ACTIVE AGEING MANAGEMENT IN IRAN: DESIGNING A MODEL

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ABSTRACT

OBJECTIVE
Active ageing constitutes one of the guiding perspectives on policies, but the factors influencing ageing have not received considerable attention. The present study aimed to identify the factors affecting active ageing management in Iran.

DESIGN
Drawing on quantitative data gathered through a questionnaire filled out by 287 participants and an interview with 20 experts.

MAIN OUTCOME MEASURES
The instrument was a questionnaire based on the five-point Likert scale. Questions with CVR>0.49 and with CVI>0.7 were accepted. To assess the reliability of the questionnaire, Cronbach's alpha coefficient was (0.92) used. The adequacy of the sample size was estimated at 0.952, based on the Kaiser-Meyer-Olkin (KMO) index. The collected data were analyzed by SPSS Ver 22. An exploratory factor analysis was used to explore and evaluate the dimensions of the model through a mathematical approach. Also, confirmatory factor analysis was utilized to verify the model, using AMOS 24 software.

RESULTS
Eight factors were identified as effective factors in active ageing management in Iran, which include: Organizational structure (0.83), services (0.80), control (0.74), financing (0.72), government grants (0.71), policy making (0.68), selected area to focus (0.65), members (0.63).

CONCLUSIONS
Organizational structure and member components had the most and least significant effects.

BACKGROUND
The 20th century has witnessed an unprecedented increase in average human lifespan as well as a rapid decrease in human fertility in many countries of the world. [1] Globally, the share of older people (60 years and older) incremented from 130 million in 1994 to more than 600 million in 2017; that is, it has increased from 4% to 10% during this period which is expected to reach 21% per se by 2050. [2] In Iran, the population of older people (60 years and older) increased from 7.3% in 2006 to 9.3% in 2016, and it is expected to reach 25% by 2050. [3] So, in the near future, we will see an ‘aging explosion.’ [4] What has been described as the trend of increasing population in the world and in Iran is not important in itself inasmuch as the fact that the economic and social consequences of this population
Ageing is a multidimensional phenomenon with political, economic, social, cultural, educational, welfare, physical, mental, and health dimensions that are intertwined as a chain. Therefore, we are mistaken if we rely solely on the health facilities and abilities to address ageing issues. [6]

These findings highlight several questions from both an individual and public perspectives. Who will take care of the current generation as we become older? What types of health and social organizations should we develop to preserve the quality of life of an ageing population and sustain our health care systems over the medium and long term? Supporting Active and Healthy Aging (AHA) is one answer to these questions.

AHA population is a resource that benefits society. Maintaining a healthy ageing population may also lower demands for health care services. In addition, in many cases, older adults in good health conditions are able to support their fellow generation. [10] It is postulated that active ageing is a multidimensional concept affected by several factors, including physical functionality, lifestyle, urban environment, and social inclusion. [7] Active ageing is a process of optimizing opportunities for health, participation, and security in order to enhance quality of life as people age [8] and healthy ageing is process of developing and maintaining the functional ability that enables well-being in older age. [9]

Older people contribute to society in many ways – whether it is within their family, to their local community or to society more broadly. [9] Therefore, policies should ensure that older people can continue participating in economic and community activities as they grow older, and that they can take care of themselves as long as possible, and this is the essence of an Active and Healthy Aging (AHA) approach. [11] Most of developing countries in the world have perceived socioeconomic and health related complexities resulting from population transition called ‘ageing nations’, however, given the progressive growth of the elderly population, their problems also have increased so that a satisfactory solution has not been found yet for them. [12]

The status of hospitals and health care facilities in providing services to the elderly is severely weak in terms of staff, physicians, nurses trained to interact with the elderly, home visits and preventive measures. Existing policies on the health of the elderly have failed to achieve their goals; elderly policymaking has taken place regardless of the important underlying factors (such as human resources), community conditions and stakeholders. [3] And the elderly in Iran are not covered by any insurance organization as “elderly” unless they are insured as employed, retired, needy, disabled, and rural. [21]

**OBJECTIVES**

Resolving elderly problems is not the sole responsibility of an entity or organization and requires the combination of capabilities and involvement of all sectors, so establishing a coordinated body to plan elderly related activities as a strategic measure can be a strategy for improving elderly
support services. Consequently, the aim of this study was to identify the factors affecting active ageing management.

**METHOD**

This descriptive quantitative study and carried out in six phases in 2018. In the first phase, factors influencing active ageing management were identified and extracted through a literature search. In the second phase, a comparative study was conducted on the experience of the selected countries in active ageing management. A narrative review was used in databases of Pub Med, Science direct, Scopus, and Web of Science. In order to find more reports and documents, various databases such as the WHO, the World Bank, and the Google search engine were also examined. To this end, the relevant studies were checked using the key words “active ageing, elderly policy making financing, control, organizational structure, active ageing management, and ageing services. The study population was selected from countries with high aged population and available references. These countries included Norway, the United Kingdom (UK), Japan, Malaysia, Turkey, and Iran. The data obtained from this stage (literature review and comparative study) were classified using an information form, and duplicate data were removed. The important variables affecting active ageing management were classified into eight dimensions consisting of policy making, organizational structure, members’ component, control, financing, governance grants, services, and selected area to focus which led to the development of a proposed model.

In third phase, an interview was conducted with 20 experts in the field of the ageing management. The inclusion criterion for experts was a minimum experience of 10 years in ageing management positions. The interviews continued until reaching data saturation, and analysis of the collected data from the interviews was carried out by content analysis.

In fourth phase, a researcher-made questionnaire with 41 items in eight dimensions, rated on a five-point Likert scale (from very low = 1 to very high = 5) was used to confirm the validity of the proposed model by a large number of experts. The face validity and content validity of the questionnaire was confirmed by 20 experts. Questions with CVR>0.49 (Content Validity Ratio) and with CVI>0.7 (Content Validity Index) were accepted. Furthermore, to assess the reliability of the questionnaire, Cronbach’s alpha coefficient was (0.92) used. In fifth phase, validation of the model was made by the stakeholders. The questionnaire was distributed among 287 samples, including experts of ageing management in the organizations related to the provision of active aging services such as ministry of health and medical education, ministry of cooperatives labor and social welfare (state welfare organization of Iran, insurance companies) and universities of medical science with 10 years of experience in the field of ageing. The sample size was determined using the Cochran formula, and sampling was carried out using cluster sampling method. The adequacy of the sample size was estimated at 0.952, based on the Kaiser-Meyer-Olkin (KMO) Kaiser Mayer Olkin index. The collected data were analyzed by SPSS 22 software. An exploratory factor analysis was used to explore and evaluate the dimensions of the model through a mathematical approach. The internal consistency of dimensions was estimated through Cronbach’s alpha. In the last step, confirmatory factor analysis was utilized to verify the model, using AMOS 24 software.

**RESULTS**

According to the literature review, five countries were selected, including Norway, the United Kingdom (UK), Japan, Malaysia, and Turkey, and seven factors were identified including policy making, organizational structure, control, financing, governance grants, services, and members component. Table 1 provides an overview of the key characteristics of active ageing management in the selected countries. After comparative study, one more factor was added to the name of selected area to focus. In exploratory factor analysis, to categorize the items among the factors, based on their factor load, the rotated component matrix results were used.

Table 2 shows the correlation matrix between items and factors rotation, in which the correlation value varies from -1 to +1. Based on this table, the researcher, based on the largest factor load of each item, classified them according to the degree of correlation with each other. Classification of variables (items) in factors is usually based on the first variable of the factors and its implicit meaning. The Eigen values of the first and eight factors were 14.225 and 7.225, respectively. Besides, these eight factors could explain approximately 73.25% of the variance in the variables.
### TABLE 1 - THE RESULTS OF LITERATURE REVIEW ON ACTIVE AGING MANAGEMENT IN SELECTED COUNTRIES

| POLICY MAKING | CONTROL | ORGANIZATION | FINANCING | COMPONENT | SERVICES | MEMBER | COUNTRIES | NO. |
|---------------|---------|--------------|-----------|-----------|----------|--------|-----------|-----|
| *             | *       | *            | *         | The United Kingdom (UK). | 1      |
| *             | *       | *            | *         | Norway    | 2      |
| *             | *       | *            | *         | Japan     | 3      |
| *             | *       | *            | *         | Malaysia  | 4      |
| *             |         | *            | *         | Turkey    | 5      |

### TABLE 2 - ROTATIONAL CORRELATION MATRIX AMONG ITEMS, ENGINE VALUES AND TOTAL VARIANCE EXPLAINED BY EACH FACTOR

| ITEM | FACTOR 1 | ITEM | FACTOR 2 | ITEM | FACTOR 3 | ITEM | FACTOR 4 | ITEM | FACTOR 5 | ITEM | FACTOR 6 | ITEM | FACTOR 7 | ITEM | FACTOR 8 |
|------|----------|------|----------|------|----------|------|----------|------|----------|------|----------|------|----------|------|----------|
| q 3  | 0.821    | q 5  | 0.715    | q 10 | 0.660    | q 14 | 0.632    | q 19 | 0.697    | q 21 | 0.547    | q 25 | 0.536    | q 32 | 0.497    |
| q 1  | 0.814    | q 7  | 0.713    | q 11 | 0.653    | q 15 | 0.600    | q 17 | 0.634    | q 22 | 0.542    | q 24 | 0.532    | q 37 | 0.492    |
| q 4  | 0.803    | q 9  | 0.702    | q 12 | 0.620    | q 16 | 0.584    | q 20 | 0.612    | q 23 | 0.540    | q 26 | 0.530    | q 33 | 0.487    |
| q 2  | 0.792    | q 6  | 0.690    | q 13 | 0.619    | q 18 | 0.604    | q 27 | 0.527    | q 36 | 0.471    |      |          |      |          |
| q 8  | 0.681    |      |          |      |          |      |          |      |          |      |          |      |          |      |          |
| q 30 | 0.522    | q 34 | 0.462    |      |          |      |          |      |          |      |          |      |          |      |          |
| q 28 | 0.517    | q 35 | 0.450    |      |          |      |          |      |          |      |          |      |          |      |          |
| q 29 | 0.515    | q 39 | 0.448    |      |          |      |          |      |          |      |          |      |          |      |          |
| q 31 | 0.502    | q 38 | 0.431    |      |          |      |          |      |          |      |          |      |          |      |          |
| q 40 | 0.420    |      |          |      |          |      |          |      |          |      |          |      |          |      |          |
| q 41 | 0.409    |      |          |      |          |      |          |      |          |      |          |      |          |      |          |
| Total| 14.225   | 14.036| 13/125   | 12.136| 11.096   | 10.174| 6.854    | 7.226|          |      |          |      |          |      |          |
|       | 14.902   | 12.851| 11.236   | 10.337| 9.897    | 8.574 | 7.365    | 6.251|          |      |          |      |          |      |          |
|       | 14.902   | 16.262| 28.842   | 32.230| 38.147   | 54.415| 67.321   | 73.025|          |      |          |      |          |      |          |
As it can be seen in Table 3, the items and factors of the research are categorized into eight factors and 41 items. Confirmatory factor analysis in AMOS24 software was used to confirm the final model. The findings related to fitting indices (Chi-square/df ($\chi^2$/df), Goodness of fit index (GFI), Adjusted Goodness of Fit Index (AGFI), Normed fit index (NFI), comparative fit index (CFI), Parsimony comparative fit index (PCFI), and Root mean square error of approximation (RMSEA)), were all optimal and approved the model with five dimensions for the hospital holding governance. Table 3 demonstrates the fitting indices of the model.

Figure 1 and Table 4; represent the active aging management model with eight factors. The dimensions of policy making, organizational structure, control, financing, governance grants, services, members component, and selected area to focus consisted of four, four, five, four three, three, eight, and 10 items, respectively.

### Table 3- Fitting of Model On Active Aging Management

| Status of Index | Estimated Value | Optimal Value | Statistics |
|-----------------|-----------------|---------------|------------|
| $\sqrt{}$       | 4.163           | Between 2 and 5 | $\chi^2$/df |
| $\sqrt{}$       | 0.028           | <0.08         | RMSEA      |
| $\sqrt{}$       | 0.906           | 0.9>          | GFI        |
| $\sqrt{}$       | 0.915           | 0.9>          | AGFI       |
| $\sqrt{}$       | 0.927           | 0.9>          | CFI        |
| $\sqrt{}$       | 0.945           | 0.9>          | NFI        |
| $\sqrt{}$       | 0.661           | 0.6>          | PCFI       |

In this model, there was a significant direct relationship between all factors and active aging management. Also, the highest and lowest standard coefficients were attributed to financing and decision rights, with factor loadings of 0.83 and 0.44, respectively.

### Table 4- Factors and Sub-Factors of Active Aging Management

| Status | Standard Coefficient | Sub-Factors | Items | Standard Coefficient | Factors |
|--------|-----------------------|-------------|-------|-----------------------|---------|
| $\sqrt{}$ | 0.73 | Formation of the High Council on Aging | A1 | 0.684 | Policy making |
| $\sqrt{}$ | 0.69 | Ministry of Health and Medical Education | A2 |
| $\sqrt{}$ | 0.66 | Ministry of Cooperatives, Labor and Social Welfare | A3 |
| $\sqrt{}$ | 0.61 | Ministry of Education | A4 |
| $\sqrt{}$ | 0.72 | National Strategic Plan of the Elderly | L1 | 0.742 | control |
| $\sqrt{}$ | 0.68 | Developing an Active Aging Law | L2 |
| √ | 0.63 | Developing Active Aging Regulations (Proposed at Ministries Level) | L3 |
| √ | 0.74 | National Strategic Plan of the health and welfare of the Elderly | L4 |
| √ | 0.70 | Develop national policies and operational plans based on valid needs assessment | L5 |
| √ | 0.78 | Decentralized Organizational Structure: Establishing Secretariat of the National Council on Aging at the Capital Level and Establishing General Offices in Welfare Offices in the Provinces | R1 | 0.832 | Organizational structure |
| √ | 75Q/ | Council consisting of Ministries of Health and Medical Education and Ministries of Cooperatives, Labor and Social Welfare | R2 |
| √ | 0.69 | Forming a council consisting of relevant ministries at the state level and delegating to municipalities at the local level | R3 |
| √ | 0.74 | Formation of the National Council of State and formation of secretariats at the level of deputy governor | R4 |
| √ | 0.72 | The current composition of the Iranian National Council on Aging, | D1 | 0.633 | members component |
| √ | 0.78 | The formation of an aging council chaired by the first vice president and all members of the cabinet | D2 |
| √ | 0.74 | Forming a policy council chaired by the Minister of Health, Health and Medical Education plus the Ministers of Co-operation, Labor and Social Welfare and the Ministers of Education | D3 |
| √ | 0.74 | Allocate sufficient funds to the Ministries of Health and Medical Education and Cooperatives, Labor and Social Welfare the Ministries of | C1 | 0.715 | financing |
| √ | 0.77 | Financing from municipalities | C2 |
| √ | 0.88 | Allocate Social Security Resources plus Pension Funds | C3 |
| √ | 0.83 | Creating a special insurance plan with the participation of citizens over 40 years old | C4 |
| √ | 0.74 | Subsidies for people over 60 | V1 | 0.707 | governance grants |
| √ | 0.73 | Payment of insurance and tax quotas from the state budget to social security | V2 |
| √ | 0.64 | Paying elderly health insurance | V3 |
| √ | 0.82 | Non-participation pension payment to the elderly | K1 | 0.800 | services |
| √  | 0.74 | Discount Cards for Transportation | K2 |
| √  | 0.79 | Discount cards for recreational and sports centers | K3 |
| √  | 0.80 | Perform free health check-ups and outpatient services | K4 |
| √  | 0.80 | Establishment of hospitals and clinics for the elderly | K5 |
| √  | 0.72 | Providing long-term care insurance to the elderly | K6 |
| √  | 0.73 | Creating mobile care services | K7 |
| √  | 0.71 | Creating a college education plan | K8 |
| √  | 0.46 | Lifelong Learning | P1 |
| √  | 0.72 | "Health literacy" | P2 |
| √  | 0.71 | Housing | P3 |
| √  | 0.73 | Urbanization and Adaptation of Spaces | P4 |
| √  | 0.65 | Leisure planning | P5 |
| √  | 0.80 | Nutrition | P6 |
| √  | 0.78 | mental health | P7 |
| √  | 0.80 | Employment | P8 |
| √  | 0.71 | Income security | P9 |
| √  | 0.68 | Community attitude | P10 |

**FIGURE 1: MODEL OF ACTIVE AGING MANAGEMENT FOR IRAN**
This study provides a framework for identifying the factors affecting the management of active ageing. The results showed that the model of the active ageing management had eight factors, including policy making, organizational structure, members component, control, financing, governance grants, services, and selected area to focus. The organizational structure, with a factor loading of 0.83, was the most important factor affecting active aging management, followed by services with a factor loading of 0.80. The factors of control, financing, governance grants, policy making, selected area to focus, and members component with factor loadings of 0.74, 0.71, 0.70, 0.68, 0.65 and 0.63 were in the third, fourth, fifth, sixth, seventh, and eight places, respectively.

The finding of the study indicated the importance of policy making on active ageing management. In a study conducted by Haghshenas [22], evaluation in policymaking in the field of senior management as the main perspectives of the relevant institutions has been emphasized and in the present study the above factor is also mentioned. In this regard, from Ahmadi Teimorlooi’s [20] point of view, at present, the issue of stewardship is neglected in the health of the elderly and is not one of the priorities of the country which is in line with this study. The government, as the country’s executive and policymaker, by forming and attending the High Commission on Ageing, has an important role to play in active ageing management.

The finding of the study showed the importance of control on active ageing management. Ahmadi Teimorlooi’s [20] study adopted national laws and regulations to control elderly health issues which included 11 policies that did not pay much attention to the necessary dimensions and components of the policy content, which give credence to the results of the present study. According to Zeinalhajlu et al. [4] organizing elderly affairs have no legal support and the creation of laws and regulations are proposed for the protection of the elderly by related organization. Also, according to the Riahi’s [6] study, a review of the laws and regulations on aging is needed to improve their economic and social position. It is not enough just to adopt laws and policies, but implementation of them is more important, and the government must adopt long-term planning, laws, policies.

In the result of this study establishing coordinated organization to plan and direct activities, related to elderly as a strategic measure to improve elderly support services is necessary, and it is in line with results of the present study. In a study conducted by Palombo [23], collaboration between organizations and the establishment of formal organizations is a key pillar of advocacy for the elderly.

The finding of the study showed the importance of member component on active ageing management. Some studies such as Vogeli and Haghshenas [22,24], in developing countries, there is a need for the involvement of various public and private organizations, but in the present study, non-governmental organizations have not been involved at least in macro policy-making.

The findings of this study indicated the importance of financing on active ageing management. [25]. Ahmadi Teimorlooi [20] and Alizadeh et al. [26] proposed insurance policy and service financing. Boyle et al. [27] study, establishing financial stability for the elderly is one of the top priorities of efforts to support the elderly. Jhala and Christian [4]’s study, stated that the financial needs of the elderly must be included in the policies and plans for the elderly. Therefore, sufficient financial support with no concern about daily expenses and future medical expenses is a prerequisite for a good old age. Based on the results of study, government grants on active ageing management is very important. [29] Studies by Jacobs et al. [30] have emphasized the need for preventive measures by government for the whole population (including the elderly) that could lead to a decline in chronic disease. They have proposed the implementation of essential measures in the area of provision of insurance services and free treatment of the elderly by the responsible authorities. One of the executive policies of the government to fund the elderly is the use of targeted subsidies, which is mentioned in the national elderly document.

The finding of the study indicated the importance of providing services on active ageing management. Considering Mohammadi et al.’s [29] research, the formulation of formal and informal policies by the government to establish welfare structures and health-based services for the elderly can lead to the improvement of family quality.
So we can say older people’s health plans should focus on meeting the needs of the elderly with a balanced approach which are consistent with the present study. According to previous studies, measures for the elderly in Iran are not adequate and appropriate, and not taking into account the priorities and needs based on the experiences of advanced countries in the near future will lead the country to economic, social and health crisis. The findings of the present study showed alignment with those of Jaleh and Christian [28], who believe that ageing policies and programs should focus on health protection, the labor market, employment, lifelong education, and social support.

**CONCLUSION**

The results of this study showed those factors, including policy making, organizational structure, members’ component, control, financing, governance grants, services, and selected area to focus had an influence on the active ageing management. Therefore, based on the proposed research model, the first step should be to form a High Council of Ageing with the presence of the President’s representative and to set policy, plans, and policy priorities in accordance with surveys and need assessment of the elderly. Then, in the second step, the specific funding for the elderly, purely as the elderly (not as retired, needy, disabled, rural or...) as well as the duties of the government and related organizations at each specified level should be determined with responsibility and the scope of their activity and should be precisely defined to ensure implementing decisions. In the final step, which is the implementation phase, with the help of government agencies and other relevant agencies, the elderly are exposed to a variety of services and supports in various individual, economic, and social areas. The results of the present study can be used in countries that are economically, socially, and culturally similar to Iranian conditions and in other countries, due to the impact of these variables, must be done based on the specific need assessment of the communities.

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