Investigating the Causes of Elderly People Leaving Home during Coronavirus Disease-19 Epidemic

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Abstract

BACKGROUND: Coronavirus disease-19 (COVID-19) disease affects all age groups, especially the elderly, and regarding the high mortality rate among the elderly, preventive measures are needed to reduce mortality in the elderly.

AIM: This study was conducted to investigate the causes of in elderly people leaving home in time of COVID-19 epidemic.

METHODS: The present study is a descriptive-analytical study performed on 1656 elderly people in Urmia, Iran, by simple random sampling method. The data collection tool in this study was a researcher-made questionnaire that included demographic characteristics, a questionnaire on the causes of the elderly leaving home during the COVID-19 epidemic. Data were analyzed using Chi-square and Fisher tests using SPSS 23 software.

RESULTS: The results revealed that the highest concern of the elderly to leave home was to receive health services (45.89%) such as visiting the doctor or the caregiver, receiving medication, and so on. As the second priority, buying daily necessities such as bread, food, clothes … (42.75%) was one of the reasons for the elderly to leave home. Furthermore, education, gender, age, underlying diseases, occupation, and living conditions of the elderly were related to the needs of health services and living necessities and this relationship was statistically significant (p < 0.05).

CONCLUSION: Effective interventions should be designed based on the causes of the elderly leaving home, including the use of home distance care and health ambassadors to estimate the needs and causes of leaving home. Therefore, the elderly would be protected from this disease and its mortality.

Introduction

The World Health Organization (WHO) claimed coronavirus disease-19 (COVID-19) disease as an epidemic, and a new, different one from other viruses of severe acute respiratory syndrome, Middle East respiratory syndrome, and influenza [1]. The morbidity rate and mortality rate of the COVID-19 are growing and the economic damage resulting from the disease is highly increasing, estimated to overpass the capacity of both developed and developing countries in forthcoming months [2]. Elderly people are one of the high-risk groups with a high possibility of morbidity and mortality, due to old age as well as high statistics of underlying diseases. Therefore, elderly people are at higher risk of catching the disease and death from the COVID-19 more than other groups of society [3]. Studies on the elderly showed that they not only face a higher risk of catching the disease but also are at a greater risk of death of the disease. However, the reason of the fact that old people with underlying diseases are at higher risk of the disease is unknown [4]. The results of a study in China showed that 92% of the people affected by COVID-19 were elderly over 72, while more than 42% of the death from COVID-19 were of them. It is also reported to have 82% of the deaths from COVID-19 among elderly over 60 in the U.S [5], [6]. Old people are more susceptible of the disease because underlying diseases such as renal failure, diabetes, high blood pressure, arthritis, heart diseases, and chronic obstructive pulmonary disease are more common among the elderly. Recent research revealed that the high rate of morbidity among the elderly is due to diagnostic disorders, immune system deficiency, underlying diseases, malnutrition, taking multiple drugs, and social problems. Thus, in developing countries, the number of elderly people affected from and died of COVID-19 outnumbers other age groups [7]. Weak preventive measurements among the elderly indicate they have not taken the significance of the issue seriously and have not considered COVID-19 as a threat to their health. To diagnose the preventive measurements and to control the spread of the COVID-19, the determinants and contributory factors on preventive behavior from the disease should have been identified [4].

Regarding the ways of transmission for this disease, home quarantine is one of the main influential ways in removing the transmission cycle of the disease [8]. Staying at home and not commuting out would reduce the elderlies' contact with each other, as well as the environment, therefore, decreases the transmission of the disease from one person to the other or to the environment [9].

Findings of the studies conducted by Daoust in 27 countries were dramatically clear and alarming: Despite the fact that the probability of death from COVID-19 is much higher among the elderly, they seldom regard preventive measures like staying at home [10]. Therefore, the behavior of the elderly in preventing the disease and staying home is crucial toward advancing home-quarantine policies. However, the needs of the elderly should be noticed for their home quarantine. The elderly people often have complicated and unknown needs, and besides their physical disorders, they have psychological, social, environmental, protective, and health-relevant problems [11]. Daily needs of the elderly are of important factors in preventing COVID-19, for their leaving home. Therefore, it is of vital importance to identify the daily needs of the elderly and providing them to prevent their home-leaving. The purpose of the present study is to identify the reasons of the elderly people home leaving during the coronavirus epidemic in Urmia, Iran.

Materials and Methods

The present study is a descriptive-analytical one, aiming at investigating the reasons of the elderly people home-leaving in time of coronavirus epidemic in 1399 (2020), conducted in Urmia, Iran. Regarding the population of the elderly in Urmia (51000), of which, 3.25% was chosen as the sample to study, and 1656 persons were included in the study. Using simple random sampling from 30 health centers of Urmia, 3.25% of the elderly people were selected in the proportion of the population of each health center. Data collection instruments of the present research study were researcher-made, including the demographic specifications of the participants and the Elderly Home-Leaving Questionnaire. The items of the determined consequences were selected through the literature review, and to meet the reliability and validity of the questionnaire, the methods of content validity and Cronbach-alpha were implemented respectively. To indicate the reliability of the questionnaire, it was sent to 10 experts in health education and elderly science, and the comments were applied according to their opinions. The reliability of the questionnaire was more than 80%. To measure the validity, the questionnaire was completed by 30 elderly people who were not included in the group under study. Using the Cronbach-alpha method, reliability coefficient of the health and therapeutic questions 0/77; referring to the banks and offices 0/78; living necessities 0/28; social and recreational interactions 0/80; and being in ceremonies and occasions 0/83 were reported.

To assess the above-mentioned dimensions in 24 questions which were provided as Yes/No choices and the Yes ones were pointed as 1, while the No answers were pointed as 0. The points were varied from 0 to 24; as the health-therapeutic dimension had 4 questions, referring to the banks and offices 6 questions, living necessities 5 questions, social and recreational interactions 4 questions, and being in ceremonies and occasions 5 questions.

Health-care providers communicated with the elderly through phone calls and the purpose of the study was elaborated to all the participants. Then, the questionnaire was completed through phone interviews by elderly people. In addition, the time range of the home-leaving was considered as 1 week before. The criteria for taking part in the study were age over 60, capability of answering through phone, not abiding in nursery home, while the items of not satisfaction, not being inclined to contribute in the research were excluded from the study. The descriptive data were analyzed in terms of frequency (in percent), and analytical data through Chi-square and Fisher tests using SPSS 23 software.

Results

The average age of the elderly people participated in the study was 66/4 ± 8/87, while the biggest age group was 60–65 (33%). Most of the elderly were women (51/1%), being housewives (49/2%). The living conditions indicated that most of the elderly people under study live with their spouses (79/7%). Moreover, most elderly people were illiterate (45/7%), and 72/5% of them were suffering from a chronic disease (cardiovascular, respiratory, diabetes, blood pressure, etc. diseases) Table 1.

The findings of the reasons of elderly home-living indicated that their biggest concern of going out of home was to receive health-therapeutic service like visiting the doctor or the caregiver, and medication (45/89%). The second priority of the elderly home-leaving reason was to buy daily necessities such as bread, food supplies, clothing, and so on (42/75%). Besides, 21/02 percent of the elderly people leave home to pay their electricity, gas, and phone bills, as well as to get their payrolls. Taking part in social and recreational interactions was of weak reasons of their home-leaving of the elderly (Table 2).

Table 1: Frequency and the distribution percentage of the demographic features of the elderly under study

Variables	Number	Percent
Age		
60–65	547	33
65–70	497	30
70–75	414	25
80–75	198	12
Sex		
Male	809	48.9
Female	847	51.1
Job		
Housewife	815	49.2
Employed	278	16.8
Retired	563	34
Living condition		
With spouses	1320	79.7
Alone	112	6.8
With children	224	13.5
Education		
Illiterate	757	45.7
Elementary	577	34.8
Diploma and postgraduate	211	12.7
	111	6.7
History of chronic diseases		
Yes	1201	72.5
No	455	27.5

The results of Chi-square and Fisher test revealed that home-leaving of elderly to receive health-therapeutic services, going to the banks and offices, buying living necessities, and social-recreational interactions were more among elderly people with higher education. Moreover, elderly women had home-leaving to receive health and therapeutic services more than men. In contrast, elderly men leave home to go to banks and offices, to buy living necessities, and social, recreational interactions more than women with a

Table 2: The frequency and the distribution percentage of the home-leaving elderly under study

Variables of the elderly home-leaving	Yes		No	
	Frequency	Percent	Frequency	Percent
Social/recreational interactions	823	12/42	5801	87/58
Going to parks	131	7/91	1525	92/09
Being in streets, sectors	371	22/40	1285	77/60
Visiting relatives and friends	196	11/84	1460	88/16
In/out city communities	125	7/55	1531	92/45
Being in ceremonies and occasions	195	2/36	8085	97/64
Visiting the patients	53	3/20	1603	96/80
The obit, funeral	74	4/47	1582	95/53
The birthday parties	14	0/85	1642	99/15
The wedding parties	28	1/69	1628	98/31
The religious ceremonies	26	1/57	1630	98/43
Referring to the offices and banks	2089	21/02	7847	78/98
To unbound and free Edalat stocks	198	11/96	1458	88/04
To pay bank installment	318	19/20	1338	80/80
To pay bills of gas, electricity,	365	22/04	1291	77/96
To get money from ATM	550	33/21	1106	66/79
To receive payrolls	234	14/13	1422	85/87
To receive subsidy and livelihood	424	25/60	1232	74/40
Health-therapeutic issues	3040	45/89	3584	54/11
Doing tests and risk assessments	632	38/16	1024	61/84
Receiving Medications	737	44/50	919	55/50
Doctor visiting	949	57/31	707	42/69
Referring to the caregivers	722	43/60	934	56/40
To buy living necessities	3540	42/75	4740	57/25
Buying clothing	532	32/13	1124	67/87
Buying sanitary fittings (shampoo, soap)	756	45/65	900	54/35
Buying home appliances	450	27/17	1206	72/83
Buying food	902	54/47	754	45/53
Buying bread	900	54/35	756	45/65

significant meaning statistically ($p < 0/05$). On the other hand, older people leave home mostly to receive health-therapeutic services, while elderly with lower age heave home to buy living necessities, and this difference was more meaningful among age groups home-leaving ($p < 0/05$). The findings of investigating the relationship between underlying diseases and the reasons of elderly home-leaving revealed that the elderly people with underlying diseases refer more to the health centers, while leave homeless for providing living necessities and official or bank affairs. Employed elderly leave home more than other groups in all dimensions but attending the ceremonies and occasions. Living alone was the other reason of the elderly home leaving. All above-mentioned reasons were significant statistically ($p < 0/05$) Table 3.

Discussion

Since no study has been conducted on the issue so far, the viewpoints, approaches, and suggestions were most discussed in this study. The results showed that the biggest mental concern of the elderly leaving home is health and therapeutic issues. It seems that elderly people with more physical problems refer to health centers for treatment. In studies conducted in Iran [12], Turkey [13], and Uganda [14], the reported level of health for the elderly was weak. The reason can be related to the increasing frequency of the various concurrent diseases in the elderly. On the other hand, the assessment of the relationship between demographic variables with the elderly home leaving to provide sanitary fittings was meaningful. According to the report of WHO, the elderly were at higher risk of getting the coronavirus [15]. Since the mortality rate is high among old people, it is suggested in to reduce the elderly commuting and encountering the virus, medical care be done through tele home care (THC), so better management of the elderly with underlying diseases such as cardiovascular diseases, COPT, diabetes, and so on resulted elderly people less home leaving to receive health care services. THC increases the access to health and sanitary services, particularly when the importance of the need of the elderly for in-home care increases. Moreover, THC can help establish the service network between hospitals and first-aid providers, through which will facilitate the opportunity of better accessibility of the elderly to the services. In addition to the improvement of the management of the chronic condition as well as the increasing availability of health care, THC believes that it would decrease the health care expenses as well [16], [17]. Eventually, it should be noted in THC, the prioritizing THC, implemented according to the meaningful relationship of the demographic variables with health and sanitary needs. For instance, women and lonely elderly people who leave home more than other groups to receive health and therapeutic services should be prioritized.

Other findings of the present study indicated the amplitude of daily needs (buying bread, food, sanitary fittings, etc.), as well as referring to the banks and offices, as the reasons of home leaving. Daily necessities are mentioned as part of major environmental needs of

Table 3: Investigating the relationship between demographic variables with the home-leaving of the elderly

Demographic variables	Health issues (%)		Going to banks and offices (%)		Buying living necessities (%)		Social and recreational interactions (%)		Going to ceremonies and occasions (%)	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Education										
Illiterate	1320 (43/6)	1708 (56/4)	621 (13/7)	3921 (86/3)	1167 (30/8)	2618 (69/2)	353 (11/7)	2675 (88/3)	80 (2/1)	3705 (97/9)
High school	1089 (47/2)	1219 (52/8)	903 (26/1)	2559 (73/9)	1474 (51/1)	1411 (48/9)	319 (13/8)	1989 (86/2)	81 (2/8)	2804 (97/2)
Diploma	433 (51/3)	411 (48/7)	388 (30/6)	878 (69/4)	575 (54/5)	480 (45/5)	87 (10/3)	757 (89/7)	18 (1/7)	1037 (98/3)
Academic studies	198 (44/6)	246 (55/4)	177 (26/6)	489 (73/4)	324 (58/4)	231 (41/6)	64 (14/4)	380 (85/6)	16 (2/9)	539 (97/1)
p value	0/000		0/000		0/000		0/012		0/105	
Gender										
Male	1419 (43/9)	1817 (56/1)	1529 (31/5)	3325 (68/5)	2318 (57/3)	1727 (42/7)	468 (14/5)	2768 (85/5)	92 (2/3)	3953 (97/7)
Female	1621 (47/8)	1767 (52/2)	560 (11)	4522 (89)	1222 (28/9)	3013 (71/1)	355 (10/5)	3033 (89/5)	103 (2/4)	4132 (97/6)
p value	0/001		0/000		0/000		0/000		0/636	
Age groups										
60–65	1618 (44)	2058 (56)	1171 (21/2)	4343 (78/8)	2070 (45)	2525 (55)	463 (12/6)	3213 (87/4)	116 (2/5)	4479 (97/5)
65–70	251 (40/5)	369 (59/5)	472 (20/9)	1784 (79/1)	448 (43/5)	582 (56/5)	168 (11/2)	1336 (88/8)	36 (1/9)	1844 (98/1)
70–75	424 (51/5)	400 (48/5)	271 (21/9)	965 (78/1)	778 (41/4)	1102 (58/6)	117 (14/2)	707 (85/8)	30 (2/9)	1000 (97/1)
>75	747 (49/7)	757 (50/3)	175 (18/8)	755 (81/2)	244 (31/5)	531 (68/5)	75 (12/1)	545 (87/9)	13 (1/7)	762 (98/3)
p value	0/000		0/321		0/000		0/194		0/165	
Underlying diseases										
Have	2491 (51/7)	2325 (48/3)	1432 (19/8)	5792 (80/2)	2406 (40)	3614 (60)	600 (12/5)	4216 (87/5)	148 (2/5)	5872 (97/5)
Not have	549 (30/4)	1259 (69/6)	657 (24/2)	2055 (75/8)	1134 (50/2)	1126 (49/8)	223 (12/3)	1585 (87/7)	47 (2/1)	2213 (97/9)
p value	0/000		0/000		0/000		0/891		0/311	
Job										
Retired	285 (12/7)	1967 (87/3)	1053 (31/2)	2325 (68/8)	1503 (53/4)	1312 (46/6)	285 (12/7)	1967 (87/3)	59 (2/1)	2756 (97/9)
Housewives	348 (10/7)	2912 (89/3)	478 (9/8)	4412 (90/2)	1121 (27/5)	2954 (72/5)	348 (10/7)	2912 (89/3)	96 (2/4)	3979 (97/6)
Employed	190 (17/1)	922 (82/9)	558 (33/5)	1110 (66/5)	916 (65/9)	474 (34/1)	190 (17/1)	922 (82/9)	40 (2/9)	1350 (97/1)
p value	0/027		0/000		0/000		0/000		0/290	
Living condition										
With spouses	2345 (44/4)	2935 (55/6)	212 (15/8)	1132 (84/2)	347 (31)	773 (69)	122 (13/6)	774 (86/4)	34 (3)	1086 (97)
Alone	471 (52/6)	425 (47/4)	1741 (22)	6179 (78)	267 (47/7)	293 (52/3)	651 (12/3)	4629 (87/7)	148 (2/2)	6452 (97/8)
With children	224 (50)	224 (50)	136 (20/2)	536 (79/8)	2926 (44/3)	3674 (55/7)	50 (11/2)	398 (88/8)	13 (2/3)	547 (97/7)
p value	0/000		0/000		0/000		0/395		0/266	

the elderly in other various studies, and speculated their environmental need different according to their residence [18], [19], [20]. Due to the fact that it is inevitable for the elderly to provide daily needs and to refer to the banks, the elderly have to leave home to provide them. In this regard, the family and relatives should help the elderly, do the out of home activities for them. Educating families so that one of the close people to the elderly takes the responsibility of providing his/her necessities is an important issue, of which media play an important role in this regard. Therefore, it is suggested to implement Health Ambassadors to provide the elderly necessities and to pay their bills. The ministry of health has initiated training Family Health Ambassadors since 1393 (2014), who is a young member of the family with at least 8 years of school studies, taking responsibility of conveying health-related learned issues, as well as active care of himself, his family members, and society voluntarily. Volunteer Health Ambassador is trained for every family without any competent member [21], [22]. The Family Health Ambassador can act as a link between health system and the families under coverage, to receive the sanitary data about coronavirus in person or electronically, and convey them to the families to provide self-care. Of other activities supposed for family, health ambassador is buying daily necessities of the elderly and paying their bills. Consequently, the elderly would not have to leave home and the young, informed person of the ways and possibilities of transmission of the coronavirus would do them instead. For families without such a person, a volunteer health ambassador from other families would be employed to do this. It is worthy of noting that demographic features such as age, gender, and education are related to the frequency of home leaving to provide daily needs and to pay the bills, thus should be taken into account in administrating the provision of the daily needs of the elderly by the health ambassadors.

Fortunately, having social and recreational interactions was one of the weak reasons of the elderly going out. However, most of the affected and hospitalized patients in corona wards usually attended in family gatherings, wedding and funeral ceremonies, as well as gathering places 2 weeks before getting the disease. Thus, it is of vital importance to educate and sensitize the elderly in terms of not attending in ceremonies and highly crowded places such as parks, streets, as well as visiting and traveling. It should be prioritized, particularly for the men and employed elderly who have a higher frequency of home leaving to meet their social and recreational needs.

Conclusion

Regarding the findings of the present study, it is suggested to design precise planning for the elderly people on the basis of their home leaving reasons, like using THC, and Health Ambassadors, which are influential in estimating the home leaving reasons and preventing the elderly from getting the disease and associated death.

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