



Understanding the Elderly's View of Central Human Functional Capabilities

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Abstract

Introduction: Older people are more vulnerable to physical disability, as well as mental illnesses. They also may experience challenges that can be related to Nussbaum's Central Human Functional Capabilities. The purpose of this study was to explore the elderly's views related to Central Human Functional Capabilities.

Methods: This study used a qualitative approach to understand older people's perspectives on capabilities. Purposive sampling was used to select nineteen older women aged 65 to 79 years. The data collected through semi-structured interviews were thematically analyzed.

Results: Eighteen themes emerged by thematic analysis of the ten functional capabilities, including life (life expectancy, life satisfaction), bodily health (functional independence, nutrition, and accessibility), bodily integrity (independent decision-making and dealing with insults), senses, imagination and thought (material interests and religious beliefs), emotions (love of children), practical reason (daily routine), affiliation (respect for others, empathy for others, gender discrimination), other species (interest in nature and flowers), play (interest in recreational activities), and control over one's environment (political participation, being dependent).

Conclusion: Despite the importance of all the capabilities from the viewpoint of the elderly, the "bodily health" and "bodily integrity" capabilities were of particular importance. Health policymakers should recognize the Central Human Functional Capabilities and allocate resources and services that best promote these capabilities for the elderly.

Keywords: Elderly, Social participation, Central Human Functional Capabilities

Introduction

Old age, according to the World Health Organization, begins at age 60 with significant personal physical and psychological changes (1,2). Old age can differ widely from person to person (3).

According to the World Health Organization, healthy aging is "the process of developing and maintaining the functional ability that enables wellbeing in older age" (4). Globally, the United Nations estimates that the number of people over the age of 60 will increase from 800 million in 2011 (11

percent of the world's population) to more than 2 billion in 2050 (22 percent of the world's population) (5). According to the 2011 census, the population of elderly Iranians will be increasing from 8.3% in 2019 to 26% in 2050 (6). According to UN estimates, countries with an older population ratio of 7% or more are classified as countries with older populations, thus, Iran is one of them.

One of the critical factors on the physical and mental health of the elderly is social participation. Social participation is a process in which individuals voluntarily engage in awareness and information in groups based on their specific interests and contribute to social decision-making (7). According to the International Classification of Functioning, Disability, and Health (ICF), participation is "involvement in a life situation" (8).

Studies show that social participation in old age not only reduces mortality (9,10), disability (11-13), and depression (9-12, 14,15) but also promotes positive emotions, wellbeing (9-12,14,16), and people's health levels (17-19). Therefore, social participation in old age has been considered the basis for successful aging (20). It is important to study the factors affecting the improvement of social participation in the elderly.

The impact of many factors such as improving cognitive function (21), fear of falling (22), chronic pain (23), anxiety (24), sleep (25), quality of life (26), gender (27), and mental health (28) on the social participation of the elderly has been studied. However, the impact of basic capabilities on the social participation of the elderly has not been studied yet.

Central Human Functional Capabilities

The capability approach was introduced by

Nobel Prize-winning economist Amartya Sen in 1998 and developed by Martha Nussbaum (29,30). The idea of capability is central to understanding the capability or capabilities approach (31,32). Capability means "the opportunity to achieve valuable combinations of human functionings-what a person is able to do or be" (32, p.153).

Nussbaum attempted to list Central Human Functional Capabilities to provide a bare minimum basis for human dignity, which should be respected by the governments of all nations. According to Nussbaum, these capabilities should be considered one of the most important items that should be secured to all citizens (31). These capabilities include life, bodily health, bodily integrity, senses, imagination and thought, emotions, practical reason, affiliation, other species, play, and control over one's environment. This qualitative study explores the elderly's view of Central Human Functional Capabilities on social participation from the elderly's perspectives.

Methods

A qualitative research approach was employed to understand the elderly's view related to Central Human Functional Capabilities. Thematic analysis was applied to analyze transcript data that emerged from the interviews. Thematic analysis is the frequent reading of texts taken from interviews to find dominant themes and summarize the interview findings under thematic headings. The thematic analysis identifies prominent and common themes in the texts and structurally classifies common themes (33).

In this study, the inclusion criteria included older adults aged at least 60 years referring to the Senior Rehabilitation Center, having

no history of neurological diseases, rheumatology, and acute mental illness, having no history of hospitalization in the past six months according to their medical records, not being residents in the nursing home, and having the level of cognitive function higher than 23 in the Min-Mental State Examination (MMSE) (34) test.

Purposive sampling was used to select nineteen older women aged 65 to 79 years from a Senior Rehabilitation Centre who were willing to participate in the study. Data were collected through one-on-one, face-to-face, open-ended, semi-structured interviews from June to August 2018. Before the interview, the consent form was reviewed by the participants and the participants were asked to sign the form. They were informed that their answers to the questions were completely voluntary. Permission to record the interview was obtained. The participants were informed that the interviews would be tape-recorded. The participants were interviewed once in a quiet environment. Each interview lasted about 60 minutes. The participants were asked questions about their views related to the Central Human Functional Capabilities. The interviews continued until data saturation was achieved (when no new information emerged).

A six-step process was used to inductively develop themes based on the guidelines of Braun and Clarke. The process for analysis of the data consisted of: familiarizing with the data, creating the original code, searching for the themes, reviewing the themes, defining the themes, and providing the final report (35).

Some strategies have been suggested to ensure the credibility of qualitative research findings, such as prolonged engagement

and persistent observation in the field, triangulation, peer review, negative case analysis, clarifying researcher bias, member checks, rich, thick description, and external audits (10). For the present research, three of these strategies were thought to be most relevant to the data set, namely, thick description, clarifying researcher bias, and member checks.

Results

This section describes older people's views on each of the ten capabilities, namely, life, bodily health, bodily integrity, sense, imagination, and thought, emotions, practical reason, affiliation, other species, play, and control over one's environment. The findings are described in relation to each capability as follows:

1) Life

The participants were asked questions about their understanding of life capability according to Nussbaum's definition, and two themes were extracted that included life expectancy and life satisfaction. The following quotes support these themes.

Life expectancy

For most participants, life means "hope" which is a basis for living. For example, one participant stated, "*It is not possible to live a life without hope*" (Participant 17). Another participant believed being healthy and life expectancy are interconnected. As participant 9 said, "*If I am not healthy, it is better to die*".

Some participants mentioned Life is a blessing. For example, one participant noted, "*If God wills, our Life is a blessing, even in the face of pain, calamity, sorrow, and grief*" (Participant 12). Another assumed, "*Whatever God wills, if it is*

God's will, we will live" (Participant 16).

Life satisfaction

Several participants believed that life meant satisfaction or lack of satisfaction. For example, one stated, *"I am satisfied with my life after 87 years"* (Participant 6). In contrast, participant 4 mentioned, *"I am now 70 years old, and I have not lived even a year; I have lived a long time so far!"*

Some noted that life satisfaction is related to being healthy or not. As participant 8 mentioned, *"I wish I could die sooner, as if I'm not in this world, I'm always sick."*

2) Bodily health

In answer to the questions of bodily health capability, nutrition, and shelter, three themes were extracted: functional independence, nutrition, and accessibility.

Functional independence

Some participants were healthy and were able to do their daily living activities independently.

As participant 1 declared, *"I do my work, and I sweep, wash my clothes by hand, and wash my dishes"*. Another participant asserted, *"I do all my work without any pressure"* (Participant 3).

Participants assumed this capability as a prerequisite for independence and they believed that the healthier they are, the less dependent they will be on others. Some also pointed to the lack of independence due to lack of physical health. As participant 7 noted, *"I have a lumbar disc problem; it's been three weeks now, I can't take my spoon to my mouth, food is spilling out of my hand, my hand hurts, my daughter is doing my job"*. Another participant said, *"Because of my obesity, myopia, and severe back pain, I can't do much anymore"* (Participant 4).

Despite their lack of bodily health, some participants acknowledged their independence in their daily activities. For example, participant 13 assumed, *"I have diabetes, cholesterol, and osteoarthritis, but I'm still doing my work"*. Another participant mentioned, *"My physical problems do not interfere with my daily activities, and I try to do my work to meet my needs"* (Participant 17).

Nutrition

Many participants pointed to the direct relationship between severe economic and livelihood conditions and lack of proper nutrition. For example, participant 7 mentioned, *"I can't eat what I like. I don't have enough money to buy things for preparing healthy food"*.

Some also believed that there is a connection between having multiple illnesses due to old age and poor nutrition. They believed that due to various diseases, they should have certain diets.

Some of the symptoms of mood disorders, such as depression, makes the brain deprived of good nutrition. As participant 14 assumed, *"I don't have desire to eat at all. I dislike chicken; I dislike meat. It's been a year, and I don't like to eat anything"*.

Accessibility

A few participants mentioned that due to poverty, they failed to access affordable housing. For example, participant 7 said, *"I have to crawl up and down the stairs to get in the bathroom, which is cold, and there is no heating"*. Participant 15 also mentioned, *"My bathroom is in the yard and not safe to use, especially during winter, as I am afraid of falling"*.

3) Bodily integrity

In answering the questions relevant to the ability to move freely from one place to

another, and the ability to protect oneself from violence and abuse by others, two themes emerged, including independent decision-making and dealing with insults.

Independent decision-making

Some participants were more independent in decision-making despite their age. For example, participant 9 noted, *"I can travel independently without getting the permission of others"*.

Others stated that they could not make decisions for themselves as they did not have their private lives and lived with their children. As participant 12 reported, *"I have never traveled alone. When I want to go somewhere, I have to tell my sons to know where I am going because if something happens to me, they should know"*.

Some other problems, such as physical and financial problems and illiteracy were cited as lacking this capability. For example, participant 9 said, *"I can't travel because of my low economic situation and physical illness"*. Participant 3 also mentioned, *"Because I'm illiterate and it is difficult for me to travel alone, I only can get around the city"*.

Dealing with insults

A number of participants claimed that they were not silent against insults. For example, Participant 2 declared, *"Usually, if someone insults me, I respond her/him quickly"*. Participant 19 also mentioned, *"If someone treats me badly, I hate her/him and respond immediately"*.

However, most participants said they were silent against others' insults. One of the participants said, *"I don't let anyone talk to me angrily, but sometimes my oldest son behaves me badly, but I don't tell him anything because I love him"* (Participant

3). Another one mentioned, *"When I was young, I used to defend myself against violence and insults. Now, I am old; if someone is rude to me, I tolerate to avoid any conflicts"* (Participant 12).

4) Senses, imagination and thought

Two themes emerged from participants' perspectives on senses, imagination and thought including material interests and religious beliefs.

Material interests

Some participants linked their senses, imagination and thought with their worldly and material interests. As one mentioned, *"I didn't get what I wanted. A home, a TV, a fridge, I couldn't get any"* (Participant 13). Participant 17 declared, *"I had a lot of dreams when I was young, but I didn't have money. I wish I could help my children financially..."*.

Religious beliefs

For most participants, religion was the main source of their imagination. Their thought was associated with religious rituals. For example, participant 2 said, *"I pray every day, even for my mother, but I cannot fast. I also like to go to shrines."* Participant 8 mentioned, *"I pray and fast, I always pray for all the youth and the martyrs and everyone. I love Imam Reza very much"*.

5) Emotions

Only love of children emerged as a theme regarding emotions.

Love of children

When asked about attachment, love, affection, and oppression, the participants' answers were all about their children. As one participant noted, *"I'm worried about my son, who is far away from me, and I am also worried about my other son, who is a*

truck driver" (Participant 1). Participant 14 said, *"I love my grandson very much. He is special to me"*.

Some participants sadly mentioned that they had been neglected and their children do not respect them. As participant 11 mentioned, *"My daughter speaks badly to me. I don't miss her when she's not at home"*. Participant 13 said, *"I love my daughters more because they respect me more. My addicted son is at home and doesn't work and gets my subsidy. My son says either give me money or I'll kill you"* (Participant 13).

6) Practical reason

From the analysis of the interview data on practical reason capability, only the theme of the daily routine emerged.

Daily routine

Nearly half of the participants had routine and repetitive daily life activities. For example, one of the participants mentioned, *"I don't have a specific plan. Only when I come to this center, I have the opportunity to talk about my memories. I'm alone inside the house, and that's what bothers me"* (Participant 1). Participant 9 noted, *"When my husband was alive, I had a plan for my life, but now I don't have any plan"* (Participant 9).

One participant mentioned that sometimes changing daily routines can have a huge impact on one's life. Participant 15 indicated, *"I do my work; I clean my house. I diversify my days, and I don't let it be my daily routine"*.

7) Affiliation

After analyzing the data, three themes emerged including respect for others, empathy for others, and gender discrimination.

Respect for others

Most of the participants considered "respecting

the rights of others and mutual respect" as an important factor in maintaining their respect and comfort. For example, one participant stated, *"I respect my family, I avoid hurting others' feelings, and I give them the right to disagree with my opinions as they could not think like me"* (Participant 2). Another participant also mentioned, *"I respect my children's decisions. They listen to me and respect me. Although sometimes it may be hard, I cannot be always right. Maybe they're right. We have to understand others"* (Participant 5).

Empathy for others

Most participants think it is their social responsibility to care and feel empathy for others. As participant 2 noted, *"I try to talk with those who are upset around me, I care about their problems and try to find a solution by telling them about my experiences, and I invite them to be patient"*. Participant 12 also mentioned, *"When a person is upset, I accompany her to make her happy; I don't let her go until she laughs and calms down"*.

Some participants also stated that they do not tolerate discrimination and harassment against others and react as participant 1 said, *"If I see someone being bullied, I get very angry and warn the insulting person"*.

Some participants expressed their need to have a deep interest in connecting with others. For example, one participant mentioned, *"I want to have a close friend, a good friend, but I don't have anyone"* (Participant 11).

Loving others and expecting love from others was raised as a need by some participants. Participant 17 reported, *"If my neighbor is upset, I'll invite her for lunch, and I talk to her to be patient"*.

Some also suffered from the unkindness of

those around them. For example, one participant mentioned, *"When I wake up in the morning, my daughter tells me why aren't you careful when you wash your hands and face, and yells at me"* (Participant 11).

Gender discrimination

Almost all participants experienced gender discrimination in their life. For example, one participant stated, *"In the past, there was a big difference between a girl and a boy. A woman who gave birth to a girl was rejected and stigmatized"* (Participant 1). Another participant noted, *"In the past, a woman faced discriminations if she did not give birth to a son"* (Participant 6).

8) Other species

Interest in nature and flowers was the only theme identified regarding the relationship with nature.

Interest in nature and flowers

All participants were very interested in keeping flowers and plants and being in nature. Even if they did not have enough places to grow and maintain flowers and plants, their speech expressed love and interest in plants and nature. As one participant mentioned, *"I don't have a garden, but I would love to have a garden where I can grow vegetables"* (Participant 1).

Growing flowers and plants is not only an entertainment but also a purposeful activity that connects the elderly to the past and the present. For example, participant 2 noted, *"Taking care of flowers makes me very happy. I would love to go to the mountains and remember the past when I was young and enjoyed living in the village"*.

Almost all participants had spent their young ages in the village. They missed their previous life; their regret today was

the separation from that nature and a real-life. As one participant said, *"If I have space, I would love to have chickens, roosters, and lambs"* (Participant 2).

9) Play

In response to the ability to enjoy recreational activities, the theme of interest in recreational activities was emerged.

Interest in recreational activities

Most of the participants enjoyed the time that they spent in the daily rehabilitation center. They mentioned that they have opportunities to chat, laugh and play some games. For example, one participant mentioned, *"We talk about most of the old proverbs, and we play the game (Chide Chika) or the same humorous local stuff, and sometimes we dance together (Lori's local dance)"* (Participant 2).

10) Control over one's environment

In response to questions about the right to have property, equal rights and political participation, two themes emerged including political participation and being dependent.

Political participation

For most participants, civic engagement and participation in local, parliamentary, and presidential elections were very important. For example, one participant asserted, *"My official document no longer has space to stamp (as I participated in all elections). My children tell me who to vote for, and I vote for the same person"* (Participant 13).

Nevertheless, some of them had the freedom to choose as participant 14 mentioned, *"Whoever I vote for, he is elected. I will vote for whoever I want; nobody can force me"*.

Being dependent

Lack of financial independence and living with other family members was an annoying issue for most participants and made

them feel overwhelmed. For example, one participant stated, *"I have to tolerate their bad behaviors, as I am living in their home and have no choice"* (Participant 11). Another participant noted, *"I feel overwhelmed. I think I'm dishonorable"* (Participant 14).

Discussion

This study investigated the elderly's view on Central Human Functional Capabilities. Many participants in this study considered these capabilities as basic needs and they more likely experienced failure to achieve them and have not had their needs met.

Capability Approach has been used to assess poverty, inequality, welfare, social justice, social deprivation, gender issues, disability, and child poverty (36-39). Capability Approach can also be considered an effective tool for understanding the determinants of the wellbeing of the elderly (40).

These findings, along with other studies, contribute to the literature in that an exploration of Nussbaum's Capabilities Approach has helped explain the meaning and the importance of expanding the basic capabilities of disadvantaged people (41, 42). The participants of the study were older adults. Most participants experienced a difficult life as they thought their lives were not worth living. The participants mentioned the importance of some capabilities, such as life, bodily health, and bodily integrity. They believed that their economic and living conditions were closely associated with these capabilities. Most participants did not have opportunities to be able to have pleasurable experiences and to avoid non-necessary pain. Although they were able to have attachments to things and people

outside themselves, their love is very superficial and can summarize only in terms of love of their children. They were not able to engage in critical reflection about the planning of their life. Their lives were repeated every day in a daily routine and repetitive plan. They were able to show their concern for other human beings. They could engage in simple forms of social interaction and were able to have the capability for both justice and friendship. They thought their families and others did not respect them as they were poor. They did not feel respected as a dignified being whose worth is equal to that of others. Most of them had experienced gender discrimination during their lifetime.

They were able to live with concern for animals, plants, and the world of nature when they were young, as most of them in the past lived in the village. Due to the limitations of urbanization, they had restrictions to enjoy the world of nature. They could laugh, play, and enjoy recreational activities despite the lack of entertainment activities and programs. They were able to participate in political choices that governed their life. They often acknowledged political participation in elections and considered voting as an important part of their life.

This study supports Nussbaum's idea that disadvantaged people, like other human beings, have needs in the areas covered by all the capabilities (42). Older people are not only physically but also mentally prone to various diseases and disabilities as they are vulnerable (43). Having bodily health and bodily integrity capabilities were the priorities of the participants in the current study which were different from the research conducted by Mousavi et al. which identified affiliation and practical

reason as the most important capabilities in people with mental health problems (44). It shows that a different group of people understands these capabilities differently, and their needs are different.

There were some limitations in using qualitative method for this study. The primary limitation was related to the interview as the only method for collecting data. The second limitation was related to researcher bias. As the researcher was the key instrument of the data collection, the researcher's opinions might have influenced the collection, analysis and interpretation of the data. Steps were taken to establish rigor of the study and identify the researcher's personal biases and minimize them. The third limitation was related to the small sample size. Moreover, all participants were recruited only from one rehabilitation center. These limitations restricted the generalizability of the results. The identification of these limitations supports the credibility and rigor of this study.

Conclusion

Despite the importance of all Central Human Functional Capabilities from the perspective of the elderly, bodily health and bodily integrity capabilities are of particular importance. There is a direct relationship between proper nutrition and shelter and having bodily health capability. Financial independence is a prerequisite and precondition for having bodily integrity capability to be able to move freely from one place to another and to be secure against assault and violence. This study indicated that achieving Central Human Functional Capabilities is the basic need of every person in any society. Health policymakers should recognize these

capabilities and provide the ground for their realization and achievement by effective planning and removing obstacles. This study reflects our duties and responsibilities in providing appropriate services to the elderly. It may help policymakers better understand and consider their roles in promoting the capabilities of the adults. Further research will be very informative to understand the elderly's views in other parts of the country or even in other countries on these basic capabilities.

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Conflict of Interest

Authors declare there is no conflict of interest regarding the publication of this paper.

References

1. Hebert R, Brayne C, Spiegelhalter D. Incidence of functional decline and improvement in a community-dwelling, very elderly population. *Am J Epidemiol.* 1997; 145(10):935-944. doi:10.1093/oxfordjournals.aje.a009053.
2. Hinkle JL, Cheever KH. Study guide for Brunner & Suddarth's textbook of medical-surgical nursing. Philadelphia: Lippincott Williams & Wilkins; 2013.
3. Sadock BJ, Sadock VA. Kaplan and Sadock's synopsis of psychiatry: behavioral sciences/clinical psychiatry. Philadelphia:

- Lippincott Williams & Wilkins; 2011.
4. Beard JR, Officer A, De Carvalho IA, Sadana R, Pot AM, Michel J-P, et al. The world report on ageing and health: a policy framework for healthy ageing. *The Lancet*. 2016; 387(10033):2145-54.
 5. Tajvar M, Arab M, Montazeri A. Determinants of health-related quality of life in elderly in Tehran, Iran. *BMC Public Health*. 2008; 8(1):323. doi: 10.1186/1471-2458-8-323.
 6. Zahmatkeshan N, bagherzadeh R, Akaberian S, Yazdankhah M R, Mirzaei K, Yazdanpanah S, et al. Assessing quality of life and related factors in Bushehr's elders 1387-8. *J Fasa Univ Med Sci*. 2012; 2(1):53-58. [In Persian]
 7. Yazdanpanah L. The study of obstacles of social participation among citizenship's Tehran city. *Social Welfare*. 2007; 7(26):105-130. [In Persian]
 8. World Health Organization. International classification of functioning, disability, and health: Children & youth version: ICF-CY. World Health Organization; 2007.
 9. Berkman LF, Syme SL. Social networks, host resistance, and mortality: a nine-year follow-up study of Alameda County residents. *American Journal of Epidemiology*. 1979; 109(2):186-204. doi: 10.1093/oxfordjournals.aje.a112674.
 10. Wilkins K. Social support and mortality in seniors. *Health reports*. 2003; 14(3):21-34.
 11. Escobar-Bravo MA, Puga-González D, Martín-Baranera M. Protective effects of social networks on disability among older adults in Spain. *Arch Gerontol Geriatr*. 2012; 54(1):109-116. doi:10.1016/j.archger.2011.01.008.
 12. Lund R, Nilsson CJ, Avlund K. Can the higher risk of disability onset among older people who live alone be alleviated by strong social relations? A longitudinal study of non-disabled men and women. *Age Ageing*. 2010; 39(3):319-326. doi:10.1093/ageing/afq020.
 13. Mendes de Leon CF, Glass TA, Berkman LF. Social engagement and disability in a community population of older adults: the New Haven EPESE. *Am J Epidemiol*. 2003; 157(7):633-642. doi:10.1093/aje/kwg028.
 14. Bourassa KJ, Memel M, Woolverton C, Sbarra DA. Social participation predicts cognitive functioning in aging adults over time: Comparisons with physical health, depression, and physical activity. *Aging & Mental Health*. 2017; 21(2):133-46.
 15. Glass TA, De Leon CF, Bassuk SS, Berkman LF. Social engagement and depressive symptoms in late life: Longitudinal findings. *J Aging Health*. 2006; 18(4):604-628. doi: 10.1177/0898264306291017.
 16. Sirven N, Debrand T. Social participation and healthy ageing: an international comparison using SHARE data. *Soc Sci Med*. 2008; 67(12):2017-2026. doi:10.1016/j.socscimed.2008.09.056.
 17. Barnes LL, Mendes de Leon CF, Wilson RS, Bienias JL, Evans DA. Social resources and cognitive decline in a population of older African Americans and whites. *Neurology*. 2004; 63(12):2322-2326. doi:10.1212/01.wnl.0000147473.04043.b3.
 18. Engelhardt H, Buber I, Skirbekk V, Prskawetz A. Social involvement, behavioural risks and cognitive functioning among the aged. *Ageing and Society*. 2010; 30(5): 779-809. doi: 10.1017/S0144686X09990626.

19. Wang HX, Karp A, Winblad B, Fratiglioni L. Late-life engagement in social and leisure activities is associated with a decreased risk of dementia: a longitudinal study from the Kungsholmen project. *Am J Epidemiol.* 2002; 155(12): 1081-1087. doi:10.1093/aje/155.12.1081.
20. Ramage-Morin PL. Successful aging in health care institutions. Ottawa: Statistics Canada; 2005.
21. Gleib DA, Landau DA, Goldman N, Chuang YL, Rodríguez G, Weinstein M. Participating in social activities helps preserve cognitive function: an analysis of a longitudinal, population-based study of the elderly. *Int J Epidemiol.* 2005; 34(4):864-871. doi:10.1093/ije/dyi049.
22. Pin S, Spini D. Impact of falling on social participation and social support trajectories in a middle-aged and elderly European sample. *SSM Popul Health.* 2016; 2:382-389. doi:10.1016/j.ssmph.2016.05.004.
23. Baker S, McBeth J, Chew-Graham CA, Wilkie R. Musculoskeletal pain and co-morbid insomnia in adults; a population study of the prevalence and impact on restricted social participation. *BMC Fam Pract.* 2017; 18(1):17. doi: 10.1186/s12875-017-0593-5.
24. Kolanowski A, Litaker M. Social interaction, pre-morbid personality, and agitation in nursing home residents with dementia. *Arch Psychiatr Nurs.* 2006; 20(1):12-20. doi:10.1016/j.apnu.2005.08.006.
25. Chen JH, Lauderdale DS, Waite LJ. Social participation and older adults' sleep. *Soc Sci Med.* 2016; 149:164-173. doi:10.1016/j.socscimed.2015.11.045.
26. Moradi S, Fekrazad H, Mousavi M T, Arshi M. The study of relationship between social participation and quality of life of old people who are member of senior association of Tehran city in 2011. *Salmand: Iranian Journal of Ageing.* 2013; 7(4):41-46. [In Persian]
27. Mirzaee M, Kavehfaruz Z. Quality of life of older adults and participation in social activities of them according to their sex. *Journal of Population Association of Iran.* 2009; 4(8):123-48. [In Persian]
28. Rashedi V, Gharib M, Yazdani A A. Social Participation and Mental Health among Older Adults in Iran. *Iranian Rehabilitation Journal.* 2014; 12(1):9-13.
29. Alkire S. Valuing freedoms: Sen's capability approach and poverty reduction. England: Oxford University Press on Demand; 2005.
30. Nussbaum M. Human rights and human capabilities. *Harv. Hum. Rts. J.* 2007; 20:21-24.
31. Nussbaum M. Women and human development: a study in human capabilities. Cambridge: Cambridge University Press; 2012. doi: 10.1017/CBO9780511841286.
32. Sen A. Human rights and capabilities. *Journal of human development.* 2005; 6(2):151-166. doi: 10.1080/14649880500120491.
33. Dixon-Woods M, Agarwal S, Jones D, Young B, Sutton A. Synthesising qualitative and quantitative evidence: a review of possible methods. *J Health Serv Res Policy.* 2005; 10(1):45-53. doi: 10.1177/135581960501000110.
34. Shulman KI, Shedletsky R, Silver IL. The challenge of time: clock-drawing and cognitive function in the elderly. *International Journal of Geriatric Psychiatry.* 1986; 1(2):135-140. doi: 10.1002/gps.930010209.

35. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology*. 2006; 3(2):77-101.
36. Clark DA. The capability approach: its development, critiques and recent advances. Swindon: ESRC Research Group; 2005.
37. Alkire S. Choosing dimensions: the capability approach and multidimensional poverty. In Kakwani N, Silber J. (Eds), *The many dimensions of poverty*. Palgrave Macmillan, London; 2013. p. 89-119.
38. Biggeri M, Karkara R. Transforming children's rights into real freedom: a dialogue between children's rights and the capability approach from a life cycle perspective. In Stoecklin D, Bonvin JM (Eds), *Children's rights and the capability approach*. Children's Well-Being: indicators and Research. Dordrecht: Springer; 2014. p.19-41.
39. Hick R. The capability approach: insights for a new poverty focus. *Journal of social policy*. 2012; 41(2):291-308. doi: 10.1017/S0047279411000845.
40. Yeung P, Breheny M. Using the capability approach to understand the determinants of subjective well-being among community-dwelling older people in New Zealand. *Age Ageing*. 2016; 45(2):292-298. doi:10.1093/ageing/afw002.
41. Mousavi T, Dharamsi S, Forwell S, Dean E. Occupational therapists' views of Nussbaum's life capability: an exploratory study. *OTJR (Thorofare N J)*. 2015; 35(4): 239-249. doi: 10.1177/1539449215601010.
42. Nussbaum M. *Frontiers of justice: nationality, disability, species membership*. Cambridge, MA: Harvard University Press; 2006.
43. Davidian H. Recognition and treatment of depression in Iranian culture. Tehran: academy of Medical Sciences press; 2007. [In Persian]
44. Mousavi T, Forwell S, Dharamsi S, Dean E. Occupational therapists' views of Nussbaum's practical reason and affiliation capabilities. *Occupational Therapy in Mental Health*. 2015; 31(1):1-18. doi: 10.1080/0164212X.2014.1003265.