



Effective Factors on Elderlies' Disability

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(Received 06 Nov 2024; accepted 19 Nov 2024)

Dear Editor-in-Chief

Elderly is directly related to disability and the aging of society is a fundamental problem in various systems of government policy and health care management (1).

In Iran, the number of elderly over 60 years old in 2011 was 6.2 million people; this number will increase to nearly 8.9 million people in 2020 estimated to will increase rapidly until some future years (2). It is important to identify the state of disability in the elderly in Iran and the factors affecting it. This will help the policy makers of the health system to formulate and implement interventions to improve the current situation.

In this study, we investigated the disability rate of the elderly (over 65 years old) in Zanjan, Iran, and the related factors.

In current cross-sectional study (with approval code IR.ZUMS.REC.1401.269), 162 elderlies that referred to Ayatollah Mousavi and Vali-Asr Hospitals, Zanjan, Iran, from 22th December to 4th February 2023 were considered. The 36-item WHO Disability Assessment Schedule version 2 (WHODAS II) was used (3).

In general, 60 (37.5%) older had no/mild disability and 100 (62.5%) had moderate/sever disability.

There was significant relationship between education level, living arrangements, hearing problem, and history of falling with having moderate/sever disability.

Different prevalences for disability have been reported in various studies. In a study conducted from 2007 to 2010 among people over the age of 50 in China, Ghana, India, Mexico, Russia, and South Africa, the prevalence of people without disabilities was reported to be 43.3 percent (4). In Palestine, 71% of people aged 50 and over had no disability and only 29% mentioned a type of disability (5).

Our results showed that demographic variables such as age, gender, place of residence, level of education and occupation did not have a statistically significant relationship with disability. Different studies have reported different influencing factors on disability. Old age, hospitalization, comorbidities, living in rural areas, poor health care, lack of family support, cognitive and mental disorders, falls, illiteracy, and female gender are among the risk factors for disability. In addition, stroke, less active in housework and dementia are causes that accelerate disability faster (5-8).



Table 1: Disability in elderly across demographic characteristics

Variable	Disability		OR (C.I 95%)	P-value
	no/mild	moderate/sever		
Age (yr)				0.328
65-74	33(41.3)	47(58.8)	Reference	
> 75	27(33.8)	53(66.3)	1.38(0.72,2.62)	
Gender				0.206
Male	32(42.7)	43(57.3)	Reference	
Female	28(32.9)	57(67.1)	1.52(0.80,2.88)	
Residence				0.375
Urban	47(39.5)	72(60.5)	Reference	
Rural	13(31.7)	28(68.3)	1.41(0.66,2.99)	
Education level				0.077
Illiterate	21(28.0)	54(72.0)	Reference	
Primary	13(35.1)	24(64.9)	0.72(0.31,1.67)	0.441
Secondary	6(54.5)	5(45.5)	0.32(0.09,1.18)	0.087
Diploma	10(52.6)	5(45.5)	0.35(0.12,0.98)	0.046
Academic	10(55.6)	8(44.4)	0.31(0.11,0.90)	0.030
Job				0.068
Retired	27(44.3)	34(55.7)	Reference	
Unemployed	1(16.7)	5(83.3)	3.97(0.44,36.04)	0.220
Employed	7(70.0)	3(30.0)	0.34(0.08,1.44)	0.143
Housewife	4(21.1)	15(78.9)	2.98(0.88,10.02)	0.078
Disabled	21(32.8)	43(67.2)	1.63(0.79,3.36)	0.190
Living arrangements				0.001
With spouse	46(50.5)	45(49.5)	Reference	
Lonely	9(22.0)	32(78.0)	3.63(1.56,8.47)	0.003
With relatives	5(17.9)	23(82.1)	4.70(1.64,13.45)	0.004
Smoking				0.106
No	16(50.0)	16(50.0)	Reference	
Yes	44(34.4)	84(65.6)	1.91(0.87,4.18)	
Underlying diseases				0.305
No	24(42.9)	32(57.1)	Reference	
Yes	36(34.6)	68(65.4)	1.42(0.73,2.76)	
Insurance type				0.119
Without	4(23.5)	13(76.5)	Reference	
Supplemental	31(34.1)	60(65.9)	0.60(0.18,1.98)	0.398
Public	25(48.1)	27(51.9)	0.33(0.10,1.15)	0.083
Hearing problem				0.029
No	56(41.2)	80(58.8)	Reference	
Yes	4(16.7)	20(83.3)	3.50(1.13,10.80)	
Vision problem				0.361
No	41(35.3)	75(64.7)	Reference	
Yes	19(43.2)	25(56.8)	0.72(0.45,1.46)	
Falling				< 0.001
No	52(51.0)	50(49.0)	Reference	
Yes	8(13.8)	50(86.2)	6.50(2.80,15.07)	
Stroke				0.359
No	57(38.5)	91(61.5)	Reference	
Yes	3(25.0)	9(75.0)	1.88(0.49,7.23)	

The elderly people are at high risk for a variety of injuries that can cause death and disability (9). After the age of 60, the incidence and prevalence of falls and the severity of complications after that increase significantly (9). Falling is the most common injury in older age groups and is one of

the main causes of accidental injuries, morbidity and even death in the elderly. Falling has a great financial burden on people and increases the need for nursing care.

Conflict of Interest

The authors declare that there is no conflict of interests.

References

1. Zheng PP, Guo ZL, Du XJ, Yang HM, Wang ZJ (2022). Prevalence of Disability among the Chinese Older Population: A Systematic Review and Meta-Analysis. *Int J Environ Res Public Heal*, 19(3): 1656.
2. Rashedi V, Asadi M, Foroughan M, Delbari A, Fadayeveatan R (2016). Prevalence of disability in Iranian older adults in Tehran, Iran: A population-based study. *J Heal Soc Sci*, 1(3): 251–62.
3. World Health Organization (2010). Measuring health and disability: manual for WHO Disability Assessment Schedule WHODAS 2.0. Illustrated, pp.:90.
4. Salinas-Rodríguez A, Rivera-Almaraz A, Scott A, Manrique-Espinoza B (2020). Severity Levels of Disability Among Older Adults in Low- and Middle-Income Countries: Results From the Study on Global Ageing and Adult Health (SAGE). *Front Med*, 7: 562963.
5. Jasser JJB, Harsha NAY, Ziq LSA, Shalash AA-M, Ghandour R, Giacaman R (2017). Prevalence of disability among elderly people in the occupied Palestinian territory: a cross-sectional study. *The Lancet*, 390: S15.
6. Huang X, Zhang M, Fang J (2022). Growth patterns of activity of daily living disability and associated factors among the Chinese elderly: A twelve-year longitudinal study. *Arch Gerontol Geriatr*, 99: 104599.
7. Vaish K, Patra S, Chhabra P (2020). Functional disability among elderly: A community-based cross-sectional study. *J Fam Med Prim Care*, 9(1): 253.
8. Qiao R, Jia S, Zhao W, Xia X, Su Q, Hou L, Li D, Hu F, Dong B (2022). Prevalence and correlates of disability among urban–rural older adults in Southwest China: a large, population-based study. *BMC Geriatr*, 22(1): 517.
9. Tang S, Liu M, Yang T, Ye C, Gong Y, Yao L, Bai Y (2022). Association between falls in elderly and the number of chronic diseases and health-related behaviors based on CHARLS 2018: health status as a mediating variable. *BMC Geriatr*, 22(1): 374.