

Effectiveness of communication skills training programs in caregivers of adults with dementia: a review of systematic reviews

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SUMMARY

Background: Training in communication skills in caregivers is one of the aspects included in the care of people with dementia, and it has been shown to have a positive impact on the quality of life of people and their families. Both in permanent care institutions and in community care centers, these intervention strategies require the training of caregivers and facilitators in the use of behaviors and skills that facilitate communicative interaction with patients.

Goals: Collect and gather the available evidence in systematic reviews on the impact of communication skills training programs aimed at caregivers of adults with dementia.

Methods: Searches carried out in English, in the databases MEDLINE®, the Cochrane library and Scopus®; In Spanish, it carried out in the SCIELO and BASE databases from 2010 onwards. A search strategy developed based on MeSH® terms and the use of keywords from the texts found a priori. The types of studies that were part of the review were Systematic Reviews of the literature that carried out from 2010 to 2020.

Results: Training programs reported in communication skills and person-centered attention, and in communication skills and behavior management, which showed an improvement in the communication of caregivers, which were related to a decrease in their difficulties to communicate, use of negative statements, behavioral management skills, knowledge of the use of support and interaction strategies. On the other hand, there is no evidence that this type of intervention has an impact on the neuropsychological state of the patient, nor on the quality of life or the level of stress of the caregivers.

Conclusions: Communication skills in caregivers have proven to be essential to promote the quality of life of people with dementia, however, it is necessary to unify the methods, activities and specific training programs in order to provide a clearer guide that helps caregivers to have better interactions and skills to serve this population.

Keywords: Communication, dementia, caregivers

BACKGROUND

Dementias are a major public health problem in the world. This condition is characterized by the progressive decline in people's abilities both at the level of thinking, like language and speech, up to altering basic locomotion and feeding skills. This generates that the assistance of or after people to carry out daily activities, as well as supervision and assistance needed as the condition progresses and dependency increases.

In general, dementia is preceded by mild cognitive impairment (MCI) (1), which is characterized by an alteration of one or more cognitive domain, which, as usual, it is memory, but it does not generate disability, while dementia occurs when there is already an alteration of two or more cognitive domains and generates limitations for work or social interaction. The term dementia has fallen into disuse due to the social stigma it generates, so that in DSM V the term major neurocognitive disorders was coined (2).

In general, treatment is aimed at improving cognitive functionality, reducing behavioral and psychological symptoms, and stabilizing global functioning in activities of daily living. Pharmacological treatment depends on the clinical presentation of the symptoms and the level of tolerance to them; however, the pharmacological options currently have limited effectiveness (3). For this reason, non-pharmacological treatments are the most recommended option, which promote the quality of life of families and patients, since it provides support to live with the disease (4).

In general, non-pharmacological management is classified into four categories: holistic techniques, psychotherapy, cognitive methods, and alternative methods. The holistic approach is the one that seems to be most effective in managing symptoms, and includes counseling therapy, reminiscence therapy, validation therapy, and cognitive stimulation (5).

Both, in permanent care institutions such as geriatric homes, as well as in community care centers that do not require hospitalization, and these intervention strategies require the training of caregivers and facilitators in the use of behaviors and skills that facilitate communicative interaction with patients, since all therapies include verbal cues and non-verbal, handling of body and gestural language, intonation and the use of verbal formats adapted to the needs of the moment and the particular characteristics of each case.

Training in communication skills is one of the aspects included in healthcare services. The training of these skills in caregivers and facilitators who are in charge of people with major neurocognitive disorders. It is one of the interventions that has been shown to have a positive impact on the quality of life of individuals and their families.

The programs referred to in the literature for people with dementia and / or cognitive impairment are generally based on the training of specific skills that aim to maintain those skills, however, in the disease of Alzheimer's and other dementias, cognitive stimulation programs should target several processes where they complement each other (6).

Impaired communication in Alzheimer's disease (AD) may have an impact significant in the quality of life of people with dementia and their carers. This can be mitigated through the use of communication strategies; multiple authors such as Roque, et al (7), Brandao, et al (8), Gharavi, et al (9), and Alonso (10) have proposed a series of programs that seek, to establish how people's communication skills can be improved with cognitive impairments including dementia, observing, for example, a significant increase in the use of proposed strategies and that self-efficacy increased significantly over time and caregiver burden decreased significantly.

The importance of communicative interaction and in the elderly, they must play a fundamental role when it comes to quality of life, since it allows and facilitates participatory links with the social and family context. When the routine changes, friends are no longer in the same place, the family circle modifies, and the health condition interferes with the development of activities, this communicative interaction is disturbed and generates isolation and exclusion. Alterations specifically in the lexicon, syntax, and speech are the most affected in the elderly (11).

People with dementia suffer linguistic alterations of all kinds, it has been shown that the lexical-semantic and pragmatic components are much more deteriorated than the phonetic-phonological and morphosyntactic levels of language, which is why it is important to consider each of the components of language both in the evaluation and in the planning of communication skills promotion programs (12).

Communication methods and validation techniques and interventions typical of specific psychotherapies are also used. (13), which leads to a radical improvement in their quality of life with

the constant use of these programs, confirming, so, that training in communication skills in people with dementia and their carers does improve their interaction with their immediate environment.

Common dementia diseases in the elderly generate anguish in patients and their families, completely altering family dynamics, in addition to generating a high cost for society. Early diagnosis, advances in treatment, and future identification of its cause can reduce its negative impact (14).

The evidence on the description of language and communication in dementias points to them as early markers of deterioration. Semantic alterations predominate with a more noticeable loss of concepts in the specific than in the general. Semantic memory and connections between concepts may be responsible for disturbances at this level. Phonology, syntax, reading and writing show relative preservation in the initial stages of dementia (15).

When conducting a review of the state of the art of communication skills around dementia, there are innumerable investigations found , Nevertheless, few oriented to the creation of validated programs that contribute to improving the quality of life of patients. The case of these programs implemented with caregivers are much smaller, observing that, Generally, programs are delivered to patients as their primary objective, however, the primary caregiver is seldom taken into account.

On the other hand, the collection of evidence is required to understand how training programs aimed at caregivers can improve the skills of adults with dementia, in order to improve their daily performance. In particular, training in the communication skills of caregivers of adults with dementia It can improve the relationship, management and behavior of these people, taking into account that pharmacological management is insufficient.

The objective of this review of systematic reviews is to collect and gather the evidence available in systematic reviews on the impact of communication skills training programs aimed at caregivers of adults with dementia.

METHODS

In the systematic review He participated a team of two professionals in speech therapy. The review was carried out following the Cochrane methodology for conducting systematic reviews. Searches were carried out in English, in the databases MEDLINE®, the Cochrane library and Scopus®; In

Spanish, it was carried out in the SCIELO and BASE databases from 2010 onwards. A search strategy was developed based on MeSH® terms and the use of keywords from the texts found a priori.

Inclusion and exclusion criteria

The inclusion criteria are described in Table 1.

Table 1. PICO

Population	Caregivers of adults with dementia or neurocognitive disorders
Intervention	Communication skills training programs
Comparator	The review is not limited to comparators
Outcome	Communicative, cognitive and behavioral behavior of the adult with dementia
Study types	Systematic reviews of the literature

Search strategy

The types of studies that were part of the review were revisions systematic of literature that were carried out from 2010 to 2020 in the languages, Spanish, English and Portuguese. The following terms were used as keywords:

Spanish: communication, dementias, caregiver, nurses.

English: dementia and communication training.

Portuguese: comunicação, caretaker, demência, treinamento.

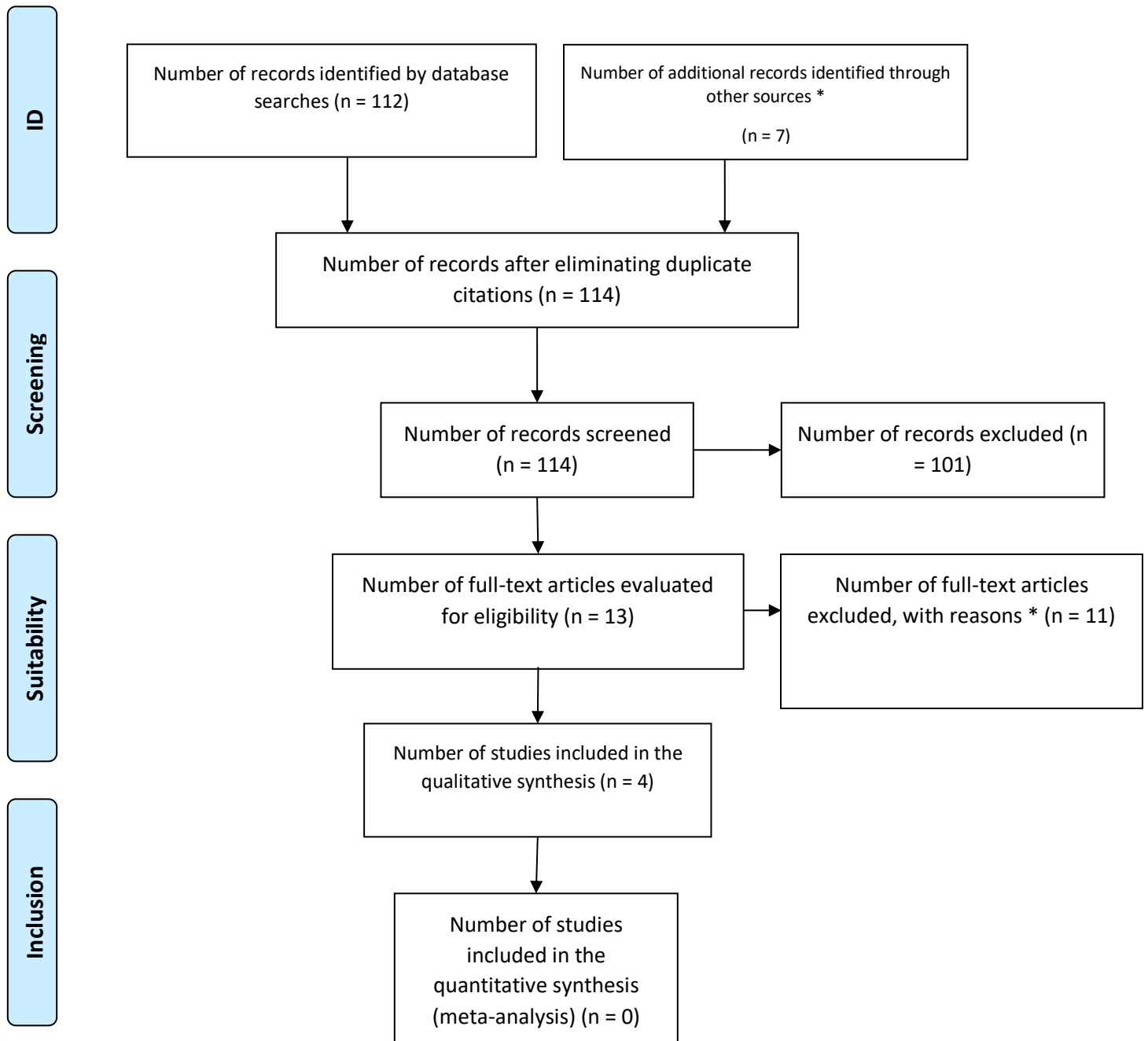
Six databases were reviewed: Pubmed, Scielo, Scopus, Cochrane, Base and Prospero as well as the lists of references that the search yielded and the first filter was made by title, then by abstract and finally the inclusion and exclusion criteria were applied until obtaining the articles to review the full text. The articles were organized in Excel® for your analysis. A gray literature search in Prospero was also performed to identify relevant unpublished research and a manual search in Google Scholar, Pubmed and Scielo.

Data collection and analysis

Selection of reviews

For the selection and reporting of the results, the PRISMA recommendations (16) were followed. The search results were organized in the Zotero bibliographic reference software[®] removing duplicates. Titles and abstracts of individually located studies were screened to identify potentially eligible studies for assessment using the AMSTAR checklist (17). Differences in evaluation were resolved by discussion by the authors. Studies that did not meet the eligibility criteria or were at high risk of bias were excluded.

Diagram 1. PRISMA



Data extraction and management

The extraction of the primary studies included in each of the reviews was carried out and the overlaps of the studies were identified, later the description of the characteristics of the studies was

made, according to: year, author, description of the intervention and main results of the intervention. For the synthesis, the studies chosen to extract the data were organized in relation to the results of the intervention in terms of impact on cognitive, communicative and behavioral performance of people with dementia. The extracted data was classified and coded.

Critical appraisal of the studies was performed using the AMSTAR checklist (Appendix 1). The primary studies included in the systematic reviews were extracted, the overlap of these studies was evaluated, and the results were described. The data were categorized according to the results obtained from the performance interventions. A narrative synthesis of each outcome or outcome was performed and the effectiveness measures were taken into account in each review.

RESULTS

The first systematic search, was carried out with the corresponding search terms caregiver + communication skills + dementias in the databases of SciELO, BASE, MEDLINE®, Cochrane library and Scopus®; againstnd in SciELO 113 items; in BASE, 3; Cochrane,0; Pubmed, 68; Scopus,267; However, these did not meet the inclusion criteria by title for the selection, so it was decided to carry out a second search with the terms corresponding to communication skills + dementias, after the search, 2 articles were found in the SciELO database; in base, 4; Cochrane,2; Pubmed, 73; Scopus, 29. The manual search found 7 articles: Pubmed, 3; Scielo, 1; Nure Iresearchon, 1; Dialnet, 1 and; Science Direct, 1.

Finally, and after the analysis of the inclusion criteria, was applied abstract screening and duplicates eliminated, where 114 systematic reviews were selected. Then the inclusion and exclusion criteria were evaluated, where 13 documents were obtained to review in full text (Appendix 2).

Description of the included revisions

The selected articles were evaluated using the AMSTAR checklist, which allowed the full text to be evaluated in order to determine their quality by the two evaluators. After this evaluation, 4 systematic reviews were included that met all the quality criteria to perform the qualitative synthesis. A summary of the characteristics of these studies is included in Appendix 3.

It was found that the study by Livingston G, et. to the. (18) is a systematic review that includes an economic evaluation of interventions carried out in people with dementia. Its purpose is to determine which non-pharmacological approaches works for agitation in dementia , for whom and in what context, whether or not they work immediately and in the long term, and whether or not they work, they represent good value for money. Inclusion and exclusion criteria and a broad search strategy were defined.

The risk of bias assessment was performed using the CEBM (Center for Evidence-Based Medicine) tool (19) ;Although an attempt was made to assess the risk of publication bias, it was not possible given the heterogeneity of the interventions and the way the results were measured in the studies. Selection biases were controlled by a broad search of different databases, expert opinion, searches for bibliographic references and translation of articles from other languages.

Furthermore, the review was carried out by two independent reviewers. They differentiated between interventions that treat current agitation and those that prevent emerging agitation (new, recurrent or increasing agitation), determining the level of agitation of the recruited participants specified in the inclusion criteria using a qualitative scale with a point of quantitative cut with the Cohen-Mansfield Agitation Inventory (CMAI). For the synthesis of the data the authors performed deviations and standardized results, and established standardized effect sizes (SES) of interventions with 95% CI, if data were available.

In the review by Nguyen H, et. to the. (20), the objective was to review communication interventions that aim to improve regular care interactions between people with dementia and their caregivers in various settings; and examine the impact of such interventions on both the caregiver and the recipient of care. The studies included in this review were published between 1998 and 2016, the final analysis included 17 systematic reviews of interventions that included training in communication skills for caregivers of people with dementia.

The methodology used was that proposed by the Cochrane group, it had a search strategy and two evaluators to control the risk of selection bias. Studies were included that evaluated any type of intervention at the level of verbal and non-verbal communication, in people diagnosed with dementia and caregivers both in specialized institutions or in homes. The type of study included was RCTs (andnsayos clynics torandomized), ECNAs (andnsayos clynics no torandomized) and andstudios pre- post. Studies in languages other than English were not reviewed because there was no possibility of guaranteeing their translation.

The methodological evaluation of the studies was assessed using the criteria recommended by Cochrane. Studies that had comparable quantitative data were included in five meta-analyzes to measure the effects of interventions on caregiver communication, physiological outcomes, and on neuropsychiatric symptoms of people with dementia, p less than 0.05 were considered significant .

The standard deviations of the measurements made, in the cases in which it was possible, the mean difference between the values before the intervention and after the intervention, was calculated. Due to the heterogeneity of the scales to measure the results, the standardized mean difference was calculated. The authors reported a publication bias, which they adjusted for the Duval and Tweedie method (21) in order to identify the possible effect of missing studies.

In the study by L Morris, et.al (22) the aim was to update previous reviews and provide a more detailed description of the efficacy, acceptability and conceptual basis of communication training interventions for caregivers of people with dementia. The authors used the methodology for systematic reviews recommended by Cochrane.

Quantitative and qualitative studies were included in this review, for 21 included studies. The quality of the included studies was assessed from the PRISMA statement for quantitative studies, and Walsh and Downe criteria (23) were used for qualitative studies. 38 studies with pre-post evaluations, such as RCTs, cohort studies and open-label trials, were included with a time range of andnero 2010 to the end of nNovember 2016, which met the eligibility criteria and methodological quality. An analysis of the conceptual basis of the intervention, the effects on caregivers and families, and on people with dementia was carried out. No evaluations of study heterogeneity were made, and summary measures were not established, as the criteria for a meta-analysis were not met.

In their studio Mariska Machiels, Silke F Metzelthin, Jan PH Hamers, Sandra MG Zwakhalen (23), searched different sources of information in order to provide an up-to-date overview of the

communication interventions that are applicable during daily nursing care activities, regardless of the care setting, and to describe the effects on the communication in people with dementia and nursing staff. Studies were searched up to 23 February 2016, that they were RCTs and that they evaluated the effectiveness of the communication skills training of nursing personnel who care for people with dementia. The systematic review methodology recommended by Cochrane was used. Six studies were included in the analysis after performing the methodological quality assessment.

All studies included interventions in centers of long care term, with training in communication skills for nursing focused on improving communication skills that can be used in daily activities of caring for people with dementia. Risk of bias was assessed using the Cochrane risk of bias assessment tool. No meta-analysis of the studies was carried out; however, a qualitative synthesis of the characteristics of the interventions and the effects on verbal and non-verbal communication of patients with dementia is presented.

Assessment of overlap of the primary studies included in the systematic reviews was performed. Of the 204 studies included in total in all reviews, 8 were found to overlap, representing 3.9% of overlap (Table 2).

Table 2. Study overlap analysis

	1	two	3	4
	Livingston G, Kelly L, Lewis-Holmes E, Baio G, Morris S, Patel N, Omar RZ, Katona C, Cooper C.	Hoang Nguyen 1, Daniel Terry 2, Hoang Phan 3, James Vickers 1, Fran McInerney 1	L Morris 1 2, M Horne 1 3, P McEvoy 1, T Williamson 2 3	Mariska Machiels, Silke F Metzelthin, Jan PH Hamers, Sandra MG Zwakhalen
Primary studies	A systematic review of the clinical effectiveness and cost-effectiveness of sensory, psychological and behavioral interventions for managing agitation in older adults with dementia.	Communication training and its effects on carer and care-receiver outcomes in dementia settings: A systematic review	Communication training interventions for family and professional carers of people living with dementia: a systematic review of effectiveness, acceptability and conceptual basis	Interventions to improve communication between people with dementia and nursing staff during daily nursing care: A systematic review

Alnes et al. (2011) Norway		X	X	
Broughton et al., 2011		X	X	
Conway & Chenery, 2016		X	X	
Liddle et al. (2012)		X	X	
Magai et al. (2002), USA	X	X		X
McCallion et al., 1999	X	X		
Sprangers et al. (2015) Netherlands		X	X	X
Wells et al. (2000), CanadaRCCT	X	X		X

Effects of interventions

The strategies and programs included in the systematic reviews are heterogeneous and vary in intensity, frequency and activities. Livingston G, et. to the. (18) report interventions that were classified according to activities that included music therapy, sensory stimulation, cognitive stimulation, aromatherapy, animal-assisted therapy, light stimulation, education, behavioral therapy, communication skills, and person-centered care, mdementia care management (DCM), communication skills and behavior management, and environmental change approaches.

This review reports that person-centered care, communication skills and the application of DCM (Dementia Care Mapping), sensory therapy, and structured music therapies reduce behavioral agitation in people with dementia. It cannot be affirmed with certainty that, with the study data, that training in communication skills in caregivers significantly changes the behavior of older adults, however, it does affirm that the approach to this type of problem must be carried out personally trained in these aspects. On the other hand, the interventions that demonstrated an improvement over a period of more than 6 months in the behavior of people with dementia, had a continuous and prolonged implementation over time (3 months to 2 years).

The review by Nguyen, et. to (20) reports that the results of the studies included in the meta-analysis demonstrate an improvement in the communication of caregivers, after going through the intervention compared to those without statistical significance (difference media andstandard: 0.86; CI 0.56-1.22; $p < 0.001$). It must be taken into account that the confidence interval passes through the null value, which indicates little power of the sample, in addition to the fact that a high heterogeneity of the studies was demonstrated, mainly due to their design.

The improvements in the communication of the caregivers were related to a decrease in the difficulties to communicate, the communication skills especially in the decrease in the use of negative statements, behavioral management skills, knowledge about support strategies and in general behaviors for interaction (25), (26), (27). Respect of effects on the neuropsychiatric status of patients, no significant effect was found in studies with RCT design (Standard Mean Difference 0.12, 95% CI -0.50, 0.74), however, in the designs pre- post intervention, in which meta-analyzes were performed, if a significant effect was identified (28), (29) with a Standard Mean Difference of 0.62 (95% CI 0.34, 0.90; $p < 0.001$).

The study by L Morris, et. to the. (22), shows that regarding the conceptual basis of communication interventions, there is great variability, since the programs include particular aspects and others include aspects that are more general. The importance of training in the use of communicative signals of people with dementia and the need to adopt an open attitude has been highlighted. On the other hand, it was identified that the training programs focused on aspects such as eye contact, maintaining the use of simple language and avoiding distractions. However, it is not taken into account if the person with dementia knows that the caregiver is trying to communicate with him (30). In other studies (31) (32), they focus on the use of keys, formulas and specific expressions, and communicative effectiveness is evaluated based on it.

Regarding the effectiveness in increasing knowledge about communication, it is reported that knowledge increased, but longitudinal follow-up data indicated that these advances may decline over time. AND These improvements are related to knowledge in the use of behavioral management strategies, including communication strategies, such as the use of visual cues, familiar expressions, and interesting and familiar conversation topics (33). No relevant evidence was found environment to the effects on the quality of life, psychological and emotional state of the caregivers who underwent an intervention in communication training. No evidence related to the impact on the state is reported neuropsychiatric and behavioral of the patient with dementia.

In the study by Machiels, et. to the. (24) it is reported that the duration of the interventions was between 20 to 30 minutes, including training in non-verbal communication skills of the nursing staff. The training covered topics related to basic emotions, expression of emotions, personal emotional triggers, and recognition of emotions (34). Other programs included training in verbal communication for the use of short instructions, positive speech and limiting the use of ineffective communication, using biographical data and using topics of interest, in addition to receiving feedback. In addition to verbal communication training, other studies included non-verbal communication training, such as learning to understand the patient's signals, increase communicative interaction and social skills (35), (36), (37). The systematic review reports that it is not possible to determine how communication between nursing staff and people with dementia can be improved, based onto weigh of the existence of various communication techniques to improve interaction with these people.

DISCUSSION

In the analysis carried out, the interventions in training in communication skills and person-centered attention, and in communication skills and behavior management, they showed an improvement in the communication of caregivers, with a statistical significance (Standard Mean Difference: 0.86; CI 0.56-1.22; $p < 0.001$) (20). The improvements in the communication of the caregivers related to a decrease in their difficulties to communicate, the use of negative statements, behavioral management skills, knowledge about the use of support strategies and interaction. These knowledge maintains over time, however, they fade with the passage of time.

On the other hand, Machiels, et. to the. (24) report that it is not possible to determine how communication between nursing staff and people with dementia can be improved, despite the existence of various communication techniques to improve interaction with these people. There is also no evidence that this type of intervention has an impact on the neuropsychological state of the patient, nor on the quality of life or the level of stress of the caregivers.

The impact and importance, of the communication skills of caregivers of people with dementia has been documented, as has the need for training in them, however, there is little evidence of the impact that this training has on the daily performance of the people with dementia. Although it is true that decreased agitation has been documented, it is not clear how it is achieved through the communication skills of the caregiver. Therefore, there is no clear communication skills training methodology for caregivers of adults with dementia, nor is there a clear guide on how communication can impact quality of life.

Of the 4 systematic reviews included in this study, one was registered in PROSPERO There was a 3.6% overlap of primary studies, explained because only one review was registered in PROSPERO, all of them followed the systematic review methodology established by the PRISMA statement and used evaluations of methodological quality of the studies, however, the evaluation of the risks of bias is not clear in 2 studies. Meta-analysis was performed in only one study, which indicates high heterogeneity between the primary studies, so it is not necessary to state that the results are consistent and applicable.

The included systematic reviews were chosen because they met the inclusion and exclusion criteria, and the assessment of methodological quality, however, the assessment of potential biases was not a determining factor for their inclusion in the analysis, which could introduce some selection bias.

CONCLUSIONS

Due to the increase in life expectancy in the population, there is an increase in the prevalence of chronic diseases, such as dementias, a health condition that affects the quality of life of the elderly, their families and their environment. Therefore, it is important to develop research on the interventions that are carried out during their care, particularly in the training of personnel who provide care in institutions or at home.

Communication skills in caregivers have proven to be essential to promote the quality of life of people with dementia, however, it is necessary to unify the methods, activities and specific training programs in order to provide a clearer guide that helps caregivers to have better interactions and skills to serve this population. Therefore, more research is required in this field to collect sufficient quality evidence to improve the practices of caregivers of people with dementia.

REVIEW REFERENCES

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CONFLICT OF INTEREST DECLARATION

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