Development and Validation of a General Adjustment to Aging Scale in Pakistan

Zahida Ilyas* & Amina Muazzam**

In the present study, General Adjustment to Aging Scale was developed and validated. The items were practically created and written in uniformed form. Factorial validity of the scale was determined on 200 participants, male and female participants having age range of 60-90 years belonging from Lahore and Islamabad. Factor analysis resulted in four factors i.e., Cognitive and Emotional Adjustment, Psychological Adjustment, Attitude towards Family, and Attitude towards Friends, alpha of all sub variables revealed an overall satisfactory Cronbach alpha (0.74). Convergent validity was estimated by correlating the scores of The Multidimensional Scale of Perceived Social Support by Zimet, G.D., Dahlem, N.W., Zimet, S.G. & Farley, G.K. (1990) with General Adjustment to Aging Scale (N = 40). The resulting correlation was significant and added to the validity of General Adjustment to Aging Scale (r=.659, $P<0.001$). Discriminant validity was assessed by correlating the scores of Perceived Stress Scale by Cohen et al. (1988) with General Adjustment to Aging Scale (N = 40). Inverse relationship was found between both scales of measures (r= -.354, $p<0.05$). Hence, it is a reliable and valid measure for assessing general adjustment to Aging in indigenous context and in the perspective of Pakistani culture.

Keywords: Adjustment, Aging, Pakistan, validity.

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* Zahida Ilyas is Ph.D Scholar in Applied Psychology Department LCWU. Email: zahida.ilyas.mano@gmail.com

** Amina Muazzam is Assistant Professor, Applied Psychology LCWU. Email: amina_muazzam@hotmail.com

Life span is being increased all across the world, Pakistan as a nation and country is also experiencing arises in its elderly population. This country usually faces many challenges in regards of its elder population due to insufficient resources and underprivileged understanding of aging. This scale development research highlights the problems and issues in place for the aged in Pakistan with a special focus on general life adjustment issues. Future possibilities for improvement in the adjustment and how they can use strategies in adjustment process can also be explored. The present research aims to identify an exploration of aging related issues and life adjustment as experienced and perceived by older adults in Pakistan. It will also investigate the different aspects of life adjustment including the types of life adjustment that exist, causes and helping factors , the consequences of aging and the coping strategies that are adopted in response to the aging.

A survey conducted by Qidwai (2009) that was hospital-based analysis in Karachi offers insight into the wellbeing status, requirements, problems and issues confronting this highly at risk population in the perspective of Aging. According to this survey over 40% population above the age of 65 years were given up work or retired, establishing the need for older people to have post-retirement support. Over 76% were currently in a marital relationship; presence of life partner or spouse in the life of an aged person is certainly an advantage and a positive finding. (Qidwai 2009)

Impacts of aging on life adjustment

It seems that older adults in Pakistan are not yet perceived as problematic and major issue as in the global North, although it is increasing rapidly. The importance of Adjustment to aging is particularly determining the executive type of management and care for aging progression amongst the elderly people in Pakistan. According to Croll (2005) the perception and understanding of ageing and late adulthood in Southern Asia is 'secured in the household'.

Another researcher suggested that there is no concept and perception of old age as being a trouble and considered to be burden on the family in Asians, and that the elderly are not supposed as being 'on the dole, but rather, as receiving their due' (Cain 1991b). In South Asia old age and aging is viewed as an essentially indefinite state: "a time both of maximal practice and maximal incapacity, concurrently vaunted and evaded" (Cohen 1994).

Adjustment

Cattell (1950) purposed the idea of adjustment as the integrity of internal cohesiveness

by which an adjustment level is sustained and well maintained. In another research by Fiske (1980) described that factor as a complete understanding of psychological and mental health and the aged people must include an appreciation of how aging process deal with the demands that are usually associated with aging.

It can be said that aged people are not one consistent group and diversity on the bases of individuality increases with age as the older people do not belong to the same sex, gender, socio economic class, marital status, background of family, their religious class, wellbeing status, living styles, specialized background, and educational accomplishment, and their way of respond to the old age seems to be differently, face diverse kind of needs, expectations, apprehensions problems and many kind of other living issues according to a given particular situation (Chaudhry, 2004).

Adjustment to aging

Adjustment to aging process according to Wrosch et al. (2006) is the emotional, psychological biological and physical assistance originating from adaptive self-monitoring of common age-related challenges in the process of adjustment to aging.

Old age in Pakistan

In Pakistan it is randomly set at the age of 60 years, as in other emergent countries where we see life expectancy at birth has only just approached this age. It seems that family life and respect for the understanding and wisdom of the older people are central in Asian society. Ali and Kiani in their research finding explored that the older people who are living in extended family system had a better quality of life than those living in joint and nuclear family system. Particularly, elderly women in Pakistan had a poorer and low quality of life than elderly men, even in the multi-variant model (Ali & Kiani 2003).

Montorio I, & Izal M., (2005) developed a scale on The Geriatric Depression Scale: A review of its development and utility. It deals with how depression and its related factors effects older people. Another scale developed by Weintraub (2006): Test characteristics of the 15-item geriatric depression scale and Hamilton depression rating scale in Parkinson disease. In this scale researchers revealed different types of depression in Parkinson disease in older people. A scale on Assessing Adjustment to Aging: A Validation Study for the Adjustment to Aging Scale by Sofia (2014). Results showed that this scale is an adequate cross-cultural instrument for research, clinical practice and program development in the health care context. Gulzar.,et.

al (2008) also suggested that Social adjustment in old age was also consistently found to be associated with marital status, gender and education of the respondents.

A scale was developed by Kurlowics (2007) The Geriatric Depression Scale: Best practice in nursing care to older adults. The researcher found that older people had severe symptoms of depression during their aging process. There are many other researches that were conducted related to aging as Mirza and Jenkins (2004) proposed a study in which he revealed factors, prevalence, and treatment of anxiety and depressive disorders in Pakistani older people. A study was conducted on population aging issues in Pakistan by Afzal (1997) addressing the problems and issues of older persons.

There is another study in which Ali (2003) proposed that being socially and economically dependent, they bear the brunt of rising poverty levels in the country. It is noted that type of residence and gender contribute significant changes to the quality of life of the elderly. Contrary to the common belief that the elderly living in a joint family set-up have better quality of life, it is found not to be so.

The present area of scale development needs to address due to find out cultural relevance, to resolve linguistic issue and to sort out indigenously usefulness of development and creation of selected items into non-Western cultures and languages. There are also many other reasons and logics which limits the usefulness of these non-indigenous and international instruments in aging related issues. Most of these instruments and tools have carefully excluded general adjustment factors to avoid the likelihood of false positive responses in the presence of coexisting familial, psychological and cognitive issues.

Objective of the study

The basic purpose of this research is to develop an indigenous scale for older people to measure general adjustment of these people in Pakistan.

Method

To develop General Adjustment Scale to Aging (GASA) the study was conducted in three phases.

Phase I: identifying Phenomenology of Adjustment

Following steps were followed to generate preliminary pool of items:

Step I. Related literature was reviewed on Adjustment and aging related issues. The

researcher initially conducted unstructured interviews with two psychologists from Islamabad City to derived items from three main sources which are:

Literature reviews. In step first the researcher study the phenomenology of Adjustment, by carefully reviewing the past literature most of the items were generated. The scales ad previously conducted studies on adjustment and aging related issues were also included in the study, Population aging issues in Pakistan by Afzal (1997), Test characteristics of the 15-item geriatric depression scale .Hamilton depression rating scale in Parkinson disease.(Weintraub ,2006). The Geriatric Depression Scale (Kurlowics 2007) ,A Validation Study for the Adjustment to Aging Scale . (Sofia,2014) and Adjustment to Aging and Subjective well-being in an older cross-national community-dwelling sample. (sofia, 2013)

Interviews with practicing psychologists. In addition, two psychologists from Islamabad city (each having at least 4 to 5 years of experience in old homes) were interviewed for the items coherence of adjustment. They were asked to report the issues and problems they observed in older people during their experiences and how these people tried to adjust in their lives.

Unstructured interview with older people. Four older people from an institute that was Sunrise Lahore, Pakistan, age range was 55- 65 years. Unstructured interviews were conducted through purposive sampling to recognize the adjustment issues and problems in older people. These people were encouraged to talk about their adjustment problems and how they are trying to adjust with their aging. Open-ended questions were included in interviews which were related to cognitive, emotional, psychological and social aspects of aging.

Step II. After the literature review and interviews from older people and psychologists, a list of items was prepared. The list of 60 items was formed as initial pool and thoroughly reviewed by supervisor.

Step III. In this step, the items were closely analyzed for their content. Some items were added and rephrased whereas repeated items were deleted. After attentive reading, the list consisted of 50 items.

Step IV. The prepared list of items on the bases of their content was reviewed keenly and vigilantly again by five psychologists three female and two male (each having more than 4 to 5 years of experience). Each of them independently endorsed each item for relevant to construct and clarity. Response format for endorsement ranged from yes (2) to some extant (1) to no (0). Fifteen items were deleted as they received less than 20 % endorsement. These items

were *3, 7,5,13, 16,19, 21.25,28, 32, 36, 37, 42, 47,52,51, 55, 56, 57* and *60.* The final list of items of scale for GASA study consisted of 30 items.

Step IV. The 30 items were presented in the form of a 5-point likert-type scale, which required the participants of the study to report the degree of their agreement or disagreement with each item. Response format ranged from Strongly agree (4) to Strongly disagree (0). Instructions were "Following are some statements regarding adjustment. Read them carefully and tick the option which is more appropriate for you.

Step V. For pilot testing, a sample of 20 older adults, who could read Urdu, was recruited from the NGO's of Islamabad city with the permission of authorities. After taking informed consent, the participants were given GAAS, Data were analyzed. The purpose of pilot tested was reduction of vagueness and lack of clarity on 20 participants with age range 60-70years. Participants were instructed to fill the questionnaire and to note any ambiguous statement. All the 30 items were reported to be clear and comprehendible, and were retained for the final version of the scale. Results of Pilot Testing Firstly, Cronbach's alpha were calculated for GAAS showed sufficient Cronbach's alpha values that were 0.71.

Phase II. Establishing the Construct validity through Factor Analysis One of the purposes of factor analysis is to assess the construct validity of a test or a number of tests (Kahn, 2006).

Sample

The demographic information of participants is summarized in Table1

Table 1

Variables	Frequency	%
Gender		
Male	112	56%
Female	88	44%
Age Range		
60-70 years	100	50%
70-80 years	50	25%
80-90 years	50	25%
Marital Status		

Unmarried	8	8%
Married	46	46%
Divorced	19	19.0%
Widow	13	13%
Widower	14	14%
Educational level		
Metric		39%
Intermediate		2%
B.A		15%
Masters		14%
Family system		
Nuclear		51%
Joint		49%

Procedure

General Adjustment to Aging Scale was administered individually on each participant. The participants were asked to select a given option to each item which best described their feelings and thoughts regarding adjustment issues. Their confidentiality was assured regarding their responses and they were also informed that the data would only be used for study purpose. In order to assess the factorial validity and psychometric properties of the scale were determined. The varimax rotation was used to maximize the interpretability of the factors (Kahn, 2006). Bartlett's test of sphericity was significant $p <.01$, indicating that the data was adequately distributed to allow an evaluation of the potential factor structure. The condition of the distribution of participants' responses was evaluated through Bartlett's test of sphericity (Bartlett, 1954). he Kaiser-Meyer-Olkin measure of sampling adequacy value was 650. Four Items were deleted due to less than .3 communalities value. (Kaiser.1974)

Eigen values were 5.11,3.12,2.56 and 2.44 for factor 1, 2, 3, and 4, respectively. A four factor model was examined in detail and accepted with 50.2% of the total variance. Items for the scale were selected on the criteria of having factor loadings of .45 and beyond (Raubenheimer, 2004). Four items having factor loadings less than .45 were excluded from the scale. Finalized list of 26 items had high factor loadings .47 to .704) on the four factors; resultant was multidimensional 26-items GAAS. The labeled factors with respective factor loading are presented in Table 2.

Table 2: Factor Loadings of the 40 Items of General Adjustment to Aging Scale on Four Factors Solution (n = 200)

S. No.	No. of Items	I Cognitive and Emotional Adjustment	II Psychological Adjustment	III Attitude towards Family	IV Attitude Towards Friends	h Communalities
1	1	.49	-.18	.00	.16	.31
2	2	.56	.02	.11	-.31	.38
3	3	.48	-.33	.15	-.03	.36
4	4	.62	-.33	.28	.54	.47
5	5	.45	.01	-.23	-.23	.54
6	6	.37	-.40	.01	.30	.43
7	7	-.36	.42	-.50	-.07	.56
8	8	-.38	.44	-.50	.06	.59
9	9	-.25	.41	-.43	-.18	.46
10	10	-.57	.30	.26	.06	.48
11	12	-.43	.58	.16	.38	.72
12	13	-.47	.39	.30	.22	.53
13	15	-.53	.43	.15	.06	.43
14	16	-.03	.31	.01	.18	.57
15	20	-.16	.44	-.01	-.38	.41
16	21	-.19	.14	.39	-.47	.44
17	22	.31	.43	.54	-.07	.58
18	23	.33	.50	.56	.01	.69
19	24	.40	.43	.55	-.15	.67
20	25	.14	.28	.52	-.12	.38
21	26	.36	.20	-.30	.61	.62
22	27	.70	.20	-.08	.34	.65
23	28	.68	.24	-.12	.37	.66
24	30	-.49	.12	-.18	.45	.48
25	31	.30	.06	-.25	.40	.34
26	32	.34	.04	-.24	.49	.38
		5.11	3.12	2.56	2.44	

Eigen values	19.68%	12.01%	9.8%	9.4%
Variance	19.68%	31.70%	41.57%	50.98%
Cumulative Percentage				

Note. The items having factor loadings of .30and greater are given in boldface.

Final Structure of GAAS

Finally, General Adjustment to Aging Scale with 26-item was established. The scale GAAS measures individual adjustment issues in older adults (M=72.32, SD=9.6). Respondents use a 5-point scale, on which 0 represents strongly agree and 4 represents strongly disagree to indicate the extent to which each item described their adjustment level. Internal consistency was estimated by using Cronbach Alpha Coefficient. The 26 items of the scale were analyzed for the item total correlations. Item total correlations 0.68 (p < .01). Alpha internal consistency reliability estimate of GAAS was considerably high i.e., .74 indicating that the degree of homogeneity among the items was consistent. The internal consistency of the four subscales was evaluated by computing Cronbach alpha for each subscale. The alphas were high for all the four sub-scales.

Convergent Validity

It was hypothesized that General Adjustment to Aging Scale and Perceived Social Support Scale will be positively correlated.

Instrument

The Multidimensional Scale of Perceived Social Support by Zimet, G.D., Dahlem, N.W., Zimet, S.G. & Farley, G.K. (1990).A 12-item scale of perceived social support from significant others, family and friends and it was 7point likert scale. It was used without permission procedure because it was already published with permission instruction from authors. For each assessment, there is an algorithm leading to one of three acuity ranges. Each item is scored 1-7. Total is sum of 12 items, possible range for total is 7-84. It was high acuity 69-84, moderate acuity 49-68 and low acuity 12-4.

Procedure

The participants were administered the two scales, i.e. GAAS and Perceived Social Scale, selected for convergent validity check. Participation voluntary participated in study.

Sample

A sample of 40 older adults with age ranged between 60-70 years (M = 73.47, SD =9.02) participated in the present study, belonged to Happy home NGO of Lahore.

Results

Correlation coefficient was found between Adjustment to aging scale and Perceived Social Support scale: r=.659**, n=40,p<.01.Hence the strong positive correlation established the convergent validity of the scale.

Discriminant Validity

It was hypothesized that General Adjustment to Aging Scale and Perceived Stress Scale will be inversely correlated.

Instrument

Perceived Stress Scale by Cohen et al. (1988) consisted of 10-item scale ,5 point likert scale was used. The items are rated on a five point Likert type scale, ranging from 0 (never) to 4 (very often). Scales scores with higher scoring indicating higher level of stress. Item 4,5,7 and 8 were reversely scored.

Sample

A sample of 40 older adults with age ranged between 60-70 years (M = 72.37, SD =8.61) participated in the present study, belonged to Dastak old age home from Lahore.

Procedure

The participants were administered the two scales, i.e. GAAS and PSS, selected for discriminant validity check. Participation voluntary participated in study.

Results

Inverse correlation was found between Adjustment to aging subscale friend and family adjustment and perceived stress scale. r=-.354*,n=40,p<0.05 . Hence the inverse correlation established the discriminant validity of the scale.

Discussion

This research indicates that adjustment level of older adults in Pakistani population is poor and in miserable condition; It is also seems that, there is no specific indigenous tool available to measure these adjustment levels and issues related to aging.

Older persons should benefit from family and community care and protection in accordance with Pakistani society's system of cultural values. The point to be made here is that, as the population ages, there will be increased demands on the health system and increased expectations of older people to have control of how and where they live their lives (World Health Organization, 2011). Older persons in this society should have access to health care to help them to maintain their adjustment level or regain the optimum level of physical, mental and emotional well-being and to prevent or delay the onset of illness. Older persons should be able to enjoy human rights and fundamental freedoms when residing in any shelter, care or treatment facility, including full respect for their dignity, beliefs, needs and privacy and for the right to make decisions about their care and the quality of their lives. As individuals live longer, the quality of that longer life becomes a central issue for both personal and social well-being (Kinsella & Velkoff, 2001). Likewise, due to this growing number, new approaches focused on aging well, should be developed for the elderly (Aurelia & Baldazzi, 2002). In fact, sociocultural factors play a crucial role in affecting the way in which individuals see themselves as changing in later life (Westerhof, Whitbourne, & Freeman, 2011). Furthermore, because the aging of the population is becoming a pressing reality for both developing and developed countries, gerontologists need to expand their horizons of interest to include a multi- dimensional and multi-cultural approach (Löckenhoff et al., 2009; Torres, 2003, von Humboldt, Leal, & Pimenta, 2012a). Furthermore, biological and cognitive health, social competence, personal control, self-esteem, positive self-perceptions of aging, productivity, active engagement with life, personal and spiritual beliefs are some of the most relevant contributors for aging well (Baltes & Baltes, 1990; Barrett, 2005; Ford et al., 2000; Kim & Moen, 2002; Vaillant & Mukamal, 2001; von Humboldt, Leal, & Pimenta, 2012a, von Humboldt, Leal, & Pimenta, 2012b).

To establish the convergent validity, it was found that it correlated significantly with Perceived Social Support. A positive correlation with Perceived Social Support does not minimize the importance of developing indigenous scale as there is large variation in cultural permissiveness in experience of these support relationships. Discriminant validity ensured by obtaining the inverse correlation between GAAS and PSSS. The negative relationship among the said variables is well established in the research. It can be used to study different adjustment levels on Pakistani multitude.

Strengths and Limitations

It would helps to minimize Cultural Bias on the bases of Language. It would be helpful to resolve the linguistic difficulty. It would be beneficial for future studies related aging and adjustment issues. Further tools can be developed on the bases of validation of this scale. It may helps that government programs support community development models to prevent isolation and promote recognition and integration of older persons within the wider community. This scale development would be helpful to identify an exploration of aging related issues and life adjustment as experienced and perceived by older adults in Pakistan. Sample bias can be considered as only older age homes of two cities were included. Sample was only taken from NGO'S and government institutions. Sample can be selected from urban and rural population respectively. Scale questions were filled by researcher Due to eyesight issue of the participants chances of response bias. Many unfolded issues and problems would be explored regarding aging in Pakistan at international level due to this scale development.

Implications

Since its beginning in 1992, Pakistan has focused on the health, economics, and demographics of aging and the retirement process of older people. The assessment of psychosocial and social issues in aging was not a goal of the country. The purpose of this scale development is to facilitate the living population within cultural comparison of data on the bases of Language. This study will try to deepen life adjustment factors by assessing empirical studies and make findings comprising this scale construct. This is a very first kind of scale development work in Pakistan with reference to adjustment issues of Pakistani older adults. This tool can be used in future studies in order to enhanced culturally relevant measures. This scale development may helps in future research that may assist in the promotion of older adults' advancing life styles and healthy living styles and in meeting the demands of care interventions and policies specifically directed to the older adults. It may helps that government programs support community development models to prevent isolation and promote recognition and integration of older persons within the wider community.

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