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NURSING INTERVENTION FOR STRESS MANAGEMENT IN FAMILY CAREGIVERS OF DEPENDENT OLDER ADULTS: A PILOT STUDY

INTERVENÇÃO DE ENFERMAGEM NO ESTRESSE DO CUIDADOR FAMILIAR DO IDOSO COM DEPENDÊNCIA: ESTUDO PILOTO

INTERVENCIÓN DE ENFERMERÍA EN EL ESTRÉS DEL CUIDADOR FAMILIAR DEL ANCIANO CON DEPENDENCIA: ESTUDIO PILOTO

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Objective: assess the effectiveness of a structured nursing intervention for caregivers based on a psychoeducational stress management program in relation to primary stressors (overload), resources (coping) and results (emotional well-being), as well as an assessment by caregivers and care recipients as to the helpfulness of the intervention and the program's support material. Method: a pilot study was conducted with 13 caregivers of older adults in Portugal during five weeks. Interviews were conducted to assess the intervention and support material. Results: after the intervention, there was an improvement in coping, well-being and overload, with a statistically significant difference in overload; difficulties implementing the intervention and using the support material. Conclusion: the family caregivers stated that the intervention helped them learn new coping strategies. On the part of the nurses, the intervention helped them understand the difficulties faced by caregivers, facilitating a holistic care approach based on the caregiver and elderly person.

Descriptors: Household nursing intervention. Stress. Family caregiver. Older adult.

Objetivo: avaliar a eficácia de uma intervenção de enfermagem estruturada com base num programa psicoeducativo de gestão do estresse sobre estressores primários (sobrecarga), recursos (coping) e resultados (bem-estar emocional) do cuidador, e avaliação realizada pelos cuidadores e pelos enfermeiros sobre a ajuda da intervenção e sobre o material de apoio ao programa. Método: estudo piloto com 13 cuidadores de idosos em Portugal durante 5 semanas. Realizaram-se entrevistas para avaliar a intervenção e o material de apoio. Resultados: depois da intervenção, houve melhoria no coping, no bem-estar e na sobrecarga com diferença estatisticamente significativa na sobrecarga; dificuldades com a implementação da intervenção e uso do material de apoio. Conclusão: os cuidadores familiares revelaram que a intervenção ajudou-os na aprendizagem de novas estratégias de coping. Por parte dos enfermeiros,

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a intervenção ajudou-os a conhecer as dificuldades do cuidador, facilitando a abordagem holística do cuidado centrado no cuidador e no idoso.

Descritores: *Intervenção de enfermagem no domicílio. Estresse. Cuidador familiar. Idoso.*

Objetivo: evaluar la eficacia de una intervención de enfermería estructurada con base en un programa psicoeducativo de gestión del estrés sobre estresores primarios (sobrecarga), recursos (coping) y resultados (bienestar emocional) del cuidador, y evaluación realizada por cuidadores y enfermeros sobre la ayuda de la intervención y el material de apoyo al programa. Método: estudio piloto con 13 cuidadores de ancianos en Portugal, durante cinco semanas. Se realizaron entrevistas para evaluar intervención y material de apoyo. Resultados: después de la intervención, hubo mejora en el coping, bienestar y sobrecarga, con diferencia estadísticamente significativa en la sobrecarga; dificultades con la implementación de la intervención y uso del material de apoyo. Conclusión: los cuidadores familiares revelaron que la intervención ayudó en el aprendizaje de nuevas estrategias de coping. Para los enfermeros, ayudó a conocer las dificultades del cuidador, facilitando el abordaje holístico de la atención centrada en el cuidador y anciano.

Descriptores: *Intervención de enfermería en el domicilio. Estrés. Cuidador. Anciano.*

Introduction

Portugal is one of the oldest countries in the world and also in Europe. In the last decade, there was a sharp drop in birth rates[1]. In the last census[2], the Portuguese population over 65 years of age already corresponded to 19.1% of the total: 21.5% were women and 16.8% men. Life expectancy at birth is also one of the highest in Europe. Portuguese women born in 2016 can expect to live until 84 years old and men until 78 years old[3].

Extended human longevity leads to increased health needs throughout the aging process, with decreased functionality and its consequent impact on daily life activities. In terms of family life, spouses or other close relatives are the ones who provide care. The dynamics of caregiving have a temporal dimension to which family caregivers must adapt, as functionality decreases and needs increase. The Family Caregiver Alliance[4] describes caregiving as a dynamic process experienced by family caregivers during the performance of their role within a care continuum. This caregiving process exposes caregivers to heavy physical and psychological burdens which can lead to a set of symptoms that constitute a dysfunctional pattern identified as "caregiver stress" or "overload in the caregiver role"[5].

Caregivers are normally family members, friends or neighbors who provide care on a daily basis to people with a chronic or incapacitating disease which prevents them from totally or partially performing daily life activities, which sometimes renders them dependent. This is a non-institutional care resource[6], since the caregiving is not usually remunerated[7].

The demands of caregiving place a spotlight on caregivers, due to the need to preserve their social role and prevent the risk of getting sick. To this end, interventions need to be carried out that help them preserve their health[8], considering that older people prefer to stay at home, close to the family[9]. Caregiving also helps lower the risk of institutionalization and reduce long-term care costs[6]. The literature indicates that psychoeducational interventions are conducive to the well-being of caregivers[10]. There is also evidence indicating the need for health professionals to support family caregivers in the performance of their role.

However, nursing interventions are more effective when they are customized and information is gathered about the characteristics of the people and their needs and perceptions, resulting in actions where the care recipients participate in the decision-making process regarding what best suits them[11].

In assessing caregiver stress, one author[12] advocates using the stress transactional model of Pearlin, Mullan, Semple, and Skaff. This option is based on the assumption that the various dimensions of this model enable variability in how caregivers live their caregiving experience. The dimensions of the model include: care context (sociodemographic characteristics of the caregiver and care recipient and the caregiving history); primary and secondary stressors; resources and results. The design of the model was based on a theoretical concept[13] which considers stress to be the result of a transaction between the individual and the environment that exceeds the individual's resources and requires effort for adapting to it. According to this concept, coping refers to the constantly changing cognitive and behavioral efforts required to manage specific external/internal issues, which are assessed because they exceed the person's resources. Therefore, it is important for caregivers to maintain the ability to learn and use new strategies, in response to new needs, developing different coping strategies focused on problem-solving and not emotions. Nurses can help caregivers recognize strategies to relieve overload and develop strategies to reduce stress[14].

In Portugal, studies show that nursing interventions with caregivers primarily seek to improve their caregiving competencies, turning caregivers into "hidden partners". Needs arising from the caregiving role are often minimized and limited to comments such as "remember to take care of yourself". Therefore, structured interventions based on psychoeducational programs aimed at caregiver stress, apart from being limited and infrequent, must be assessed as to their effectiveness. The results of such assessments help improve nursing care and the competencies and efficiency of the act of caring by family caregivers with positive effects on their health.

The hypothesis considered in the present study is that interventions structured within a program reduce overload and enhance coping and emotional well-being. It is hoped that the support material for the program will be adjusted.

The main objective of this pilot study was to assess the effectiveness of a structured nursing intervention based on a psychoeducational stress management program for caregivers in relation to primary stressors (overload), resources (coping) and results (emotional well-being), as well as an assessment by caregivers and care recipients as to the helpfulness of the intervention and the program's support material.

Method

This was a prospective, longitudinal, observational pilot study. The convenience sample was comprised of caregivers for older family members in situations of functional dependency, registered for home care in health units from a Health Center Group from the Health Subregion of Lisbon and Vale do Tejo, Portugal.

The observation took place between December 2014 and March 2015, and the inclusion criteria were: family caregivers who assumed the care responsibility with a score ≤16 on the Caregiver risk assessment grid[15]; be over 18 years old; know how to read and write; and have telephone contact.

In the home nursing visits, the nurses contacted the eligible family caregivers and explained the objectives of the study. In the next visit, the research protocol was explained, informed consent was requested, the "Caregiver risk assessment grid" was applied, and the date was set for starting the structured nursing intervention.

The home nursing intervention for caregivers of older adults with dependence was supported by the psychoeducational stress management program of Ducharme, Trudeau and Ward[15]: *Gestion du stress-programme psychoéducatif de gestion du estress destiné aux proches-aidants d'un parent âgé à domicile*. An already internationally published stress management program was chosen since it was built on the concept of stress and coping[13]. Another reason was the fact that the program is made

up of steps which, since they correspond to the stress management process, enable caregivers to choose a caregiving situation that is stressful to them. This helps tailor the intervention, as well as the learning, for managing other stressful situations that arise during the course of their caregiver activities.

One of the authors was contacted by email and she authorized the use of the aforementioned program and explained how to obtain the support material: caregiver notebook and application manual. The procedures for adapting the written material to Portuguese were performed: conceptual and linguistic equivalence.

The objective of this psychoeducational program is to promote caregiver competencies for better management of difficult/stressful situations experienced during the provision of home care to family members.

The program's stress management process involves five steps:

Step 1 – awareness. The caregiver describes the general caregiving situation, sharing positive and difficult aspects experienced in the care process.

Step 2 – choice of a difficult/stressful situation and an objective to achieve. The caregiver chooses a difficult/stressful experience in caregiving where the intention is to change it. The person formulates an objective to be achieved, in order to alleviate the perception of the situation chosen, with the help of the "Scale for achieving personal objectives." This instrument enables assessing, at the end of Step 5, if the objective was achieved or not.

Step 3 – analysis of the situation chosen. The caregiver reflects on the difficult/stressful situation chosen and the factors that influence the way it is perceived (personal, family and contextual) and which strategies are normally used.

Step 4 – choice of a strategy tailored to the chosen situation and put into practice. The caregiver is invited to try out one strategy (or more) from among the adaptive strategies that can be tailored to the stressful situation chosen.

Step 5 – assessment. Assess whether the objective of Step 2 was achieved.

If the established objective is not achieved, the caregiver goes back to the beginning of the process and reflects, in order to try a new action that, in turn, will also be assessed. This systematic process allows caregivers to guide their reflections until the established objective is achieved.

The application manual has guidelines for nurses regarding the content and resources for each of the five steps of the stress management process. The caregiver notebook describes what the caregiver did in each step, which corresponds to a meeting with the nurse, as well as what needs to be done before the next meeting with this professional.

The operationalization of the program includes: five weekly home meetings between the nurse responsible for providing the elderly person with care and the family caregiver, which last from 30 to 45 minutes. In each individual meeting, the nurse and caregiver discuss each of the five stages of the stress management process. Throughout the process, it is important to take into account the caregiver's perception of the caregiving situation. This perception serves as a cornerstone for the intervention, which is aimed at using adaptive strategies tailored to the type of difficult/stressful situation. In the meetings, the nurse offers the caregiver the "caregiver notebook" and explain its usefulness. At the start of each meeting, the steps of the stress management process are reviewed, what was established in the last session (with the exception of the first meeting), what will be worked on the current meeting and what will be done the following week until the next meeting.

Each nurse received advance preparation, either in a group or individually, in two to three sessions, lasting two hours each, in regard to the intervention protocol, in addition to receiving the written material (caregiver notebook and application manual).

At the end of the intervention, in the second month, the researcher held semi-structured interviews with the nurses and family caregivers,

to assess the program in terms of the helpfulness of the intervention and adequacy of the support materials.

The research protocol was approved by the executive director of the respective Health Unit Group and received a favorable opinion from the Health Ethics Committee of the Regional Health Administration of Lisbon and Vale do Tejo, under No. 093/CES/INV/2014. Informed consent forms were signed by the participants.

The data analysis was qualitative (content of the responses from caregivers and nurses) and statistical. In the statistical analysis, the data treatment and analysis used the statistical software IBM-SPSS, Version 22. A descriptive analysis of the sociodemographic variables and caregiving history was obtained. A comparative analysis was performed to identify associations between variables of interest through the paired sample t-test for the numerical variables or, alternatively, the Wilcoxon non-parametric test. In the statistical analysis, a significance level of 5% ($p<0.05$) was assumed.

The Caregiver risk assessment grid was applied as a criterion for determining the eligibility of the participants, as suggested by the authors of the aforementioned psychoeducational program. Participants with scores greater than or equal to 16, indicating a high-stress level, were excluded from the study and advised to seek specialized support.

A questionnaire for the sociodemographic characterization of the caregivers/older adults and caregiving history, with instruments used, assessed the domains of the stress model adopted[12].

The Burden Interview Scale, from 1983, adapted to Portugal, was used to assess overload. It has four categories: caregiving impact, interpersonal relationships, caregiving expectations, and perception of self-efficacy. The version has 22 items. The possible response options are: never[1], almost never[2], sometimes[3], often[4] and almost always[5], where the higher the score the greater the overload. Internal consistency is good, at 0.96 (Cronbach's alpha[16].

To assess coping, the Carer's Assessment of Managing Index (CAMI), adapted for Portugal, was applied. This questionnaire assesses how each family caregiver copes with perceived difficulties, what coping mechanisms are used and their adequacy and effectiveness. There are three domains: dealing with problems/problem-solving, alternative perception of the situation, and coping with stress. Caregivers indicate whether they use the strategy or not [1]. If they do, they need to report whether it is effective [2], somewhat effective [3] or very effective [4], where the higher the score the higher the use/perception of the effectiveness of the coping strategies used by the caregiver. Internal consistency is good, at 0.804 (Cronbach's alpha)[17].

To assess the emotional well-being of the caregivers, the domain assessed the most is depressive symptoms proposed by the Center for Epidemiologic Studies of Depression Scale (CES-D). The Portuguese version was used, which examines four factors: depressed feelings, positive feelings, delayed somatic activity and interpersonal activity, where the higher the score the higher the intensity of the depressive symptoms. Internal consistency is good, at 0.85 (Cronbach's alpha)[12].

Results

Of the 17 participants, 13 completed the two assessment stages before and after the intervention (three elderly people died and one caregiver refused to participate).

In the Caregiver risk assessment grid, the value of the mean = median was 11 and standard deviation = 2.09, with a maximum of 15 and a minimum of 8. None of the caregivers achieved the maximum score [16] that would have excluded them from the study. Among the caregivers, there were more women; the mean age was 62.18 years (SD=15.72); and marital status was married. In terms of employment status and education, there was a higher frequency of retired caregivers and those who had completed the 3rd cycle of basic education. Similarly, a study in Portugal also reported higher frequencies of female

family caregivers, over age 50, married, with low education, and no professional activity[18].

Among the older adults, the frequency was the same between men and women, with a mean age of 81.5 years (SD=9.85). With respect to education, the most frequent was 1st cycle of basic education. In another study[19] with family caregivers, the elderly care recipients had, on average, a slightly higher age (82.36 years; SD.=7.84), few years of education and were widowers, unlike the present study where most were married.

In the caregiving history, there was a higher frequency of caregivers who had provided care from one to three years, and devoted more than ten hours of care per day. Caregiving was the responsibility of daughters and spouses; most lived with the elderly person. This data is consistent with the findings of another study on family caregiver overload[20].

Table 1 presents the sociodemographic characteristics of the caregivers and caregiving history data at the baseline assessment.

Table 1 – Distribution of caregivers according to sociodemographic characteristics and caregiving history at the baseline assessment. Lisbon, Portugal – 2015 (n=13)

Sociodemographic characteristics of the caregivers	n	%
Sex		
Female	8	61.5
Male	5	38.5
Age (years), mean (SD)	62.18 (15.72)	
Marital status		
Married	7	53.8
Single	4	30.8
Widow/widower	1	7.7
Divorced/separated	1	7.7
Employment status		
Employed	3	23.1
Unemployed	1	7.7
Retired	8	61.5
Other	1	7.7
Education		
1st cycle of basic education	3	23.1
3rd cycle of basic education	5	38.5
Secondary education	3	23.1
University	2	15.4

Source: Created by the authors.

Table 2 presents the sociodemographic characteristics of the older adults.

Table 2 – Sociodemographic characteristics of the older adults. Lisbon, Portugal – 2015 (n=13)

(to be continued)

Sociodemographic characterization of the older adults	n	%
Sex		
Female	7	53.8
Male	5	46.2
Age (years), mean (SD)	81.47 (9.85)	
Marital Status		
Married	7	53.8

Table 2 – Sociodemographic characteristics of the older adults. Lisbon, Portugal – 2015 (n=13)

(conclusion)

Sociodemographic characterization of the older adults	n	%
Widow/widower	4	30.8
Divorced/separated	2	15.4
Education		
No formal schooling	1	7.7
Can read and write	2	15.4
1st cycle of basic education	6	46.2
2nd cycle of basic education	2	15.4
3rd cycle of basic education	1	7.7
Secondary education	1	7.7
Caregiving history		
Family relationship		
Spouse	4	30.8
Son/daughter	6	46.2
Niece	2	15.3
Brother	1	7.7
Live together		
Yes	12	92.3
No	1	7.7
Length of time as a caregiver		
Less than 6 months	2	15.4
6 months to 1 year	1	7.7
1-3 years	6	46.2
3-5 years	-	-
5-10 years	1	7.7
More than 10 years	3	23.1
Number of caregiving hours per day		
1-3 hours	1	7.7
3-5 hours	2	15.4
5-10 hours	1	7.7
More than 10 hours	9	69.2

Source: Created by the authors.

Note: Conventional sign used:
- Numerical data equal to zero not resulting from rounding off.

In the assessment of the results variables, before and after the intervention, there was a statistically significant difference noted in total overload (p=0.023) and in the caregiving impact (p=0.037) and caregiving expectations (p=0.023) categories. The caregivers improved their coping strategies, especially in the category of alternative perception of the situation. Improvement was also noted in emotional well-being; in the positive feelings category, the difference was statistically significant (p=0.024). Table 3 contains the data obtained before (baseline) and after the intervention (T1).

Table 3 – Distribution of the caregivers according to overload, coping and depressive symptoms assessed at baseline and post-intervention (T1). Lisbon, Portugal – 2015 (n=13)

Variable	Baseline Mean (Standard Deviation)	T1 Mean (Standard Deviation)	Paired t Wilcoxon
Overload			
Caregiving impact	30.69 (11.24)	24.84 (6.84)	*paired t*=2.340 p= 0.037
Interpersonal relationships	9.15 (3.48)	7.76 (3.24)	*paired t*=1.737 p=0.108
Caregiving expectations	16.53 (3.12)	14.07 (3.88)	*paired t*=2.606 p=0.023
Perception of self-efficacy	4.30 (1.79)	3.35 (1.39)	*paired t*=2.034 p=0.065
Total	60.69 (15.71)	50.23 (10.17)	*paired t*=2.606 p=0.023
Coping			
Problem-solving	41.07 (7.44)	42.23 (7.35)	*paired t*=0.233; p=0.820
Alternative perception - situation	40.92 (7.064)	43.38 (10.36)	*paired t*=-0.760 p=0.462
Coping with stress symptoms	20.07 (6.04)	20.84 (6.01)	*paired t*=-1.949 p=0.075
Total	99.62 (15.11)	105.69 (19.12)	*paired t*=-1.774 p=0.101
Emotional well-being			
Depressed feelings	8.00 (5.73)	6.0 (4.43)	*paired t*=1.747 p=0.111
Positive feelings	8.38 (3.28)	6.50 (2.97)	*paired t*=2.327 p=0.040
Delayed somatic activity	4.00 (3.64)	4.55 (3.8)	*paired t*=-0.193 p=0.851
Interpersonal activity	2.25 (1.89)	1.50 (0.71)	*Wilcoxon* p=0.102
Total score	20.77 (12.14)	16.42 (9.41)	*Wilcoxon* p=0.66

Source: Created by the authors.

In the qualitative analysis of the data regarding the opinion of family caregivers in relation to the intervention's help, the responses were clearly positive. Of the 13 participants, only one expressed a negative opinion and another had an ambivalent opinion. Following are some examples of citations (verbatim) form the qualitative analysis.

Positive opinions:

The intervention helps you face the caregiving situation better and find new ways to keep going. (F; age 62; daughter).

The caregiving situation is still the same, but I see it from calmer and more peaceful perspective. (M; age 40; niece).

The intervention helped me to be prepared for other difficulties that will arise and that I know will be coming my way. (N; age 50; daughter).

I learned to lie down and get up from the chair with less stress to my back. I no longer need to wait for help. (J; age 75; spouse).

The intervention helped me realize that if I change the way I act everything around me improves. (A; age 60; daughter).

Negative opinions:

The intervention didn't help at all. It made me think about issues that have been resolved and now come back to my memory. (L; age 78; brother).

Ambivalent opinion:

> *The intervention helped and didn't help. Stopping to think about it doesn't help me* [...] *it reminds me that I'm all alone in this and what the future will be like, what will become of her* [Wife]? *The children don't want to know anything* [...] *but it was good to have someone to talk to. I felt supported*. (A; age 78; spouse).

Regarding the support material for the program, five caregivers considered the content of the caregiver notebook to be adequate and eight felt the content was too much, especially in Step 3.

Of the eight nurses, four gave their opinion on the assessment and implementation of the intervention, with responses addressing positive and negative aspects. Following are some examples of comments regarding positive aspects:

> *Nurses get to know caregivers better. There's greater closeness to caregivers, better understanding of the difficulties we were not aware of before and empathy is created*. (N1).

> *The time we're with the caregivers is formal. The caregivers feel cared for; they have the nurse's attention* [...] *they accept better what we say to them*. (N2).

> *Through the intervention, we give tools to the caregivers to find resources for solving problems, and thereby empower them*. (N3).

> *If we want to provide holistic care, it's not just for the person who is sick; the other who is caring also needs to receive care, for the sake of the sick person*. (N4).

Examples of negative comments:

> *We are pressured by the time allotted to each home visit*. (N1; N2; N3; N4).

> *If each visit exceeds the scheduled time, this affects the care management of the other sick people I am responsible for, as well as the care given to other sick people by my colleagues who are waiting for us, due to shared transportation*. (N3).

> *There are many deeply rooted things in the caregivers that can no longer change or take longer to change*. (N4).

> *Many elderly people are mistrustful and afraid to talk about certain aspects family life aspects and compromise the family due to absence of support*. (N1).

> *Sometimes, older caregivers forget what they need to do; it's necessary to remind them what has already been done and sometimes go back*. (N2; N4).

With respect to the support material, the general opinion about the caregiver notebook was that there is too much information. Consequently, older caregivers and those with fewer years of education get lost by the volume of pages. Regarding the application manual, the content is adequate for implementing the program by the nurses, but their daily transportation for home visits is not very practical.

Discussion

The results of this study indicate that the caregivers felt less overloaded in relation to caregiving, used more coping strategies and reported enhanced well-being after the intervention based on the psychoeducational stress management program. These results validate the hypothesis of the study, and statistically significant differences were found in relation to overload. This seems to confirm that the high number of hours dedicated to caregiving leads to intense overload[21] which was reduced to slight overload after the intervention. This finding corroborates the importance that the interventions should be proactive instead of reactive, in order to promote the health of family caregivers[22].

The results regarding the increase in coping strategies are similar to a study published by the authors of the program[23]. As a stress management program, after its application in the form of an intervention, coping strategies increased in the three domains assessed by the same instrument in the study carried out by the authors, with a higher increase in the domain of alternative perception of the situation. This result appears to indicate that caregivers, in the third step of the stress management process, reflected on the strategies normally used for the situations they identified as difficult in caregiving and perceived other coping strategies better suited to their needs. This would seem to demonstrate their ability to learn and put into practice new coping strategies[13].

The results regarding the well-being of caregivers, in relation to depressive symptoms, were not assessed in studies published by the authors of the program. However, this is a frequently used variable in international studies for assessing the effect of the interventions on

the emotional well-being of caregivers. In the present study it proved to be a variable sensitive to nursing interventions. Thus, the post-intervention results indicated enhanced well-being, similar to the findings of a pilot study conducted in Australia[24]. In the positive feelings category, the difference was statistically significant, revealing that the personal satisfaction and feelings of happiness of caregivers improved.

Despite the limited number of observations, the qualitative data of this study yielded results that warrant reflection and may help in future studies. The impressions shared by the caregivers regarding the helpfulness of the intervention applied by the nurses corroborated the author's opinion[25], by indicating that humanistic values and the psychosocial knowledge that nurses have about caregivers are essential for discovering and understanding their adaptive or inadequate behavior and helping them utilize their full potential to achieve the best quality of life possible after interventions aimed at adapting to stress.

The difficulty pointed out by nurses in relation to implementing the intervention mostly refers to lack of time for its application in daily practice, since the intervention required a meeting of at least 30 minutes per week for five weeks. This is consistent with the findings of another study[26] which highlighted this factor as generating resistance to a long-term application of nursing interventions with caregivers.

The growing number of situations of incapacity resulting from aging of the population prompts reflections about family caregivers as mediating elements, who should be viewed as institutional resources and, therefore, important for care continuity. To this end, when nurses assume most of the burden of home care[27], they help family caregivers to continue in their social role after the intervention, based on a program focused on caregivers and the difficulties they face.

In reference to the structure of home nursing care, it is essential that the time dedicated to nursing visits formally include time to interact with the caregiver, since the present study demonstrates the benefits for both caregivers and care recipients.

Conclusion

This pilot study assessed the effectiveness of a structured nursing intervention based on a psychoeducational stress management program associated with caregiving. Despite the low number of participants, the statistical results indicated improvement in terms of overload, coping and well-being of the caregivers after the intervention, two months after the start of the work.

The qualitative analysis revealed the need to condense the information in the caregiver notebook and explore new strategies with nurses for applying the intervention. It also provided useful information about acceptance of the intervention. It was concluded that the family caregivers felt that the intervention helped them learn new coping strategies, in order to continue in their role. On the part of the nurses, the intervention helped them learn about the difficulties faced by caregivers, facilitating a holistic care approach based on the caregiver and elderly person.

It is suggested to conduct a study in the future with a larger number of participants and to include a control group, to compare the results between the experimental group and the control group.

Collaborations:

1. conception, design, analysis and interpretation of data: Laura Maria Monteiro Viegas;

2. writing of the article and relevant critical review of the intellectual content: Laura Maria Monteiro Viegas, Ana Alexandre Fernandes and Maria dos Anjos Pereira Lopes F. Veiga;

3. final approval of the version to be published: Ana Alexandre Fernandes and Maria dos Anjos Pereira Lopes F. Veiga.

References

1. Fernandes A. Saúde e doença e (r)evolução demográfica. In: Fonseca A, editors. Envelhecimento, saúde, doença: novos desafios para a prestação de cuidados a idosos. Lisboa: Coisas de Ler; 2014. p. 7-26.

2. Portugal. Instituto Nacional de Estatística. Censos. Resultados definitivos. Região Norte Portugal - 2011 [Internet]. Lisboa; 2012 [cited 2017 Nov 19]. Available from: http://censos.ine.pt/xportal/xmain?xpid=CENSOS&xpgid=ine_censos_publicacao_det&contexto=pu&PUBLICACOESpub_boui=156638623&PUBLICACOESmodo=2&selTab=tab1&pcensos=61969554

3. Portugal. PORDATA. Esperança de vida à nascença total e por sexo [Internet]. Lisboa; Fundação Manuel do Santos [cited 2018 Abr 6]. Available from: https://www.pordata.pt/Europa/Esperan%c3%a7a+de+vida+%c3%a0+nascen%c3%a7a+total+e+por+sexo-1260-209738

4. Family Caregiver Alliance, editors. Caregiver Assessment: Voices and Views from the Field. Report from a National Consensus Development Conference. San Francisco: National Center on Caregiving at Family Caregiver Alliance; 2006.

5. Lage I, Araújo O. A construção discursiva do cuidado informal a idosos dependentes: perceções, constrangimentos e práticas. In: Fonseca A, editors. Envelhecimento, saúde, doença: novos desafios para a prestação de cuidados a idosos. Lisboa: Coisas de Ler; 2014. p. 219-62.

6. Morris TL, Edwards L. Family Caregivers. In: Lubkin I, Larsen P, editors. Chronic illness. Impact and interventions. 6th ed. Sudbury (CAN): Jones and Bartlett Publishers; 2006. p. 253-84.

7. Williams L. Theory of caregiving dynamics. In: Smith M, Liehr P, editors. Middle range theory for nursing. New York: Springer Publishing Company; 2008. p. 261-75.

8. Au A, Gallagher-Thompson D, Wong MK, Leung J, Chan WC, Chan CC, et al. Behavioral activation for dementia caregivers: scheduling pleasant events and enhancing communications. Clin Interv Aging. 2015 Mar;10:611-9.

9. Couto A, Hell C, Lemos I, Castro E. Cuidado domiciliar sob ótica de idosos dependentes: contribuições para a enfermagem. Rev baiana enferm. 2016 [cited 2017 Nov 29];30(4):1-12. Available from: DOI 10.18471/rbe.v30i4.16068

10. Steffen A, Gant JR, Gallagher-Thompson D. Reducing psychosocial distress in family caregivers. In: Gallaguer-Thompson D, Steffen M, Thompson L, editors. Handbook of behavioral and cognitive therapies with older adults. New York: Spinger Publishing Company; 2008. p.102-17.

11. Suhonen R, Välimäki M, Leino-Kilpi H. A review of outcomes of individualized nursing interventions on adult patients. J Clin Nurs. 2008 Apr;17(7):843-60.

12. Zarit S. Assessment of family Caregivers: a research perspective. In: Family Caregiver Alliance, editors. Caregiver assessment: principles, guidelines and strategies for change. Report from a National Consensus Development Conference. San Francisco: National Center on Caregiving at Family Caregiver Alliance; 2006.

13. Lazarus RS, Folkman S. Stress, appraisal and coping. New York: Springer; 1984.

14. De la Cuesta C. Strategies for the relief of burden in advanced dementia care-giving. J Adv Nurs. 2011 [cited 2017 Nov 20];67:1790-99. Available from: Doi.10.1111/j.1365-2648.2010.05607.x

15. Ducharme F, Trudeau D, Ward J. Manuel de l'intervenant – gestion du stress - Programme psychoéducatif de gestion du stress destine aux proches-aidants d'un parent âgé à domicile. Montréal: Institut Universitaire de Gériatrie de Montréal, Université de Montréal; 2008.

16. Sequeira C. Difficulties, coping strategies, satisfaction and burden in informal Portuguese caregivers. J Clin Nurs. 2013 Feb [cited 2017 Nov 25];22:491-500. Available from: Doi: 10.1111/jocn.12108

17. Brito ML. A saúde mental dos prestadores de cuidados a familiares idosos [dissertação]. Porto: Faculdade de Medicina, Universidade do Porto; 2000.

18. Carrilho da Cunha M. Impacto positivo do acto de cuidar no cuidador informal do idoso: um estudo exploratório nos domicílios do Concelho de Gouveia [dissertação]. Lisboa: Faculdade de Psicologia, Universidade de Lisboa; 2011.

19. Costa A. A família cuidadora perante a dependência do seu familiar idoso [dissertação]. Lisboa: Faculdade de Ciências Médicas, Universidade Nova de Lisboa; 2012.

20. Pereira S. Cuidar de idosos dependentes: a sobrecarga dos cuidadores familiares [dissertação]. Braga: Universidade Católica Portuguesa; 2015.

21. Ory M, Yee J, Tennstedt S, Schulz R. The extent and Impact of dementia care: unique Challenges Experienced by Family Caregivers. In: Shultz R, editors. Handbook on dementia caregiving: Evidence-Based Interventions for Family Caregivers. New York: Springer Publishing Company; 2000. p. 1-32.

22. Ducharme F, Dubé V, Lévesque L, Saulnier D, Giroux F. An online stress Management Training Program as a Supportive Nursing Intervention for Family Caregiver of an Elderly Person. Canadian J Nurs Inform [serial on the internet]. 2011 [cited 2016 Aug 20];6(2). Available from: http://cjni.net/journal/?p=1344

23. Ducharme F, Lebel P, Lachance L, Trudeau D. Implementation and effects of an individual stress management intervention for family caregivers of an elderly relative living home: a mixed research design. Res Nurs Health. 2006;29:427-41.

24. Leone D, Carragher N. Santalucia Y, Draper B, Thompson LW, Shanley C, et al. A pilot of an intervention delivered to Chinese-and Spanish-speaking carers of people with dementia in Australia. Am J Alzheimers Dis Other Demen. 2014 Feb;29(1):32-7.

25. Watson J. Nursing. The Philosophy and Science of Caring. Boulder (CO): University Press of Colorado; 1985.

26. Ferré-Grau C, Sevilla-Casado M, Lleixá-Fortuño M, Aparicio-Casals MR, Cid-Buera D, Rodero-Sanchez V, et al. Effectiveness of problem-solving technique in caring for Family caregivers: a clinical trial study in an urban area of Catalonia (Spain). J Clin Nurs. 2014 Jan;23(1-2):288-95.

27. Portugal. Observatório Português dos Sistemas de Saúde. Relatório de Primavera 2015. Acesso aos cuidados de saúde. Um direito em risco? [Internet]. Lisboa; 2015 [cited 2017 July 10]. Available from: http://www.opss.pt/sites/opss.pt/files/RelatorioPrimavera2015.pdf

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