The effect of sharing experiences on compassion fatigue of family caregivers of the disabled elderly: A Clinical Randomized Trial

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Abstract

Background: Caring for the disabled elderly can cause compassion fatigue in family caregivers. Improving social interactions in online social networks can reduce compassion fatigue by increasing social support. The aim of the study was to explore the effect of sharing experiences in an online support group on compassion fatigue of family caregivers of the disabled elderly.

Methods: The study conducted as a randomized clinical trial with intervention and control groups. A total of 58 family caregivers of the disabled elderly in Mashhad were selected via convenience sampling and assigned to the intervention and control groups using the permuted block technique. The intervention group, in addition to taking part in the first online session individually with the researcher, shared their experiences of the problems caused in their family life due to caring for the elderly in an online support group with other caregivers. The control group participated in the first online session only. Both groups completed a demographic information form, WHO Disability Assessment Schedule (WHODAS-II), and Professional Quality of Life (ProQOL) questionnaire. Measurements were made before and after the intervention. Data analysis was performed using SPSS software (version 24).

Results: Compassion fatigue reported by the participants in the intervention group did not change significantly after the intervention compared to before the intervention ($p \geq 0.05$). About half of the participants reported a moderate level of compassion fatigue before the intervention.

Conclusion: In online support groups, peers can share their care experiences to reduce the negative effects of elderly care by perceiving more social support.

Trial Registration number: IRCT20200118046173N1

Introduction

Disability is one of the consequences of aging that causes the elderly person to become dependent on the caregiver and his/her need for increasing care support (1). In Iran, due to lack of government rehabilitation centers, and insufficient post-discharge follow-up, high costs of care in private caring centers and hiring nurses at home, most families of disabled elderly people take the main role of caring for them (2). However, caring for the disabled elderly causes problems in the lives of these people including anxiety, stress, sleep problems, depression, social isolation, physical and emotional problems (3, 4), which are symptoms of compassion fatigue.

Figley (2002), sees compassion fatigue as the emotional effect or consequence of indirect traumatic events experienced by the caregiver when helping people who have directly experienced that traumatic event (5). Although compassion fatigue is often considered as a concept related to professional caregivers, many studies have shown that family caregivers also experience compassion fatigue. For example, Day and Anderson (2011). showed that family caregivers, especially children caring for their parents, experience compassion fatigue leading to negative emotional responses such as frustration,

isolation, loneliness, insensitivity, and lack of empathy in the caregiver (6). Lynch et al. (2012) also showed that about half of the family caregivers participating in their study reported moderate levels of compassion fatigue (7). Day et al. (2014) also reported that girls caring for elderly parents with dementia perceive compassion fatigue combined with feelings of loneliness in caring, frustration, inability to empathize with parents, observing long-term parental suffering, and the feeling of social isolation that results from it (8). The complications of compassion fatigue in the family include physical, psychological, spiritual, and social symptoms (7), which may occur in the form of family isolation, the despair of social support, disruption of family relationships, inadequate patient care, and eventually the abandonment of the patient (9).

Rosa E et al (2010), showed that taking into account caregivers' needs is as important as care for the elderly (10). To ensure their psychological health, caregivers need mental and emotional support. It is very important to listen to their voice and empathize with them. One of the valuable and popular strategies used by caregiver's families is to attend and joint support groups. Cascioli et al (2008), reported the most important needs of caregivers of the elderly with dementia. one of them was the formation of effective support groups (11). A study showed that family caregivers interpreted the support group for their peer caregivers as helpful because it facilitated them to find new attitudes toward care and receive greater relief and satisfaction (12). Forming and participating in support groups to gain information about effective coping strategies lead to emotional support and a better understanding of the situation. However, one of the main problems faced by family caregivers of the disabled elderly is the difficulty of finding a suitable place and time for caregivers to attend support groups, since these caregivers cannot often leave their elderly due to the elderly person's problems and their physical and mental dependencies.

One effective way to overcome this problem is to use the existing capacities in cyberspace. Online support media and networks trusted by caregivers can provide a platform to alleviate the suffering of disabled patient care by increasing social interaction (13). In a study by Coulson and Knibb (2007), the participants stated that in addition to being available at all hours of the day, online support groups have other benefits such as providing social support fitting each member's needs and helping members learn social adaptation and coping strategies and receive social support from peers (14).

The present study formed an online support group to find peers for family caregivers of the disabled elderly. There are online support groups for caregivers of the elderly with dementia in Australia (15), Germany (16), Canada (17), and the United States (18). However, similar group was not found for family caregivers in Iran. Furthermore, no clinical trial study has been conducted on family caregivers' compassion fatigue.

In this study, family caregivers of the elderly with disabilities shared their experiences in an online support group directed by the researcher and expressed their experiences about caring for the elderly and its effects on their daily lives, and also benefited from the experiences of others. Besides, they received information and emotional support and empathy from the researcher as a member of the care team.

Accordingly, this study aimed to investigate the effect of sharing experiences in an online support group on compassion fatigue of family caregivers of the disabled elderly.

Methods

Research design and setting

This study employed an experimental design with two control and intervention groups with no blinding. The study was conducted from January 2020 to January 2021 in the Nursing school of Mashhad university of Medical sciences in Iran. This University is the most prominent in the northeast of Iran. All methods of study was performed in accordance with the relevant research guidelines and regulation of Mashhad university of Medical sciences.

Sampling method

The participants were selected using convenience sampling. First, the elderly and caregivers referring to the neurology clinics and wards of two major hospitals of Mashhad university of medical sciences including Ghaem and Imam Reza hospitals were surveyed and selected through personal interviews with both the caregiver and the elderly. The research team had selected Neurology clinics and wards for better access to the disabled elderly caregivers. Upon providing a brief description of the study and its objectives, if the main family caregiver of the elderly was willing to attend the study, their phone number was recorded. The researcher then talked to the caregivers via phone calls and completed the WHO Disability Assessment Schedule (WHODAS-II) for the elderly cared for by them, type of disability was not considered. The sample size was estimated as 21 persons for each group by using formula for comparison of two independent population's averages at 1% error and 80% test power. Given the probability of some participants leaving the study, the final sample size was determined as 52 persons. Data gathered from 58 person and Since 3 persons in each group left the study, due to unwillingness to continue cooperation or the death of the elderly, the data from 52 persons were analyzed (figure 1).

The inclusion criteria for the elderly were giving informed consent to participate, having moderate to severe disability and receiving home care. Moreover, the inclusion criteria for caregivers were giving informed consent to participate in the study, being a family member of an elderly person, caring for the elderly for at least three months(6, 19), not receiving money for care, having literacy to read and write, having no serious physical or mental health problems, not being a member of other related support groups, and having the ability to participate in online social groups or use the Internet.

Procedure

From the available people, those who met the inclusion criteria were selected and randomly divided into control and intervention groups using the permuted block randomization technique by one of the researcher. In this way, first by giving the code to the groups, code A was considered as the intervention group and code B as the control group. There were two blocks AB and BA and one of the blocks was

randomly chosen. If the first block, AB, was selected, the first participant would be assigned to group A (intervention group) and the second one to group B (control group), and this process had continued until all samples were allocated, therefore both groups were equal in sample size.

After random allocation, the researchers talked to the members of both intervention and control groups during a session held online and explained the significance and objectives of the research, difficulties that impact of caring for the elderly on individuals' life, problems and challenges of caring for the disabled elderly, and the stresses and tensions experienced by caregivers in the aftermath of these problems. The researcher also tried to establish rapport with the participants and encourage their active participation. Due to the COVID-19 pandemic, this session was held online. At the end of the session, the demographic information form and the Professional Quality of Life (ProQOL) were filled out electronically by the participants in both groups. Afterward, the members of the intervention group were asked to attend the second online session. In second session, after explaining the intervention and the online support group, the researcher asked the caregivers to express the most important problems they experienced in their personal life when caring for the disabled elderly. The researcher prepared a list of the problems stated by the participants and asked them to rank them in order of significance. Next, the members of the intervention group joined an online support group on one of the social media. During each week, one of the problems was chosen from the list (Table 1) according to participant's priorities and the caregivers were asked to share their experiences, challenges, and feelings about that topic with other group members and benefit from other members' instructions and empathy. While guiding the discussion, the researcher encouraged the group members to actively participate in group discussions and share their experiences. Besides, in case that a member needed more advice and instructions on a problem that could not be provided by other group members, the researcher intervened and provided the necessary instructions or introduced a suitable source containing more information about the problem in question. The researcher also intervened in cases when a member provided misleading guidance's and tried to correct the mistake and provide the accurate solution. The researcher also shared materials as incentives to promote further discussion on each topic and to get more people involved in the group discussions. At the end of the week, the discussion was summed up and a new topic was introduced to be discussed in the next week. The topics were opened 24 hours of seven days in week. Upon the request of the group members, the group discussions lasted for five weeks. At the end of the study, the Professional Quality of Life (ProQOL) was filled out by the members of both intervention and control groups online via a link made accessible to them.

Table1: List of the most important caregivers problems in caring for the disabled elderly

Instruments

The instruments used to collect the data were a demographic information form, the WHO Disability Assessment Schedule (WHODAS-II), and the Professional Quality of Life (ProQOL). The WHO Disability Assessment Schedule (WHODAS-II) is a 36-item tool that measures the level of functioning in six domains of life including cognition, mobility, self-care, getting along, life activities, and participation in the

Priority for family caregiver	Problems
1	High burden of responsibility towards the family and the elderly
2	Physical, mental and emotional problems caused by continuous care
3	Chronic and constant stress in relation to the elderly and personal and family life, too
4	Feeling the lack of understanding, respect and support by those around him/her and relatives and the community
5	Not having enough rest and fun and chronic fatigue and not having time to be alone
6	Feeling of inadequacy in performing personal, family and work (professional) duties

society, over the past thirty days. The psychometric properties of this instrument were confirmed by the World Health Organization (20). The Professional Quality of Life (ProQOL) has been used in various studies to measure family caregivers' compassion fatigue (21, 22). The scale has three 10-item subscales including compassion satisfaction, secondary traumatic stress, and burnout with the latter two subscales reflecting components of the construct of compassion fatigue. It measured each section by using 5 point items Likert scale (1=Never, 2=Rarely, 3=Sometimes, 4=Often, 5=Very Often); then minimum score in each section was 10 and maximum score was 50. Moreover in each section whenever score was 22 or less it showed low level and score between 23 and 41 was related to moderate level and 42 or more score showed high level of related subscale (23). The validity of this instrument for use in this study was approved by seven faculty members of Mashhad School of Nursing and Midwifery and its reliability was assessed via internal consistency using Cronbach's alpha coefficient, with the corresponding values for the first, second, and third subscales as 0.92, 0.78, and 0.76, respectively.

Data analysis

Finally, the data were analyzed via SPSS software (version 24). The normality of the distribution of quantitative variables was checked using the Shapiro-Wilk test. Then, to determine the relationship between demographic variables and independent variables, chi-square test and Fisher's Exact test (the qualitative data of demographic variables) and the independent T-test and Mann-Whitney U Test (the quantitative data of demographic variables) were used. Because of this fact that the distribution of variables was not normal; the non-parametric Wilcoxon test and Mann-Whitney U test were run for intergroup comparisons. All statistical procedures were performed at the 95% confidence interval and the significance level of 0.05 ($p = 0.05$).

Results

The participants were 58 family caregivers of disabled elderly persons referring to the clinics and neurology wards of Ghaem and Imam Reza hospitals. Tables 2 and 3 display the demographic

characteristics of caregivers and elderly people.

Table 2
Frequency and Homogeneity of Background and Intervening Qualitative Variables in intervention and control groups

Group				
Demographic Variables		Intervention	control	Significance Level
		Number(Percent)	Number(Percent)	p-value
Caregiver's Sex	Female	18(69.2)	15(57.7)	P = 0.388*
	Male	8(30.8)	11(42.3)	
Caregiver's Marital	Married	20(76.9)	19(73.1)	P= 0.749*
	Single	6(23.1)	7(26.9)	
Caregiver's Education	Secondary school or less	11(42.3)	13(50.0)	P = 0.711**
	More than Secondary school	15(57.7)	13(50.0)	
Caregiver's Job	Unemployed	12(46.2)	(34.6)9	P = 0.962**
	Employed	14(53.8)	17(65.4)	
Caregiver's Incoming Rate	More than Need	1(3.8)	1(3.8)	P = 1.000**
	Acceptable	20(76.9)	76.9))20	
	Less than Need	5(19.2)	5(19.2)	
Caregiver's Relation With Elderly	Son	5(19.3)	8(30.8)	P = 0.63*
	Daughter	13(50.0)	11(42.3)	
	Other(housband,wife,...)	8(30.7)	7(26.9)	
Living With Elderly	Yes	8(30.8)	9(34.6)	p = 1.000*
	No	18(69.2)	17(65.4)	
Elderly's Sex	Female	18(69.2)	14(53.4)	p = 0.254**
	Male	8(30.8)	12(46.2)	
Elderly's Marital	Married	12(46.2)	11(42.3)	P = 1.000**
	Single	13(53.8)	15(57.7)	
Elderly's Incoming Level	More than Need	2(7.7)	3(11.5)	P = 0.839**

Group				
	Acceptable	18(69.2)	16(61.6)	
	Less than Need	6(23.1)	7(26.9)	
Elderly's Insurance	Have	21(80.8)	22(84.6)	P = 1.000**
	Not Have	5(19.2)	4(15.4)	
Elderly's House	Rental	4(15.4)	7(26.9)	P = 0.308
	Property	22(84.6)	19(73.1)	

* Chi-square test ** Fisher's Exact test

Table 3
Frequency and Homogeneity of Background and Intervening Quantitative Variables

Demographic Variables	Group		Significance Level
	Intervention	Control	p-value
	Mean $\pm$ Standard Deviation		
Caregiver's Age	39.85 $\pm$ 11.39	85.92 $\pm$ 11.39	P = 0.979*
Months of Caring	32.85 $\pm$ 59.61	47.50 $\pm$ 48.53	P = 0.7.8**
Hours per Week for Direct Caring	77.46 $\pm$ 17.21	46.85 $\pm$ 14.21	P = 0.727**
Hours per Week for Indirect Caring	39.52 $\pm$ 27.11	02.96 $\pm$ 23.11	P = 0.378**
Elderly's Age	45.46 $\pm$ 9.78	54.96 $\pm$ 7.76	P = 0.530*
Months of elderly Disease	03.68 $\pm$ 88.89	86.54 $\pm$ 64.68	P = 0.503**

*Independent-t Test

** Mann-Whitney U Test

The results of statistical analysis showed that there was no significant difference between the intervention and control groups in any of the research variables at the beginning of the study. The results of the Mann-Whitney U test showed that there was no significant difference between the control and intervention groups in terms of their compassion fatigue (including burnout and secondary traumatic stress) before the intervention ($p = 0.62$) and after the intervention ($p = 0.40$),too. Moreover, the results of the Mann-Whitney U test indicated the mean scores of compassion fatigue for the participants in the intervention group before and after intervention were not significantly different from the corresponding scores of the participants in the control group ($p = 0.60$). The results of the Wilcoxon test for intragroup comparisons suggested that the changes in compassion fatigue reported by the participants in the

intervention group after the intervention were not significantly different compared to compassion fatigue reported by them before the intervention ($p = 0.81$). Besides, the results of the Wilcoxon test showed that the changes in compassion fatigue reported by the participants in the control group after the intervention were not significantly different compared to compassion fatigue reported by them before the intervention ($p = 0.058$).

Also, the results of Wilcoxon test showed that the mean score of compassion satisfaction in both intervention and control groups after the intervention was not statistically significant compared to before ($p = 0.81$, $p = 0.16$ respectively). But the mean score of burnout in both intervention and control groups ($p = 0.001$, $p = 0.006$ respectively) and also the mean score of secondary trauma stress in both intervention and control groups ($p = 0.001$, $p = 0.01$ respectively), showed a statistically significant difference after the intervention compared to before (Table 4). In addition, all of contextual and intervening variables had no independent or interaction effect on Fatigue compassion.

Table 4
Mean and Standard Deviation of Compassion Fatigue's Score of Caregivers Before and After Intervention
According to Group

		Group		Mann-Whitney U test Outcome
		Intervention	Control	
Compassion Fatigue	Before Intervention	41.00 ± 8.67	41.15 ± 5.58	Z= -0.50 p = 0.62
	After Intervention	40.62 ± 8.90	41.76 ± 7.45	Z= -0.84 p = 0.40
	Later Changes Than Before	-0.39 ± 10.73	0.44 ± 1.08	Z= -0.52 p = 0.60
	Wilcoxon Test Outcome	0.25- =Z 0.81 = p	-1.90 = Z 0.58 = p	
Compassion satisfaction	Before Intervention	39.23 ± 8.33	39.92 ± 7.16	Z= -0.19 p = 0.85
	After Intervention	41.12 ± 6.54	39.96 ± 7.03	Z= -0.32 p = 0.75
	Later Changes Than Before	1.88 ± 7.14	0.39 ± 0.82	Z= -1.20 p = 0.23
	Wilcoxon Test Outcome	1.39- =Z 0.16 = p	0.24- =Z 0.81 = p	
Burnout	Before Intervention	15.89 ± 4.69	16.69 ± 4.82	Z= -0.46 p = 0.65
	After Intervention	19.27 ± 4.27	19.73 ± 4.11	Z= -0.31 p = 0.75
	Later Changes Than Before	3.39 ± 5.48	3.04 ± 1.34	Z= -1.05 p = 0.29
	Wilcoxon Test Outcome	2.72- =Z 0.006 = p	4.41- =Z 0.001 = p	
Secondary traumatic stress	Before Intervention	25.12 ± 5.69	25.46 ± 5.78	Z= -0.26 p = 0.80
	After Intervention	21.35 ± 5.17	22.28 ± 5.59	Z= -0.74 p = 0.46
	Later Changes Than Before	-3.77 ± 7.02	-2.72 ± 1.02	Z= -0.86 p = 0.39
	Wilcoxon Test Outcome	2.52- =Z	4.42- =Z	

Discussion

The results of this study showed that sharing experiences in the online support group did not lead to a significant change in compassion fatigue of the family caregivers of the disabled elderly ($p = 0.81$). However, it was shown that the caregivers experienced moderate level of compassion satisfaction. The results also showed that the caregivers experienced low levels of caregiving burnout and moderate level of secondary traumatic stress and also compassion fatigue.

The presence of compassion fatigue in family caregivers has been confirmed in other studies (6). This study showed that the family caregivers faced various problems related to the care of the disabled elderly including a sense of responsibility towards the family and the elderly, a sense of lack of understanding, respect, and support by those around them, relatives of the elderly and society, and a sense of inadequacy in performing personal, family and professional duties. Furthermore, it was shown that the average time of elderly care reported by the participants was about five years. This prolongation of care time, according to Figley's model of compassion fatigue, is one of the causes of compassion fatigue(5). According to the participants in this study, continuous care caused physical, mental, and emotional problems including chronic feelings of pressure and stress, not having enough rest and fun, chronic fatigue, and not having time to be alone.

Furthermore, there are some beliefs in the Iranian social and religious culture about the moral duties of children in caring for parents in old age and at the time of disability, such as belief in afterworld and sin of giving up elderly parents. These beliefs which may somehow induce a sense of duty in children to care for parents. These cultural factors, along with the long-term care and dependence of the disabled elderly person on the family caregiver, can cause compassion fatigue in the family caregiver.

Moreover, believing in special rewards in the hereafter for those who care for the elderly, especially disabled parents, as well as having deep emotional relationships with parents in the long run and feeling satisfied with meeting their needs by the child, increases satisfaction with compassion, thus reducing the perceived burden of family caregivers of the disabled elderly. Accordingly, the findings of this study showed that the caregivers reported moderate levels of compassion fatigue.

Lynch et al. (2018) conducted a study about positive and negative aspects of compassion satisfaction and compassion fatigue as caregiving outcomes, which findings showed that most caregivers (82%) reported a moderate level of compassion satisfaction and about half of them showed moderate compassion fatigue (21). Given the family caregivers of the disabled elderly in this study were all the main members of the elderly family and about 70% of them were the children of the elderly, they experienced a moderate level of compassion satisfaction because emotional attachment and kinship relations between the caregiver and the elderly create a positive feeling and inner satisfaction for the caregiver. Furthermore, considering the religious teachings and the family-oriented culture of the Iranian

community, it seems that caring for parents caused a feeling of inner satisfaction and inner peace in the caregivers. Day et al.(2011) also acknowledged that emotional bonds can create a sense of satisfaction in caregivers, although this per se is a risk factor for compassion fatigue(6). In other words, the stronger and deeper emotional bond between the caregivers and the elderly, the harder it will be for the caregiver to see the suffering of the elderly and this exposes the caregiver to more stress, and this stress is one of the factors underlying compassion fatigue according to Figley's model of compassion fatigue(5).

The family caregivers in this study reported a low level of burnout. It seems that although the elderly's disabilities and their constant need for caregivers, in addition to other responsibilities to be done by the caregivers such as duties about other family matters and caring for their children, as well as responsibilities related to their profession or education affairs related to the caregivers and their children, family caregivers showed that they were been able to manage these complex situations and could balance between their various responsibilities. On other hand the most of caregivers in this study doesn't live with elderly (69.2%) and the most elderly's incoming level is acceptable(69.2%). It seems that low level of caregiver's burnout in this study is related to level of independence of elderly individuals they care for.

It seems that the close family relationship of caregivers with the elderly and also the elderly's disability and his/her dependence on the caregiver, both physically and mentally, increase the time of care for the disabled elderly (more than 30 hours per week). As a result, long-term care causes a very close emotional connection between the caregiver and the elderly. This increases the responsibility for care beyond the limit of caregiver duties, and ultimately a deep connection between the two parties can lead to the transfer of traumatic experiences of the elderly to the caregivers, leading to secondary trauma stress. In a similar vein, Lynch et al. showed that caring for more than 25 hours per week can significantly increase secondary stress (21). Besides, in Iranian social culture, family relationships have a great depth and strength, which in turn increases the relationship between caregivers and the elderly and can increase the level of secondary trauma stress in caregivers, as it was at moderate level in family caregivers of this study.

Concerning the effect of sharing experiences in the support group on compassion fatigue of family caregivers of the disabled elderly, the results of this study showed that compassion fatigue reported by caregivers had a slight decrease after the intervention, however this decrease was not statistically significant. Nevertheless, a review of the literature found no intervention study on caregivers' compassion fatigue. Although sharing experiences in an online group is an efficient and low-cost solution in supporting family caregivers (24), given that compassion fatigue is a concept that develops in family caregivers over time and due to long-term care of the elderly, these caregivers receive less social support and experiences shared by peer groups. Perhaps social support is needed to heal this objectivity that is rooted in perceived stress and difficult situations, mental and physical stress, and the grief of seeing a loved one suffering for a long time. Therefore, there is a need for longer and more stable interventions than the intervention performed in this study.

On the other hand, the findings showed that the mean score of burnout in both intervention and control groups increased significantly after intervention. Also, the mean score of secondary trauma stress was significantly reduced in both groups. Given that these changes are significant in both groups, it may be more influenced by other reasons than the intervention. For instance long duration of caregiving maybe is the one reason for the increase in burnout, so that over the time, all caregivers have felt more burnout. Another considering point in this regard is the concurrence of the study with the Covid 19 pandemic conditions. This condition is considerable from two viewpoint. The first is that due to the pandemic condition, many individuals affected psychologically by limitation in their relationship and need to adjust their life style for being far from the risk of transition the corona virus. These factors may have affected on the quality of life of individuals and can influence on findings of the study. Such condition may have been effective in increasing the burnout of both intervention and control groups. On the other hand, due to the high mortality rate of Covid 19 disease, the priority of individuals and especially caregivers has been changed to prevent infection and reduce the risk of death, especially in the elderly. Thus, caregivers may focus more on preventing further aging and suffering, rather than focusing on the negative effects and trauma of caring for the elderly, and this has been associated with reduced secondary trauma stress.. Of course, it should be noted that because of the effect of this condition on both intervention and control group, researcher think that the main findings of the study is reliable.

The another effect of pandemic condition is related to the method of the study. In this way, there was no face to face sessions and probably this could make caregivers unreliable to researcher team. Although it was a limitation of the study, researchers tried to establish an empathic and trust based relationship with caregivers to decrease the effects of this distance.

Given that the results of this study confirmed the existence of compassion fatigue in the family caregivers of the disabled elderly, these caregivers need more stable and focused social support. Due to the lack of support groups for family caregivers of the elderly, especially those with disabilities, it is suggested that such groups be formed for them, especially the family caregivers of the disabled, and specialists and nurses provide educational, psychological, and social support for these people. Furthermore, it is recommended that in these or similar groups that have long-term activities, peers can share their care experiences to reduce the negative effects of elderly care on their personal lives by perceiving more social support.

Limitation

In addition to COVID19 pandemic situation that affected on the study and the finding, as explained above, the other limitation of study is related to population of the study. This study was done on family caregivers of disabled elderly, so that the generalizability of the study data limited to some extent.

Conclusion

This study showed that the family caregivers of the disabled elderly experience low levels of compassion fatigue. However, sharing experiences in the online support group could not significantly change the level of compassion fatigue experienced by the caregivers.

Declarations

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Author's contribution

This manuscript is the consequence of the collaboration of all the authors. The author FE designed the study, wrote the study proposal, and supervised the data collection and analysis. The author AA collected the data and prepared the first draft of manuscript. The author JJ analyzed the data and supervised the writing drafts of the manuscript. The authors TP and MS wrote the final draft of the manuscript, and prepared tables . All of the authors read and approved the final manuscript.

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Availability of data and materials

The datasets used and analyzed during the current study available from the corresponding author on reasonable request.

Ethics approval and consent to participate

This research was approved by the Ethics Committee of Mashhad University of Medical Sciences under the code ID IR.MUMS.NURSE.REC.1398.088. All participants were informed about the objectives of the study and procedure taken to conduct it before starting the intervention and their informed consent was obtained. The participants were also reassured their data would be anonymous and kept confidential

Consent for Publication

Not applicable.

Competing interests

The authors declared no potential conflict of interest with respect to the research, authorship and publication of this article.

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Figures

Figure 1

CONSORT diagram of the study