifying protective factors for life satisfaction in currently housed residents. Our sample consists of 139 aging residents from six public sector old age homes across four cities. The qualitative results highlight barriers to life satisfaction and coping strategies of the aging population. Bivariate regression results show that aging residents have higher odds for life satisfaction when they are content with: (i) quality of life overall (AOR 5.99; 95% CI: 2.38–7.06); (ii) health (AOR 2.50; 95% CI: 1.02–4.14); (iii) finances (AOR 1.98; 95% CI: 0.67–3.72); (iv) religious and spiritual associations (AOR 1.90; 95% CI: 0.81–2.45); and (v) opportunities for learning (AOR 1.02; 95% CI: 0.42–2.41). We conclude with four salient social policy recommendations to improve life satisfaction for older populations living in old age homes.

KEYWORDS

Aging population; old age homes; life satisfaction; quality of life; Pakistan

Introduction

There is a need for more research related to the experiences and challenges faced by older people living in old age homes. Developing nations of the world are facing what is called a graying population crisis, with estimates suggesting that every fifth person will be above the age of 60 years in another thirty years, lacking protective policy for life quality (Shetty, 2012). In addition, research suggests that most developing regions, including South Asia, have critical shortages of old age homes, both state-run and private (Barrientos et al., 2003; Lloyd-Sherlock, 2000; Rajan, 2014).

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In another three decades, nearly 15% of the Pakistani population will be above 60 years of age (United Nations, 2009). Despite the common belief that Pakistani society is dominated by filial piety and that aging populations are always cared for in the homes, literature from the region suggests that not all the aging population are happy living with their families (Muhammad et al., 2009). In fact, scholarship suggests that many aging people in Pakistan face abuse and neglect in the family setup (Ali & Kiani, 2003; Jalal & Younis, 2014). Additionally, nearly half the aging population in the country are estimated to be living alone without the support of relatives and are in need of state provision of old age homes to secure their safety and life satisfaction (Itrat et al., 2007). We must also consider that the demand for state-run old age homes will only rise with changes like the growth of nuclear households, urbanization, migration of youth to other countries, and fewer or no children to support aging parents (Sabzwari & Azhar, 2011).

In 1963 a Directorate of Social Welfare was established to promote public sector support for disadvantaged community members, including the aging population. Through the 18th constitutional amendment, each province of the country was delegated responsibility for the maintenance and development of their respective Social Welfare Departments (SWD). Though the departments have been working for the protection and well-being of different segments of society, there are significant problems related to low budgets and critical shortage of old age homes (Ahmed et al., 2006). In 1999 the government of Pakistan drafted a National Policy for the Health of the Elderly, which included plans to train doctors in geriatrics, provide holistic healthcare services, and introduce a social security plan for the aging population (Jalal & Younis, 2014). However, this policy has still not been implemented across the nation.

Currently, there are no fixed cash transfer schemes for aging populations in old age homes or efforts for the engagement of older people (Social Welfare & Bait ul-Maal Department, 2013). Though private organizations, non-governmental organizations, and religious centers, are running some old-age homes in the country, provision is not enough for the growing number of aging people (Alam et al., 2016; Salahuddin & Jalbani, 2006). According to SWD information there are six homes in six cities (Lahore, Rawalpindi, Multan, Narowal, Sahiwal and Faisalabad), with capacity to house 300 residents (50 in each home) (Social Welfare & Bait ul-Maal Department, 2020). However, another report suggests that there may be only three well-functioning old-age homes in three cities housing up to 159 residents (Punjab Social Welfare Department, 2014).

There is a need to include and integrate the aging population, and especially those that are residents of old age homes. One way to do this is to

support older people in ongoing learning, which retains health and vitality, and also provides them with a sense of belonging and social integration (Bárrios et al., 2018). The process of exercising and challenging the mind helps to keep people mentally active and healthy during aging. Different learning activities like reading, writing, learning a new language, and vocabulary expansion have all been evidenced to strengthen cognitive capacity in the aging population (Weinstein, 2004). The ability to learn, share, and engage with others may provide avenues for employment and financial autonomy for the aging population, assisting in more productivity for the nation. It is also true that as aging members of society remain active and engaged, they face fewer physical and mental health challenges, thus relaxing the public health sector burden.

The fear is that as the aging population gain longevity, they may suffer from multiple and complex problems related to quality of life, such as social support, health, and environment. The challenge is to keep aging members of the community integrated and engaged in society, despite their exit from the workforce and decline in physical autonomy due to health conditions (Hess, 2009; Sincihu et al., 2018). If social support is high and there is positive attention from relatives and children, older people will not suffer from stress and loss of self-esteem as they face aging challenges (Bhamani et al., 2015; Rondón García & Ramírez Navarrro, 2018). Similarly, the poverty of old age must not be allowed to cause environmental inequalities for older people such as access to transport, leisure, and adequate living conditions (Kendig & Phillipson, 2014). One of the most important considerations for a favorable quality of life for the aging population is the maintenance of their health, both physical and mental. Despite the health challenges of aging and the presence of chronic disease, when social and state support is high, aging population are able to experience relative satisfaction (Tavares et al., 2017).

Aging population who have religious and spiritual associations have been known to experience better life quality and satisfaction as they age (Abdala et al., 2015). Encountering old age problems related to health, loss, and neglect from relatives and children are also known to be buffered through faith and religious beliefs in older people. Religion serves to provide a positive support system which also diverts aging populations from unhealthy behaviors such as intoxicants, stress, and negativity (Nelson-Becker & Canda, 2008). Most especially for aging population who do not have relatives, friends, or children, religion can become a necessary means for support and survival. For many aging population, religion and spirituality can also provide comfort and patience in times of pain and the uncertainty of health (Nelson-Becker, 2017). Additionally, in a conservative society like Pakistan, involvement in religious rituals and strong faith can serve as

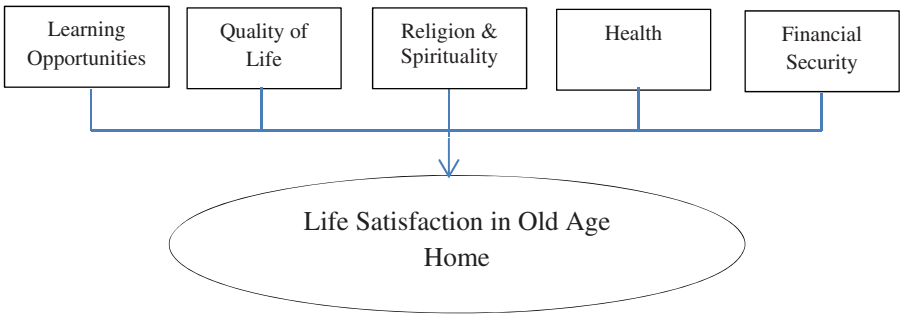

Figure 1. Theoretical framework for study, to predict life satisfaction of aging population living in old age homes.

positive memories for aging people who recall their childhood and the religious teachings of their parents.

Aging populations are known to suffer from impoverishment and face serious financial risks, especially in developing countries (Barrientos et al., 2003). Economic adjustments, inflation rates, and social sector reforms affect the pension, savings, and investments of the aging population in poorer countries. In addition, ongoing health challenges and chronic disease burden in the aging population is a drain on savings and pension. There is also the worry that in poor countries many informal workers and non-working women do not have savings or pension to assist in old age survival (Kim, 2006). When financial support in terms of old age benefits, pensions, free public goods availability, old-age stipends, and housing for the aging community are favorable they improve life satisfaction and security (Stolz et al., 2017). It has also been evidenced that aging people who are able to benefit from state financial support schemes and social security net do not face as many mental health challenges (Golberstein, 2015).

The aim of the research

Aging members of Pakistani society living in old age homes are neglected members of the nation. The life satisfaction of the aging population living in old age homes has not been comprehensively researched in order to mobilize policy improvement. The aim of this study is to identify: (i) the challenges faced by the aging population in old age homes, and (ii) to determine predictors for improved satisfaction in life in old age homes. Based on the above literature review, a theoretical model for this study has been developed (Figure 1). This has helped form the hypotheses for this study, which proposes that: "Satisfaction with life in old age homes will increase when residents are supported in H1. learning opportunities; H2. improved quality of life; H3. religious and spiritual associations; H4. health; and H5. financial security."

Methodology

This study is part of a wider research involving cross-sectional data collection and administration of an intervention for the aging populations living in state-run old age homes of Pakistan. This paper presents the results of the cross-sectional research using mixed methods.

Ethics of research

Ethics approval for this study has been taken from the Internal Review Board Ethics Committee of Forman Christian College University. No names of respondents were taken and confidentiality has been preserved by not reporting old age home names or city belonging. Informed consent has been taken from the old age centers and all respondents. All aging respondents of the study were assured that they could leave the assisted interview for survey completion at any time during the proceedings.

Sample

The selection criterion for this study is all cognitively sound and willing residents of public sector old age homes in Punjab, which comprises almost 60% of the Pakistani population. A total of six old age homes across four cities of Punjab province have been sampled. We were unable to sample Narowal and Sahiwal, due to lack of permission. At each center, there is a range of 20–45 residents. Based on permission and informed consent of respondents, the following respondents were sampled from each city: (i) Lahore, $n = 47$; (ii) Rawalpindi, $n = 47$; (iii) Multan, $n = 20$; and (iv) Faisalabad, $n = 25$. Due to the low response of respondents from two cities, city-level analysis has not been attempted in this paper.

Measures

The questionnaire for this study included a total of 52 questions. Based on a literature review, included nine socio-demographic questions, three questions related to satisfaction with life in old age home, five questions related to learning opportunities at the center, and five questions related to satisfaction with religious and spiritual associations (Supplemental Appendix A). There were 26 questions taken from the standardized WHO QOL to measure four categories of quality of life, including (i) physical health, (ii) psychological health, (iii) social relationships, and (iv) environment (World Health Orgnaization, 1998). In addition, 13 questions have been taken from the Study of Global Ageing and Adult Health to measure disease-specific ailments (Kowal et al., 2012) and 8 questions have been taken from

the Sri Lanka Aging Survey, to measure financial security (Østbye et al., 2009). The survey also includes three qualitative questions of a semi-structured and open-ended nature. These questions have been developed through the use of a literature review, meetings with SWD Officers, and meetings with aging members of the community.

Responses for all items have been measured using a 5-point likert scale (Not at all-Not much-Moderately-A great deal-Completely). For questions related to disease measurement and financial security, the responses were measured with "Yes" and "No." The 6 constructs for the study, including the dependent variable (satisfaction with: "old age home") and the independent variables (satisfaction with: "learning opportunities," "quality of life," "religious and spiritual associations," "health," and "finances") were compounded for analysis. For bivariate regression calculations, results for satisfaction with: "old age home," "learning opportunities" and "quality of life" were dummy coded to "0" = low satisfaction and "1" =high satisfaction. For multivariate-adjusted odds ratio calculation, the following independent variables were held constant: age (as a continuous variable), gender, and literacy.

Data collection

Data were collected between November 2019 to December 2019. A team of 5 data collectors who were MPhil students and experienced in field research were recruited for this project. They were trained for this project over one week and were led by the first three authors of this study during the visits for data collection. Respondents were assisted in the completion of the survey due to their age, illiteracy, or functional illiteracy. Survey results of a total of 139 aging residents of old age homes were completed and included in the final analysis of the study.

Data analysis

The data has been analyzed using SPSS. Descriptive statistics have been used to present results for socio-demographic characteristics and other information about respondents, like: (i) reasons for living in old age home, (ii) list of current ailments, (iii) perceived barriers to life satisfaction while living in old age home, and (iv) coping strategies in surviving in the old age home. Chi-square associations for satisfaction in living in old age home were derived next and last bivariate regression results were used to present predictors for satisfaction in living in old age home. A significance level of 0.05 was assigned for all statistical analyses.

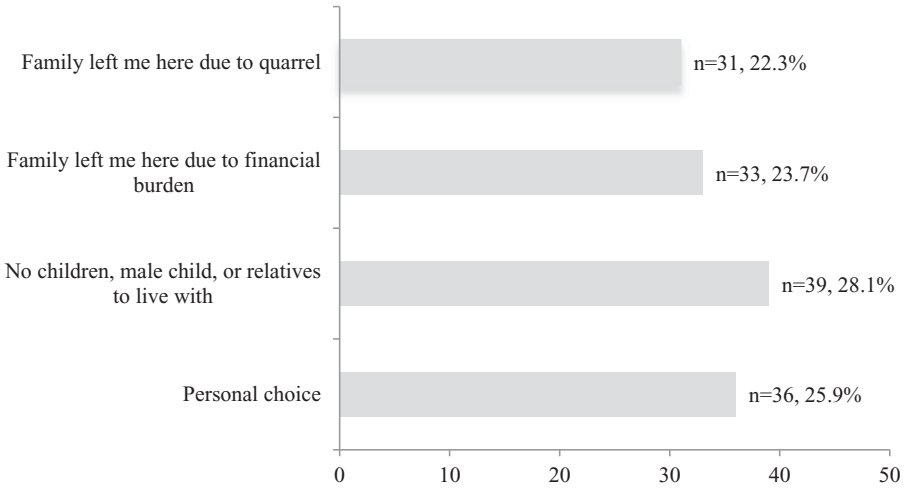

Figure 2. Reasons for living in old age home, $N = 139$.

Our survey also included qualitative questions related to barriers to life satisfaction and coping strategies of residents. Respondents were asked to respond in bullet points, but when they shared more detailed information, data collectors noted down their quotes. This information was transcribed in Excel and then coded according to similarity and commonality (Boyatzis, 1998). Qualitative results have been presented in frequencies and percentages, and quotes of relevance have been included to provide meaning and context to the data (Verdinelli & Scagnoli, 2013). Reliability and trustworthiness of the qualitative data have been secured through constant comparison of coding by authors and confirmation with aging members of community who had not participated in the survey (Leung, 2015).

Results

Figure 2 presents the reasons for living in the old age home for respondents in the study. Significant respondents at 46.0% have been abandoned by their family (due to quarrel or financial burden), and 28.1% are at the old age home as they do not have any family to live with.

Figure 3 presents the list of ailments suffered by the respondents. Majority suffer from hypertension or BP (72.7%) and diabetes (51.8%). A near majority suffer from arthritis (45.3%) and angina (42.4%). With regard to mental health problems, 38.1% suffer from depression and 7.2% from anxiety or stress.

Table 1 presents the main barriers listed by respondents to their life satisfaction while living at the old age home. Majority listed poverty (60.4%) as a major barrier to life satisfaction. With regard to poverty a respondent described: *"Currently, people or NGOs visit the old age home and give us*

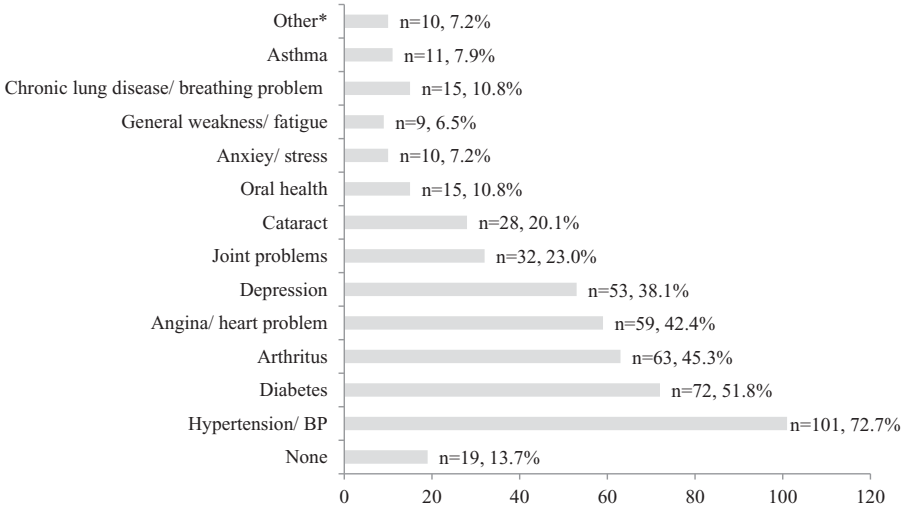

Figure 3. Breakdown of ailments suffered by residents of old age home, $N = 139$.

Table 1. Barriers to life satisfaction in old age home, $N = 139$.

Items	*f* (%)
Poverty and not owning property	84 (60.4%)
Negligence of children	72 (51.8%)
Loneliness	68 (48.9%)
Inactivity	68 (48.9%)
Politics and squabbles with other residents	67 (48.2%)
Health problems	66 (47.5%)
Inability to use computer and smartphone for news and communication	60 (43.2%)
I don't know/general dissatisfaction	59 (42.4%)
Death of spouse/parents/children	59 (42.4%)
Divorce	54 (38.8%)
Laziness/ inactivity	52 (37.4%)
Giving property to children	51 (36.7%)

sadqat or zakat (charity or religious tax for poor). They take pictures and make a big show of helping us, without realizing that they are humiliating us. Instead, if we received monthly cash subsidies from the government it will not hurt our dignity. It is our request to please stop showcasing us for charity." Another respondent explained: "*We used to be allocated PKR 200/ USD 1.22 per person. But now, as the residents have increased to above 40 in the home, without budget increase from the government, we are being allocated PKR 80/USD 0.49 per person. We now only get two meals a day and no milk or tea.*"

Majority of respondents also listed negligence of children (51.8%) as a main barrier to life satisfaction. A respondent described: "*We are now settled in this old age home, we do not want our children to take us to their homes. But we want them to visit us regularly. If we get to see them for a few minutes once a week we will know they are alright. We invested all our lives in their upbringing and wellbeing. We don't want anything from them*

now… we just want to see their faces and we want to see our grandchildren. It will make our time in this world better."

A near majority, above 48%, listed three more barriers to life satisfaction including: loneliness, inactivity, and politics or squabbling with other residents. One respondent described: "*We are provided shelter, food and tea at the old age home. But in each room there are four of us, with limited space for movement or storage of our things. We need more space to stay occupied so we don't cross each other's paths as much or end up irritating each other. For example, I would love to have space in my room for a writing desk and outdoor space for long walks. It would also be better if our time together as residents is planned and organized around an activity or some charity work.*" Another participant mentioned: "*We need clothes, bed-sheets and warm blankets for winter. Most of our illnesses are due to lack of hygiene and warm clothes.*"

A significant number of respondents indicated that health problems (47.5%) were barriers to their life satisfaction. A respondent described: "*We have to wait for a relative to take us to the doctor. In most cases we lie down when we are sick and wait to get better. If we fall sick we are sent to the nearest government hospital. If the doctor prescribes medicine, it takes a week for it to get approved and reach us. In many cases our health worsens because of this delay.*" Another respondent highlighted: "*For all health problems, we are given ibuprofen. If our health worsens in a few days, then we are taken to the local public sector hospital, where the services and waiting lines are unacceptable for us.*" Another person explained: "*We used to have budget for recreational activities and outing, but the budget has been revoked for this. This has increased depression. We need to see the outside world, otherwise we will go crazy.*"

Inability to use computer and smartphone to get news and to communicate with family and relatives (43.2%) was also listed as a significant barrier to life satisfaction by the respondents. A respondent highlighted: "*It is like we are from another world all together. We lived our lives without computers and smartphones. Now our children and the world are only accessible through these gadgets. If we are provided with these phones and taught to use them, we would not be so lonely or feel disconnected.*"

Table 2 presents the coping strategies that respondents listed as adopting in surviving at the old age home. Majority mentioned that they watched TV or read (95.7%), practiced religion (88.5%), or ignored the self (66.2%). A respondent described: "*Thank God for TV and tasbeeh (rosary beads). If we are not eating or sleeping, we watch TV or read our prayers, and in this way the days and the weeks pass. My only child, a son, in is jail, I read wazifas (prayers) regularly and have faith that one day he will be released and visit me.* Another respondent mentioned: "*We do not discuss our problems or give ourselves too much attention.*

Table 2. Coping strategies for surviving in old age home, $N = 139$.

Items	*f* (%)
TV/reading	133 (95.7%)
Religion	123 (88.5%)
Ignore self	92 (66.2%)
Talking to friends/relatives/other residents	66 (47.5%)
Taking care of their health and hygiene	60 (43.2%)
Taking enjoyment in eating or cooking	58 (41.7%)
Avoid negative people	53 (38.1%)
Walking	52 (37.4%)
Look forward to death	51 (36.7%)
Music	05 (03.6%)

We ignore our pain and the problems around us. If we think about ourselves we will not last long."

A significant number of respondents focused their energies on talking to friends, relatives and other residents (47.5%), taking care of their health and hygiene (43.2%), taking enjoyment in eating or cooking (41.7%), and walking (37.4%). A respondent explained: "*It is the positivity of my friends, relatives and fellow residents that keep me going. Talking to them or waiting for them to visit helps me deal with the absence of my children and other problems of old age. Also, though the veranda area is small, we take turns walking there for at least 10 minutes a day so we remain mobile.*" Another respondent described: "*The day passes in managing medication timings, washing and bathing. We also take turns helping the cook in preparing meals or sitting in the dining room cutting fruit or sharing snacks with each other … this is comforting.*"

Some respondents stated that they coped with their life circumstances by looking forward to death (36.7%). A respondent shared: "*My time was over a long ago. I don't know why I am still alive. There is no purpose to my life-… but since we are not allowed to take our life… I wait. I look forward to meeting my parents and siblings in the next life.*" Another respondent confessed: "*It is due to our faults and personality failures that our children have abandoned us here. God only punishes us further by keeping us alive. When we die our punishment will be over.*"

Table 3 presents the socio-demographic characteristics of the respondents. Majority at 76.3% are between the ages of 55–75 years. Sixty-four percent are men and 33.8% are illiterate. With regard to the respective study constructs majority of the respondents are not satisfied with: (i) life in old age home (64.7%), (ii) opportunities for learning (67.6%), (iii) quality of life overall (74.1%), (iv) religious and spiritual associations (76.3%), (v) health (66.9%), and (vi) finances (83.5%). The chi-square results for association with satisfaction in living in old age home are significant for all independent variables, except age.

Table 4 presents the bivariate regression results for higher odds for satisfaction in living in old age home. The results show that aging residents in

Table 3. Socio-demographic characteristics and Chi square results for satisfaction in living in old age home, $N = 139$.

Variable	Total *f* (%)	Not satisfied *f* (%)	Satisfied *f* (%)	X^2 *p*-value[a]
Age				
55–65	45 (32.4%)	23 (25.6%)	22 (44.9%)	6.354
66–75	61 (43.9%)	45 (50.0%)	16 (32.7%)	
76–85	28 (20.1%)	18 (20.0%)	10 (20.4%)	
≥86	05 (03.6%)	04 (04.4%)	01 (02.0%)	
Gender				
Male	89 (64.0%)	48 (53.3%)	41 (83.7%)	12.680***
Female	50 (36.0%)	42 (46.7%)	08 (16.3%)	
Literacy				
None	47 (33.8%)	33 (36.7%)	14 (28.6%)	9.033*
Primary	31 (22.3%)	22 (24.4%)	09 (18.4%)	
Secondary	44 (31.7%)	21 (23.3%)	23 (46.9%)	
Graduate	17 (12.2%)	14 (15.6%)	03 (06.1%)	
Marital status				
Single	30 (21.6%)	19 (21.1%)	11 (22.4%)	12.907*
Separated	17 (12.2%)	11 (12.2%)	06 (12.2%)	
Widow	64 (46.0%)	46 (51.1%)	18 (36.7%)	
Divorced	09 (06.5%)	08 (08.9%)	01 (02.0%)	
Married	19 (13.7%)	06 (06.7%)	13 (26.5%)	
Satisfaction with opportunities for learning				
Not satisfied	90 (64.7%)	58 (64.4%)	36 (73.5%)	
Satisfied	49 (35.3%)	32 (35.6%)	13 (26.5%)	11.180*
Satisfaction with quality of life overall				
Not satisfied	94 (67.6%)	79 (87.8%)	24 (49.0%)	24.885***
Satisfied	45 (32.4%)	11 (12.2%)	25 (51.0%)	
Satisfaction with religion and spirituality				
Not satisfied	103 (74.1%)	74 (82.2%)	32 (65.3%)	5.015*
Satisfied	36 (25.9%)	16 (17.8%)	17 (34.7%)	
Satisfaction with health				
Not satisfied	106 (76.3%)	58 (64.4%)	35 (71.4%)	6.699*
Satisfied	33 (23.7%)	32 (35.6%)	14 (28.6%)	
Satisfaction with finances				
Not satisfied	93 (66.9%)	73 (81.1%)	43 (87.8%)	11.014*
Satisfied	46 (33.1%)	17 (18.9%)	06 (12.2%)	

[a]*p*-Value significance: ***$p < 0.01$, *$p < 0.1$.
Satisfied with living in old age home = 90 (64.7%); Not satisfied with living in old age home = 49 (35.3%).

Table 4. Bivariate regression results for higher odds of satisfaction in living in old age home.

Variable	OR (95% CI) *p*-value[a]	AOR[b] (95% CI) *p*-value
Satisfaction with opportunities for learning		
Not satisfied	1	1
Satisfied	1.52 (0.71–2.29)*	1.02 (0.43–2.41)*
Satisfaction with quality of life overall		
Not satisfied	1	1
Satisfied	7.48 (3.21–10.39)***	5.99 (2.38–7.06)***
Satisfaction with religious and spirituality		
Not satisfied	1	1
Satisfied	2.46 (1.11–3.46)*	1.90 (0.81–2.45)*
Satisfaction with health		
Not satisfied	1	1
Satisfied	1.38 (0.65–2.93)*	2.50 (1.02–4.14)*
Satisfaction with finances		
Not satisfied	1	1
Satisfied	1.67 (0.61–2.55)*	1.98 (0.67–3.72)*

[a]*p*-Value significance: ***$p < 0.01$, *$p < 0.1$.
[b]For adjusted odds ratio age (continuous), gender and literacy has been kept constant.

old age homes of the country have higher adjusted odds for satisfaction in living in old age homes when they are satisfied with: (i) quality of life overall (AOR 5.99; 95% CI: 2.38–7.06); (ii) health (AOR 2.50; 95% CI: 1.02–4.14); (iii) finances (AOR 1.98; 95% CI: 0.67–3.72); (iv) religious and spiritual associations (AOR 1.90; 95% CI: 0.81–2.45); and (v) opportunities for learning (AOR 1.02; 95% CI: 0.42–2.41).

Discussion

We found that most of the aging population in the sample have been abandoned by their children at the old age home. So far the state and community ethic in Pakistan, and other developing and Muslim countries of the world, has been to encourage children and relatives to support aging members of the society within the family homes. But, this is not a comprehensive solution. There is an urgent need to develop state-run old age homes for aging members of society (Golant, 2011), as their numbers are increasing locally and worldwide (Phillipson & Buffel, 2018), and patterns of filial piety and child guardianship of aging population are shifting. With rising work pressures, more women working for income, and lesser children per family, states must come forward to improve the availability and quality of old age homes. At the moment, in Pakistan there is no provision in rural areas, and even large metropolitan cities have only one or two state-run old age homes, which have limited capacity (Sabzwari & Azhar, 2011).

Our study highlights that the aging population face multiple morbidities related to physical and mental health, with the main health challenges listed as hypertension/BP, diabetes, arthritis, angina, depression, and anxiety or stress. The specific disease burden identified in this research provides information for which kind of medical specialists need to be monitoring the health of aging populations in old age homes on a regular basis. Other literature corroborates that common ailments afflicting the aging population in Pakistan include undernutrition (Nasir et al., 2000), hypertension, diabetes and arthritis (Zafar et al., 2006).

Common barriers to life satisfaction in the aging population were highlighted. First, our findings highlighted the issue of poverty. Local research confirms that most of the aging population in the country are without pension, health insurance and savings; and retirement funds are available only for government officers (Sabzwari & Azhar, 2011). With inflation rates estimated to be as high as 20%, the purchasing power parity of retired and older persons is critically low (Sabzwari & Azhar, 2011). Second, it was found that negligence of children and loneliness was a barrier. International literature confirms that loneliness and estrangement from children are not uncommon for aging population living in developing

nations (Lloyd-Sherlock, 2000). Third, it was found that ill-health was a considerable barrier. Local research confirms that public healthcare access for the aging population is limited, the quality of services are unfavorable, and specialized services for geriatrics are completely absent (Jafree et al., 2017). Majority of the aging population in the country are unable to access or pay for private healthcare, and have been found to suffer from depression due to health support failure (Bhamani et al., 2015); and at times even resort to suicide (Baig et al., 2000). For many older people lack of access to legitimate health services, has led to self-medication or seeking of informal healthcare, contributing to sustained or compounded illnesses (Qureshi, 2017).

The fourth barrier to life satisfaction was listed as inability to use computers and smartphone for news and communication. Researchers agree that training of aging population for social media use could be a means to improve quality of life (Boyd et al., 2014) and that digital communication can help in keeping people aware about current affairs (Luanaigh & Lawlor, 2008). Use of social media would also be an important support for the aging population in the age of social distancing and infectious diseases. Additionally, as most research indicates that older people experience life satisfaction when they are in touch with their relatives, efforts need to be made to establish social media contact and regular communication through text and video calls (Ferreira et al., 2018).

From the data regarding coping strategies of the aging population it was found that older people are using activities like TV, reading, cooking, walking, visiting or talking to friends, and religiosity to pass their time at the old age home. Our results substantiate international literature in that if aging population are supported in diverse ways for engagement and activity, it will provide them with motivation, dignity and self-worth (Kendig & Phillipson, 2014). Of alarm is that there were many respondents who indicated that they ignored their self and looked forward to death as a coping strategy. Other literature suggests that this hopelessness and despair in the aging population has to do with the social stigma in Pakistan associated with living in old age homes, which makes residents feel shame and loss of self-esteem (Cassum et al., 2020; Qidwai et al., 2018). Similarly, when aging population have less social engagement, unfavorable living environment, and economic security they suffer from low morale and depression.

Based on a literature review five hypotheses were developed for this study, predicting satisfaction of aging population living in old age homes. This is because Pakistan needs to critically develop and plan old age homes and old age community spaces in a manner as to serve the social and economic needs of the aging population (Alley et al., 2007; Menec et al., 2011). Our multivariate regression results support all five hypotheses of

this study and also corroborate international literature. Aging population living in old age homes of Pakistan are more satisfied when they have (1) Learning opportunities (Bárrios et al., 2018), (2) Improved quality of life (Rondón García & Ramírez Navarrro, 2018), (3) Strong religious beliefs (Nelson-Becker & Canda, 2008), (4) Favorable health (Tavares et al., 2017), and (5) Financial security (Vertejee & Karamali, 2014). In lieu of these results, salient recommendations are presented for the development of social welfare policy for aging populations in the country in the next section of this paper.

Study limitations

There are limitations to this study, including inability to sample other provinces and perception-based survey responses of the respondents. This study also does not include private sector old-age homes. However, this study is beneficial as it provides us with empirical evidence about demographic and qualitative information related to the aging population living in old age homes of Punjab and predictors for satisfaction in living in old age home. The strength of this study lies in its contribution to the scarce research in the country about the necessity of providing more state-run old age homes, and to the best of researcher's knowledge, it is the first study to recommend improvements for old age home while considering the perceived life satisfaction of the aging population. We believe the findings of this study are relevant for other developing regions and the rest of South Asian countries, where state-run old age homes are scarce and under-developed.

Social policy recommendations

Aging members of the population must be provided the right to make decisions while planning the development of old age communities. We recommend the creation of a "National Association of the Aging Population" to provide impetus for policy development. Furthermore, establishing a leadership specifically for aging members of the country at ministerial level, with the representation of old age home residents, is also needed to ensure policy development and implementation at national and provincial levels. We recommend the following areas to be considered while planning the development of old age home across the country:

1. Opportunities for learning: Learning activities and teaching agendas must be introduced for the aging population to improve functional capacity, retain cognitive health, and encourage social interaction. We also recommend intergenerational learning with youth, specifically orphans

and abandoned children who are also being provided support by the Social Welfare Department. In this way, two lonely populations would be able to provide companionship and support for each other in a productive manner. Based on this study's findings, the authors have conducted an intervention on intergenerational learning, the findings of which are in the process of being published.

2. Improving religious and spiritual affiliation: Aging population need to be supported with religious and spiritual involvement in a positive way. Helping the aging population in the old age home to feel more connected with their religion and comfortably practice rituals would improve quality of time spent at the home. Similarly, improving spiritual associations through meditation, yoga, and other outdoor physical activities can become a powerful tool to elevate the mood and bring contentment in older people. Congregational prayer or meditation rooms, character building and spiritual support sessions per week, and planned observance of religious festivals would help provide life motivation to aging residents.
3. Healthcare support: Access to free and regular quality healthcare and General Practitioner visitation at the aging center is vital; specifically with respect to cardiac and diabetic monitoring, joint and bone pain management, and oral and eye care. There is also need for referral of specialist doctor's visits, physical examination and assessments, and timely transport for health-related procedures which cannot be provided in old age homes. We also recommend a resident nurse at each old age home, free drugs and health insurance, and medical aids and appliances (specifically for diabetes and BP). The aging population are also in need of basic health education and literacy for medicine and disease management. Counseling services and therapy for mental health of the aging population must also be provided. Group therapy to improve communication, catharsis, and social support within the old age home would also be beneficial. A longitudinal data-base for medical record, continuum of care, and patient satisfaction must be developed at each old age center. The standards by Madrid International Plan of Action for Ageing and WHO plan of action on health and aging may be implemented to establish better health protocols overall.
4. Financial security: To deal with the immediate financial hardships that the aging population in old age homes are encountering, there must be a provision of cash transfers. Pension payments must be adjusted for inflation. For those who were not part of the working population and formal employment sector, and thus without pensions, additional old age stipends must also be provided. We also recommend the development of a social security plan for older people, which would provide

them with cash transfers for specific needs like health and medication, food and travel, clothes and utilities, and leisure activities. Finally, the introduction of income-earning opportunities, with lesser work hours and old-age-home-based work, like consultancy and teaching, is recommended, which would help in improving financial security and building self-esteem.

Conclusion

There is a critical need to open more state-run old age homes in Pakistan and other developing regions, to support the growing aging population, expected to be in several millions. However, simultaneously there needs to be development and monitoring for protocols and policies to maintain life satisfaction of aging residents. Predictors identified empirically in this study for improved life satisfaction include four critical areas of learning activities, religious and spiritual affiliation, healthcare support, and financial security. Social policy protection for older people will be better planned and implemented when aging populations are granted representation in state bodies, at both federal and provincial level.

Compliance with ethical standards

Ethics approval for this study has been taken from the Institutional Review Board, Forman Christian College University. Permission to collect data and deliver an intervention at public sector old age homes was also taken from the Punjab Social Welfare Department. No names of respondents were taken and confidentiality of the elderly has been preserved by not reporting old age home names or city belonging. Informed consent was taken from all elderly respondents for the survey and for the intervention from elderly participants. The consent forms are available at request. All elders were assured that they could leave the assisted interview for survey completion or the intervention at any time.

Authors' contributions

SRJ designed the study and was responsible for the data collection, data analysis and drafting of the manuscript. SKB, AK, and QK assisted in supervision and coordination for data collection.

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