



## Original Article

### Status of Daily Living Activities among Older People in Maku

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## ABSTRACT

### Article history

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**Introduction:** One of the most popular methods for evaluating old people's health condition is to assess their functional practice. The aim of this study was to assess the status of daily living activities among the older people of Maku, Iran.

**Methods:** The present cross-sectional study was accomplished among 216 older people in Maku via simple random sampling. Participant's subjective and demographic information were gathered and their daily living activities status was measured by the Katz index.

**Results:** The participants' mean age was  $70.09 \pm 7.98$ . Most of the elderlies were men (59.3%) and illiterate (38.4%). Of them, 10.6% were dependent, 6% needed help or were partially dependent, and 82.9% were independent in their daily living activities. Significant associations were observed between daily living activities and age, education level, marital status and living condition ( $p < 0.001$ ). Married old adults were more dependent than other ones living alone ( $p < 0.001$ ).

**Conclusion:** Although most of the participants were independent, they needed assistance for few of their daily living activities. Also, since age was significantly correlated with daily living activities, it is necessary to implement educational health living programs for older people suffering from functional restrictions. Also, providing suitable facilities, convenience and human resources should be taken into consideration.

**Keywords:** Aged, Activities of Daily Living, Iran

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### Introduction

Most countries believe the rapid growth of the elderly population is a phenomenon of the 21 century (1, 2). Currently, there are more than 600 million elderlies in the world. It is estimated that in 2050, it will reach to more than 2 billion (3). Elderly is a period which people are prone to chronic diseases, loneliness and social isolation; and their independency and function is probably restricted by physical and mental disabilities (4). Approximately 60% of health care costs, 30% of hospital discharges and 47% of days of

hospitalization are related to older people. Thus, hygiene, health and providing elderlies comfort and welfare must be extensive in the community (5). In developed countries, people and the government have the necessary preparations for overcoming these challenges, but in developing countries elderly's health, social and economic difficulties are not managed properly (6).

Along with aging, preserving independency in activities and continuing an active life is one of the

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most important features in improving elderly's health (7, 8). However, after retirement ages, regularly a quarter of elderlies are not capable of accomplishing daily activities and 10% of them are completely cripple and dependent (9). In several studies, elderlies have emphasized active function with the phrase standing up. In elderly's opinion, performing independent functions and not relying on others is signified as being healthy (10).

As mentioned previously, one of the aims of elderly care is having independency and not relying on others which lead to satisfaction, less physical reliance, better self-control attitudes (11). Based on studies on functional independency, elderlies who needed help from caregivers and families had lower quality of life and general health. Also they needed nursing care and rehabilitation for several features (12). The objective of physical activities in elderlies is to overcome disabilities, vulnerabilities, biological changes related to elderly, chronic diseases and mental health (13). In this regards, Cowper et al, after assessing the effect of physical activity programs on people's health status came with this conclusion that regular physical exercise increases physical and mental function in the elderly (14). Therefore, assessing elderly's daily living activities status is one of the best methods for evaluating functional independency (15). The study aimed to assess functional independency in performing daily living activities among older people in Maku, Iran.

## Methods

### *Sampling and Participants*

A cross-sectional approach and simple random sampling were applied to recruit 216 older people living in their homes. Individuals who were older than 60 years were included in the study. Also, the older people who were not able to answer the questions were excluded.

### *Procedures*

A questionnaire including socio- demographic variables and Katz index of independence in activities of daily living (4) was used for data collection. The Katz questionnaire consists of a list of daily living activities such as bathing, dressing, urinary and stool incontinence, toileting, feeding and transferring. After interviewing and observing the participants, their mobility was assessed. The questionnaires content-related validity (16) and reliability (17) has been confirmed previously. The questionnaire's minimum score is 0 and maximum score is 12. Based on the different items, scoring is allocated as 0 for dependent, 1 for needing help and 2 for independent.

### *Ethical considerations*

All the information was gathered without indicating any of the participant's affinity and they were insured

that the data were collected only for research purposes and are confidential.

### *Data analysis*

Data were analyzed using descriptive statistics, independent *t*-test, and Spearman's rank correlation coefficient. All statistical tests were two-sided with a  $p < 0.05$  considered statistically significant.

## Results

The participants' mean age was  $70.09 \pm 7.98$ . Men were older than women,  $71.8 \pm 11.33$  and  $68.6 \pm 7.25$  respectively. Most of the elderlies were men (59.3%) and illiterate (38.4%). Demographic information is represented in Table 1.

**Table 1. Distribution of socio-demographic variables (n=216)**

Variable	N (%)
<b>Age</b>	
60-69	130 (60.2%)
70-79	59 (27.3%)
80 and older	27 (12.5%)
<b>Sex</b>	
Female	88 (40.7%)
Male	128 (59.3%)
<b>Education</b>	
Illiterate	83 (38.4%)
Elementary	45 (20.8%)
High school	13 (6%)
University	44 (20.4%)
<b>Marital status</b>	
Married	175 (81%)
Widow/widower	36 (16.7%)
Bachelor/ Spinster or divorced	5 (2.3%)
<b>Living status</b>	
With spouse	187 (86.6%)
With children or relatives	21 (9.7%)
Alone	8 (3.7%)

According to table 2, 10.6% of the participants were dependent, 6% needed help or were partially dependent and 82.9% were independent. Old adults had the most dependency in bathing (15.3%) and the least dependency in transferring (6%). Old adults mean daily living activity score was 10.23.

According to table 3 and 4 there was a significant relationship between Katz score and level of education.

**Table 2. Daily living activity status among the elderly**

Variable	Independent N (%)	Needing help N (%)	Dependent N (%)
<b>Bathing</b>	163 (75.5%)	20 (9.3%)	33 (15.3%)
<b>Dressing and undressing</b>	191 (88.4%)	5 (2.3%)	20 (9.3%)
<b>Toileting</b>	178 (82.4%)	20 (9.3%)	18 (8.3%)
<b>Transferring</b>	189 (87.5%)	14 (6.5%)	12 (6%)
<b>Urinary and stool incontinence</b>	116 (53.7%)	79 (36.6%)	20 (9.3%)
<b>Feeding</b>	190 (88%)	18 (8.3%)	8 (3.7%)

**Table 3. Relationship between of socio-demographic variables and Katz (n=216)**

Variable	Mean(Katz) ± SD	p
<b>Sex</b>		
Female	10.32 ± 3.17	0.83
Male	10.17 ± 2.90	
<b>Education</b>		
Illiterate	8.70 ± 3.89	
Elementary	10.55 ± 1.65	
High school	11.46 ± .96	< 0.001
University	10.75 ± 2.79	
<b>Marital status</b>		
Married	10.47 ± 2.99	
Widow/widower	8.94 ± 2.94	0.01
Bachelor/ Spinster or divorced	11.4 ± 1.34	
<b>Living status</b>		
With spouse	10.46 ± 2.9	
With children or relatives	7.61 ± 3.16	< 0.001
Alone	11.87 ± .35	

**Table 4. Predicting change in activities of daily living with age**

Variable	R Square	Adjusted R Square	$\beta$	p
<b>Bathing</b>	0.191	0.187	-0.437	< 0.001
<b>Dressing and undressing</b>	0.122	0.117	-0.349	< 0.001
<b>Toileting</b>	0.232	0.229	-0.482	< 0.001
<b>Transferring</b>	0.173	0.169	-0.415	< 0.001
<b>Urinary and stool incontinence</b>	0.383	0.380	-0.619	< 0.001
<b>Feeding</b>	0.193	0.189	-0.440	< 0.001

In other words, older people who had higher education had higher living activity score ( $p < 0.001$ ). This association was still significant regardless of age ( $p < 0.001$ ). Illiterate widow and widowers had less functional independency. Although women's mean daily living activity score was higher than men, it was

not statistically significant ( $p = 0.83$ ). A statistically significant association was observed between elderlies daily living activity and living status ( $p < 0.001$ ). Older people who lived with their children or relatives had weaker functional independency. Also there was significant associations between elderlies daily living

activities and marital status ( $p < 0.001$ ) and age ( $p < 0.001$ ). Married old adults were more dependent than other ones living alone. In assessing the correlation between age and daily living activities, variable such as urinary and stool incontinence, bathing, toileting, feeding and transferring decreased significantly as adults got older, respectively. Thus, there was a statistical significant association between age and the six items of daily living activities ( $p < 0.001$ ).

## Discussion

The present study indicates the status of daily living activities among the older adults of Maku. According to the total scores of daily living activities, most of the older adults had an independent and suitable situation. These scores were higher in the young elderlies in comparison to the old ones. These findings were in contradict with Tanjani (18), Arik (19), Ferretti-Rebustini (20) and Tavafian study (21), but similar to Mazloomi's study (22). Total scores of daily living activities were lower for old individuals residing in nursing homes in comparison to indwelling subjects. This finding seems logical since most of the old people who are dependent and need care are transferred to nursing homes. In a study in Japan, most of the seniors living at homes had an acceptable daily living activities status (23).

It seems that most of the elderlies living in Maku do not need help in accomplishing their daily living activities because of active living style and high education. These items had a direct association with total score of Katz. A study in Singapore revealed that 17% of elderly had dependency in one of the daily living activities and 10.4% were dependent on at least one instrumental activities of daily living function. The most common problem identified using this index was urinary incontinence (24). Similarly, in our study 10.6% of the elderly were dependent on at least one instrument for daily living activities but the most common problem was bathing, which may be due to cultural differences.

In the present study although total score of daily living activities was higher in women in comparison to men, there was no significant association between sex and Katz score. In contrast, in the study of Ferretti-Rebustini men had higher significant total score of daily living activities than women (20). However, in Moeini's study women significantly gained higher scores than men (25). Due to the fact that most of the daily living activities such as housing and personal activities are accomplished at home and women in Maku are mainly responsible for managing the house, it is logical that women's functional independency in doing daily living activities is higher than men.

There were statistically significant associations between living status and daily living activities. Functional independency was higher among older people living alone. These findings were not similar to the results of Moeini's study (25). This is probably because; as long as older people have independency

they live alone but when they need further help and support they prefer to live with their children or replace into nursing homes. However, in regards to social support, it was expected that older people who live with their spouse and children gained higher scores.

To conclude, in order to make appropriate decisions and suitable interventions, it is essential to monitor elderly's functional status occasionally. It has been revealed that daily living activity status may effect satisfaction level, well-being, and quality of life score. Thus, we must compensate new activities which they are able to accomplish with activities they are no longer able to do. Facing growing health needs and limited resources to care for the elderly, appropriate policies are required in the field of care, treatment, promoting healthy life styles, and social support. It is strongly recommended that stakeholders in health policy should provide age friendly environment to offer all activities in care settings. For increasing elderly's health in dependent activities, it is recommended that official organizations and supportive agencies provide essential human resources, rehabilitating facilities and instrumental activities.

## Conclusion

Most dependent older people receive informal care provided by their families and relatives. There was a significant relationship between Katz score and level of education. It is necessary to implement educational health living programs and educational and caring programs for older people suffering from functional restrictions. There was also a wide range of problem with transfer of older people. For this manner, providing suitable facilities, convenience and suitable human resources should be taken into consideration.

## Study limitations

The principal difficulty of the present study was the poor health condition of a number of participants which may impress conducted interviews. The limitation was also created by a small sample size. Studying older adults with different conditions living at residential care and nursing homes is recommended.

## Conflict of interest

The authors declare that there is no conflict of interests regarding the publication of this paper.

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