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Cognitive behavioral interventions for emotional management in the caregiver population. A systematic review

Intervenciones cognitivo conductuales para el manejo emocional en población cuidadora. Una revisión sistemática

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ABSTRACT

This research aimed to examine cognitive-behavioral interventions applied to caregivers between 2012 and 2022 for the management of emotions. Scielo, Scopus, and WOS databases were searched between February and March 2023. Of 397 articles, 18 were selected for final analysis. The studies, mainly randomized controlled trials, focused on individual, face-to-face, short-term interventions. Significant improvements were observed in variables such as depression, anxiety, emotional well-being, stress, and caregiver burden. The most commonly used techniques included problem-solving, coping strategies, and breathing exercises. Virtual interventions were the most common. Cognitive-behavioral interventions have proven to be effective, with the active participation of caregivers. Virtual modalities complement traditional ones. Emotional regulation and problem-solving techniques are particularly effective. More research is needed to refine these interventions and improve caregiver well-being.

Keywords: caregiving, intervention, population, review.

JEL Classification: I0, I11, I18

RESUMEN

Esta investigación tuvo como objetivo examinar las intervenciones cognitivo-conductuales aplicadas a cuidadores entre 2012 y 2022 para el manejo de las emociones. Se realizaron búsquedas en bases de datos Scielo, Scopus, WOS entre febrero-marzo 2023. De 397 artículos, se seleccionaron 18 para el análisis final. Los estudios, principalmente ensayos controlados aleatorizados, se centraron en intervenciones individuales, presenciales y de corta duración. Se observaron mejoras significativas en variables como depresión, ansiedad, bienestar emocional, estrés y carga del cuidador. Las técnicas más utilizadas incluyeron resolución de problemas, estrategias de afrontamiento y ejercicios de respiración. Las intervenciones virtuales fueron las más comunes. Las intervenciones cognitivo-conductuales han demostrado ser efectivas, con participación activa de cuidadores. Las modalidades virtuales complementan las tradicionales; las técnicas de regulación emocional y resolución de problemas son particularmente eficaces; y es necesaria mayor investigación para perfeccionar estas intervenciones y mejorar el bienestar de cuidadores.

Palabras clave: cuidado, intervención, población, revisión.

Clasificación JEL: I0, I11, I18

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INTRODUCTION

Caregivers, whether formal or informal, face emotional challenges that can affect their well-being and quality of life (Cohen et al., 2020; Pérez et al., 2024). As a social practice, caregiving involves performing diverse tasks that require effort, energy, and activities that jeopardize the caregiver's own health (Biliunaite, Dumarkaite, et al., 2021; Luichies et al., 2021; Sabo & Chin, 2021).

The impact of negative emotions on caregivers' quality of life and psychological well-being is described as one of the

main effects of the role, accompanied by physical exhaustion, which can lead to chronic physical and psychological illnesses. In this context, cognitive-behavioral interventions emerge as a promising option for emotional management in the caregiver population (Fossey et al., 2021; Han et al., 2020; Verreault et al., 2021).

This approach focuses on developing skills to identify and modify negative or distorted thoughts, as well as harmful behavior patterns. In this regard, cognitive restructuring techniques, social skills training, gradual exposure, and problem-solving have proven highly effective. These types of interventions aim to promote positive changes in the way people think, feel, and behave (Brown et al., 2020; Rico-Blázquez et al., 2021).

Several researchers point out that the implementation of interventions aimed at the well-being of family caregivers contributes to a reduction in burden, improved family functioning, the establishment of limits, goals, and family commitments, and a reduction in emotional disturbances in the caregiver (Martínez et al., 2022).

Recent research has evaluated the role of cognitive-behavioral interventions in caregivers' emotional management (Losada et al., 2015; Kwon et al., 2017). These studies have shown encouraging results, demonstrating that these interventions can reduce stress, depression, and anxiety in caregivers and strengthen coping skills.

Despite advances in our understanding of cognitive-behavioral interventions for emotional management in caregivers, there are still areas that require further research. To achieve this, it is necessary to provide better conditions for caregiving and offer support for dependent patients and caregivers. To date, there is a lack of methodological tools that allow for the comprehensive systematization, compilation, and analysis of available studies on cognitive-behavioral interventions in this population. This systematic review aims to describe the cognitive-behavioral interventions used with caregivers between 2012 and 2022 for emotional management.

METHODOLOGY

This research is based on a systematic review. Systematic reviews are distinguished as theoretical studies of high scientific quality, employing explicit and systematic methods that limit bias and provide more reliable results (Stern et al., 2021).

Eligibility Criteria

According to the literature, the eligibility criteria clearly establish the characteristics of the participants, interventions, comparators, and outcomes to be included in the review (Helbach et al., 2023). The acronym PICO is used to define the study population (caregivers), the intervention or treatment being evaluated (intervention), the comparison of that intervention (cognitive-behavioral), and the outcomes (Cumpston et al., 2020).

The following table lists each of the criteria and sources used for the review.

Table 1.
Eligibility criteria

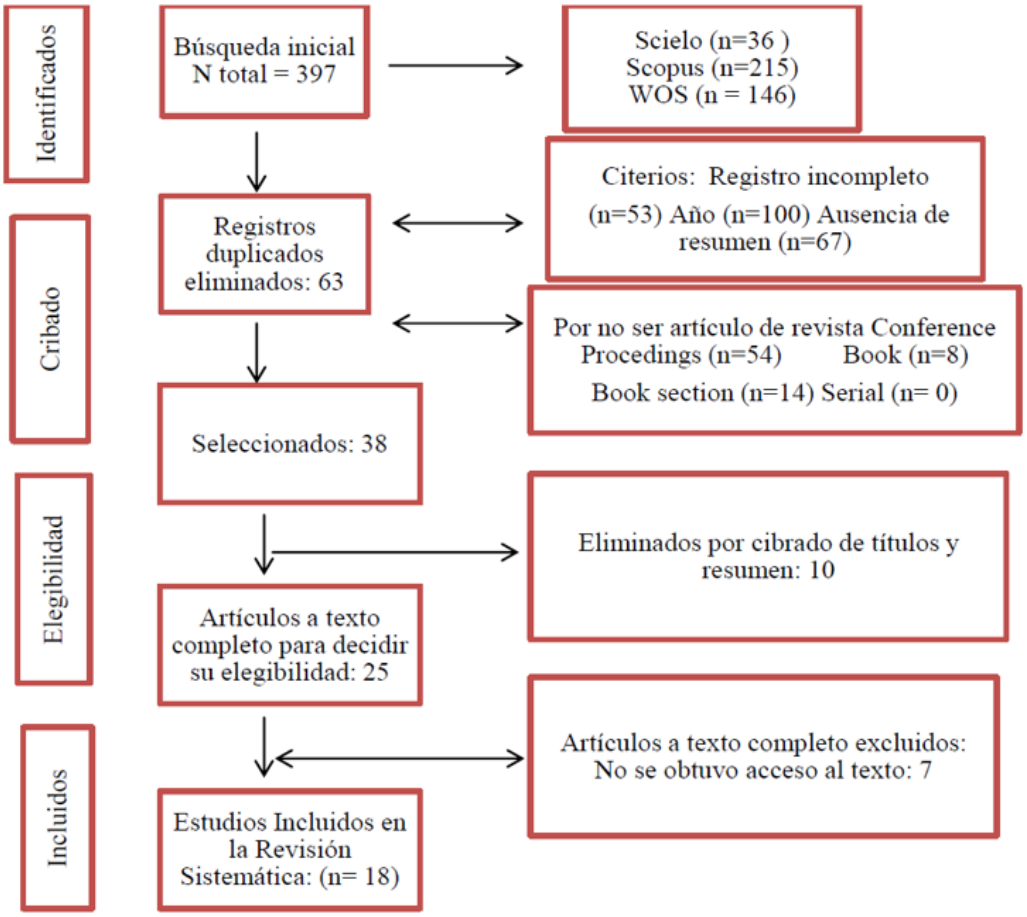
Criteria	Description
Databases	Scopus, WOS, Scielo
Descriptors	Intervention, Caregiver, Emotions, CBT
Descriptor Location	Article, title, abstract, or keywords
Temporal	2012-2022 / February 20 to March 28, 2023
Research Areas	Psychology
Document Type	Original research article
Language	Spanish / English
Exit Criteria	Article overlap effect

Source: own elaboration

Search Process

A search sequence was used based on the components title, abstract, and keywords, using the equation (caregivers OR caregiver) and (cognitive-behavioral) and (emotions OR emotions) and (program OR intervention). The definition of the descriptors initiated the search, selection, and data analysis process for a total of 397 articles.

Figure 1.
Article selection process for review



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Data Extraction and Analysis Process

The selected articles were analyzed qualitatively, using content and dimensional analysis. Indicators were established for data processing and the construction of tables, graphs, and matrices.

RESULTS

Description of the cognitive-behavioral interventions used

Table 2 describes the interventions and organizes them by type of therapy, sessions, therapeutic tasks, modality, and duration.

Table 2.
Description of the interventions

Author and year	Type of intervention	Description of the intervention
Applebaum *et al.* (2018)	Emotional Regulation Therapy for Caregivers of Cancer Patients (ERT-C)	8 weekly sessions, each lasting one hour, are delivered individually. Homework exercises are assigned after each session to facilitate learning and consolidation of ERT-C skills
Banningh *et al.* (2013).	Group psychological intervention	10 weekly group sessions, two hours each. Each group consisted of five to eight patients accompanied by their partner, child, relative, or close friend. For the first 90 minutes, patients and caregivers worked in separate groups. For the remaining 30 minutes, they met together.

Biliunaite *et al.* (2021)	Internet-based psychological intervention (ICBT)	ICBT program with 8 modules, one for each topic. Duration: 8 weeks.
Boele *et al.* (2013)	Psychological intervention	Individual, fully protocolized sessions with a psychologist were held with the caregivers every two weeks, for a maximum of six one-hour sessions.
Chauhan *et al.* (2021)	Individual psychological intervention	45-minute sessions twice a week, for 8 weeks.
Chiu *et al.* (2015)	Individual psychological intervention	It was administered in the clients' homes in three sessions, lasting 3 and 4 weeks.
Ferré-Grau *et al.* (2014)	Intervention with Problem-Solving Therapy	5 sessions. It was conducted by nurses during their routine weekly visits to the caregiver's and patient's homes.
Fidika *et al.* (2015)	Web-based intervention	Once a week, a writing assignment was to be completed within a standard 45-minute timeframe. Caregivers provided written responses to nine standardized writing assignments and received individualized feedback on each submission from their therapist within 48 hours.
Franta *et al.* (2018)	Group psychological intervention	The material from The New Maudsley Method was adapted as an 8-week therapeutic intervention for use with caregivers of children and adolescents.
Fuller - Tyszkiewicz *et al.* (2020)	Intervention via a mobile app	StressLess, a 5-week self-directed intervention delivered via a mobile app. Psychoeducation and interactive exercises are provided.
Gallego-Alberto *et al.* (2021)	Group psychological intervention	8 group sessions of approximately 2 hours.
Kwok *et al.* (2014)	Online psychological intervention	Individually, through a website created for this intervention, ADCarer.com. For 9 weeks. This was done through two-way messaging between the counselor and the individual subjects.
Meichsner *et al.* (2019)	Online psychological intervention	Through the Tele.TAnDem.online platform. Through written messages between the therapist and the caregiver. For 8 weeks.
van Groenestijn *et al.* (2015)	Psychological intervention	This was conducted with patients and their caregivers. The sessions were 1-hour sessions, often consisting of 5 to 10 sessions over a 16-week period. Depending on the problems perceived by the patients and caregivers, the sessions were conducted individually (patient or caregiver) or in pairs (patient and caregiver).
Vázquez *et al.* (2016)	Group psychological intervention	5 weekly 90-minute sessions, with groups of 5 people.
Wilz *et al.* (2018)	Telephone psychological intervention	Intervention via Tele.TAnDem. 12 individual therapy sessions over 6 months. The first 4 sessions were held weekly, the remaining 6 biweekly, and the final 2 monthly.
Wilz, G. and Soellner, R. (2016)	Telephone psychological intervention	Intervention via Tele.TAnDem. The first four sessions were held weekly, sessions 5 to 6 biweekly, and session 7 one month later, for a total intervention duration of three months. The first session was held in person at the caregiver's home. All subsequent sessions were conducted by telephone.

Source: own elaboration

The analysis shows that the psychological interventions used virtual methods via the Internet, a website, and a mobile app were alternatives, which constitutes a novel methodological requirement. The studies by Wilz et al. (2018) and Wilz, G., and Soellner, R. (2016) conducted psychological interventions by telephone, while Glueckauf et al. (2012) combined this modality with face-to-face intervention. The use of group psychological interventions is another important contribution, highlighting the combination of this modality with individual interventions declared only in the internal description of the programs. In particular, the studies by Applebaum et al. (2018) and Ferré-

Grau et al. (2014) used Emotional Regulation Therapy and Problem-Solving Therapy as part of their interventions; these therapies are an effective alternative for the treatment and emotional management of caregivers.

Regarding sample size, it ranged from 4 to 273 participants; in 12 of the articles, it was less than 100, and 6 exceeded that number. Only the study by Wilz et al. (2018) reached a sample of more than 200 caregivers. From the analysis of participants, it was determined that 14 studies defined an intervention group and a control group as requirements for their intervention. In 6 of the studies reviewed, the intervention groups had a larger sample size than the control group, and in 3, the reverse was true.

The most commonly used methodological design was the randomized controlled trial for 9 of the selected studies. Research by Applebaum et al. (2018) responds to an open-label trial, which significantly reduced variables such as anxiety and depression and improved emotional regulation skills. For their part, Banningh et al. (2013), based on a non-randomized pragmatic design, reduced stress levels, increased knowledge, perception, and coping skills. For their part, the work of Chauhan et al. (2021) stands out for its experimental study, significantly improving coping strategies and reducing anxiety.

Additionally, the study by Chiu et al. (2015) is notable for its matched cohort design, showing significant improvements in coping, mastery, burden, and stress. Towards other vortices, Fidika et al. (2015) developed a single-group intervention study, which succeeded in reducing anxiety and increasing quality of life. Kwok et al. (2014) conducted a pretest-posttest design that allowed control of behavioral and psychological symptoms of caregiver dementia and reduction of distress.

Other pilot studies with randomized controlled trials and pre-post designs are evidenced. The sample selection was randomized for 9 of the investigations, which is an important methodological condition. This procedure offers the researcher the assurance that unknown variables will not affect the study's results and ensures equivalence between groups (Little et al., 2020).

Regarding the control groups, seven interventions did not define them; this constitutes a significant limitation for the studies. Two studies did not provide care, and four used the usual care provided by the health center to the caregiver. Three of the interventions were delivered using a waiting list, and another two adopted the intervention strategy with some modifications different from the experimental group. For these studies, minimal support was offered, a different sample was used, or a simpler task was implemented. Experimental groups constitute the methodological alternative par excellence for implementing the designed intervention programs.

The homes of family members and caregivers are established as the most frequently used implementation context among the studies analyzed. Interventions developed in clinics and health centers are also recognized. Banningh et al. (2013) worked with caregivers of hospitalized patients, as well as Biliunaite et al. (2021), Fidika et al. (2015), Fuller-Tyszkiewicz et al. (2020), Kwok et al. (2014) and Meichsner et al. (2019) used technological means such as websites, mobile applications and digital platforms.

Effectiveness of cognitive behavioral interventions

Regarding the intervention program design, a wide variety was found, and 9 interventions were identified, each with a generic designation based on the psychological alternative to be implemented. The studies by Applebaum et al. (2018), Gallego-Alberto et al. (2021), and Vázquez et al. (2016) were declared as emotion regulation therapy interventions. The studies by Fidika et al. (2015), Kwok et al. (2014), and Meichsner et al. (2019) were highlighted as using website technologies. The interventions by Wilz, G. and Soellner, R. (2016) and Wilz et al. (2018) were highlighted using Tele.TAnDem.

A mobile application supported the study by Fuller-Tyszkiewicz et al. (2020). Six cognitive-behavioral interventions were identified, each multicomponent, biopsychosocial, and using problem-solving techniques. The therapeutic strategies included culturally informed therapy, cognitive-behavioral therapy, a guided self-help manual based on cognitive-behavioral therapy, emotional regulation therapy, and problem-solving therapy.

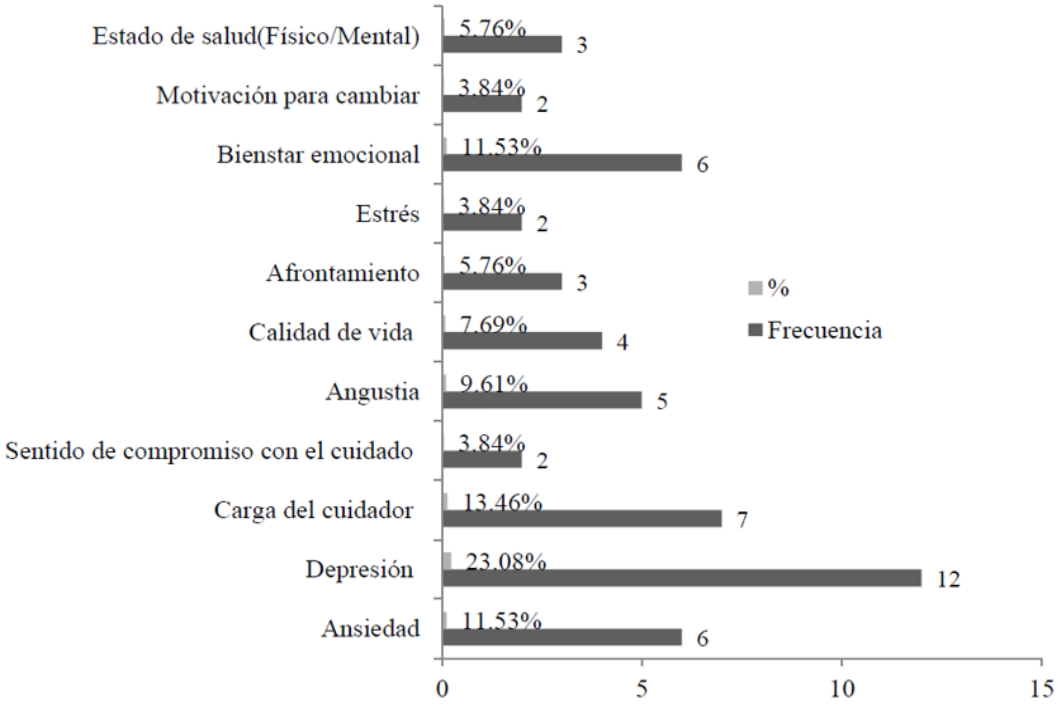
Generally, the objectives of the intervention programs were aimed at reducing anxiety, depression, stress, feelings of guilt, risk of developing mental disorders, and burden through the development of coping skills and strategies. These resources would improve the caregiver's emotional well-being and quality of life, promote a proactive lifestyle, improve physical and emotional capacity, and increase their ability to cope with demands.

Eleven of the selected articles stated the psychotherapeutic techniques used during the intervention, allowing for their review and adjustment for other similar interventions. It was evident that several reviewed studies used problem-solving, relaxation, breathing, thought management, coping strategies, role-playing, writing exercises, and meditation as specific techniques for the caregiver population (Fernández-Puerta et al., 2022; Mosley et al., 2021).

The most frequently used psychotherapeutic techniques in four of the reviewed studies were problem-solving, coping strategies, and breathing. Furthermore, the use of cognitive restructuring, role-playing, thought management, and relaxation techniques were identified as other valuable psychotherapeutic techniques.

Of the 18 research studies consulted, only that of Vázquez et al. (2016) specifies the study's independent variable but not the dependent variable. Three of the publications define primary and secondary outcomes, while only Wilz et al. (2018) defines secondary outcomes. Fidika et al. (2015) define the main variable, and Franta et al. (2018) defines the variables for caregivers and patients. The following graph shows that symptoms of depression, caregiver burden, anxiety levels, and emotional well-being are the most frequent emotional variables among the caregiver population. Regarding the affective-emotional dimension, at least 14 studies focused on mood, expression, regulation, and emotional burden, positive, negative, and self-conscious emotions such as guilt.

Figure 2.
Frequency distribution of evaluated variables



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Regarding the duration of the interventions, it is recognized that 11 lasted 2 to 3 months, the minimum duration was 3 to 4 weeks, and the maximum was 5 months. The most commonly used format was individual in 11 of the studies; the in-person format was the most widely used, and only 5 studies were delivered remotely. The shortest intervention lasted a minimum of 3 to 4 weeks, with three one-hour sessions conducted by Chiu et al. (2015), and the maximum number of sessions achieved was 20 by Meichsner et al. (2019).

Figure 2 shows interventions with a distribution of 3 to 20 sessions, while the studies by Boele et al. (2013), Fidika et al. (2015), Fuller-Tyszkiewicz et al. (2020), Kwok et al. (2014), Wilz et al. (2018), and Wilz et al. (2016) do not specify the number of sessions achieved. Frequency analysis identified that 7 studies conducted their sessions once a week, and only Chauhan et al. (2021) conducted them twice a week. The remaining studies did not specify the frequency of sessions per week. Only 6 studies specified the duration of each session.

All implemented interventions had two measurement moments, one before and one after implementation, except Boele et al. (2013), Kwok et al. (2014), Meichsner et al. (2019), and Vázquez et al. (2016), which did not state their procedures. Only van Groenestijn et al. (2015) proposed the follow-up duration of the study, with a period of 4 and

10 months after the intervention ended.

The following table shows the effects of the intervention programs used in each article, taking into account significant reductions, improvements, and effects.

Table 3.
Description of the effects of the intervention programs

Study	Effects
Applebaum, *et al. et al.* (2018)	Significant reductions in depressive and anxiety symptoms, PNT, and emotion regulation deficits were reported. Emotion regulation skills were improved. There were no significant reductions in caregiver burden.
Banningh, *et al.* (2013)	There were no statistically significant effects on sense of competence, well-being, distress, illness cognitions, and alertness to memory changes. Qualitatively, a reduction in stress levels and gains in knowledge, insight, and coping skills were reported.
Biliunaite *et al.* (2021)	Moderate effect sizes were found between and within groups for reducing caregiver burden in the intervention group. Significant post-treatment reductions were observed for the physical health and development subscales.
Boele *et al.* (2013)	The intervention helped caregivers maintain a stable level of quality of life and improved caregivers' sense of mastery over an 8-month period.
Chauhan *et al.* (2021).	Significantly improved coping strategies, statistically significant reduction in anxiety, avoidance coping, and emotion-focused coping.
Chiu *et al.* (2015)	Caregivers in the intervention group showed significant improvement in task-oriented coping, mastery, and competence and a significant reduction in emotion-oriented coping, burden, and stress.
Ferré - Grau *et al.* (2014)	There was a reduction in symptoms of anxiety, depression, and emotional distress perceived by family caregivers. PRT is cost-effective.
Fidika *et al.* (2015).	Anxiety was reduced in a clinically significant way. Quality of life increased. No significant effects on coping were found.
Franta, C., Philipp *et al.* (2018)	No results are declared based on the variables.
Fuller-Tyszkiewicz *et al.* (2020)	The intervention group experienced improvements in the primary outcomes of stress, depression, anxiety, and subjective well-being during the intervention period, despite using only a small number of the treatment modules offered, and further improvements in mental health and outlook were observed at the 3-4 month follow-up.
Gallego-Alberto *et al.* (2021)	Three of the four participants showed clinically significant changes in reducing feelings of guilt, depression and anxiety levels.
Glueckauf *et al.* (2012)	Caregiver burden and depression were reduced, and care support was increased for both in-person and remote caregivers. The effect on physical symptoms was smaller than on the other measures.
Kwok *et al.* (2014)	It was effective in helping caregivers manage their behavioral and psychological symptoms of dementia. They felt less distressed and significantly reduced their severity. It did not significantly improve self-efficacy.
Meichsner *et al.* (2019).	Significant treatment effects with medium effect sizes were found for coping with the anticipated death of the care recipient and psychosocial resource utilization at the end of the intervention period. There were no significant effects for depression and caregiving burden. Emotional well-being increased linearly over time. Overall satisfaction with the treatment was excellent.
van Groenestijn *et al.* (2015)	For caregivers, significant intervention effects were found on two outcome measures, the SF-36-MCS and the CSI. Caregivers' mental health quality of life appeared to improve in the trial group, but deteriorated in the control group. Caregivers in the control group experienced increasing amounts of caregiver burden, but caregiver burden in the trial group did not change, suggesting positive influences of the CBT intervention. The effect on psychological distress was not significant.
Vázquez *et al.* (2016)	The preventive effects of the intervention were maintained for one year after the intervention ended. At 12-month follow-up, there was a lower incidence of major depressive episodes in the intervention group compared to the control group, and approximately one new case

	of depression was prevented for every five caregivers treated with this intervention. The significant reduction in depressive symptoms in the intervention group was maintained over the 12-month follow-up, with a large effect size. The intervention was more beneficial for younger caregivers. The change in depressive thoughts (pretest-posttest) facilitated the reduction of depressive symptoms.
Wilz *et al.* (2018)	Caregivers in the intervention group showed improvements in their well-being, symptoms of depression, physical symptoms, and ability to cope with the burden of care and the care recipient's challenging behavior. No differences were found between groups regarding the burden of care.
Wilz, G., and Soellner, R. (2016)	Caregivers in the intervention group showed improvements in well-being compared to both control groups. Caregivers in the trial group reported a reduction in bodily discomfort (global measure) and burnout compared to the untreated control condition. At the 6-month follow-up, improvements in perceived health emerged for those in the trial group compared to the untreated control condition. Participants in the PMR group reported an increase in depressive symptoms compared to the trial group.

Source: own elaboration

Figure 3.
Effects achieved in the research

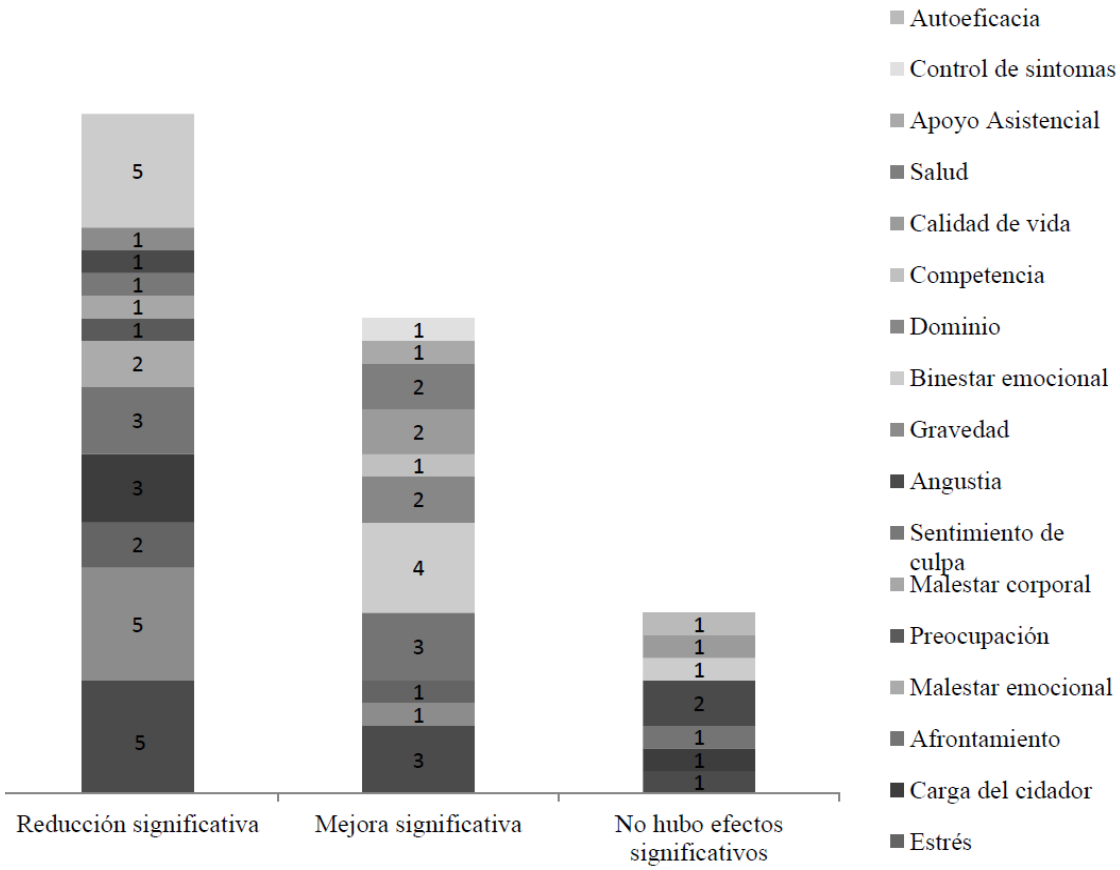

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Figure 3 shows the frequency of effects across the 18 studies. Regarding significant reductions, the effects were associated with a reduction in depression, anxiety, and increased emotional well-being, representing five studies each. Meanwhile, the studies by Fuller-Tyszkiewicz et al. (2020), Vázquez et al. (2016), and Wilz et al. (2018) show significant improvements in depression; only one improvement in anxiety and emotional well-being was found in four of the articles. Reductions in stress levels were achieved in the studies by Banningh et al. (2013) and Chiu et al. (2015), where significant changes were observed.

A frequency of 3 investigations (Biliunaite et al., 2021; Chiu et al., 2015; Glueckauf et al., 2012) is manifested that show significant decreases in caregiver burden. Concerning coping, 6 studies highlight significant reductions and improvements for this variable. Applebaum et al. (2018) and Ferré - Grau et al. (2014) demonstrate significant

reductions in emotional distress, and only Banningh et al. (2013) and Groenestijn et al. (2015) do not report effects on distress. Only 2 of the investigations (Boele et al., 2013 and Chiu et al., 2015) show relevant improvements in the caregiver domain, particularly in the variables quality of life and health with a frequency of 2 each.

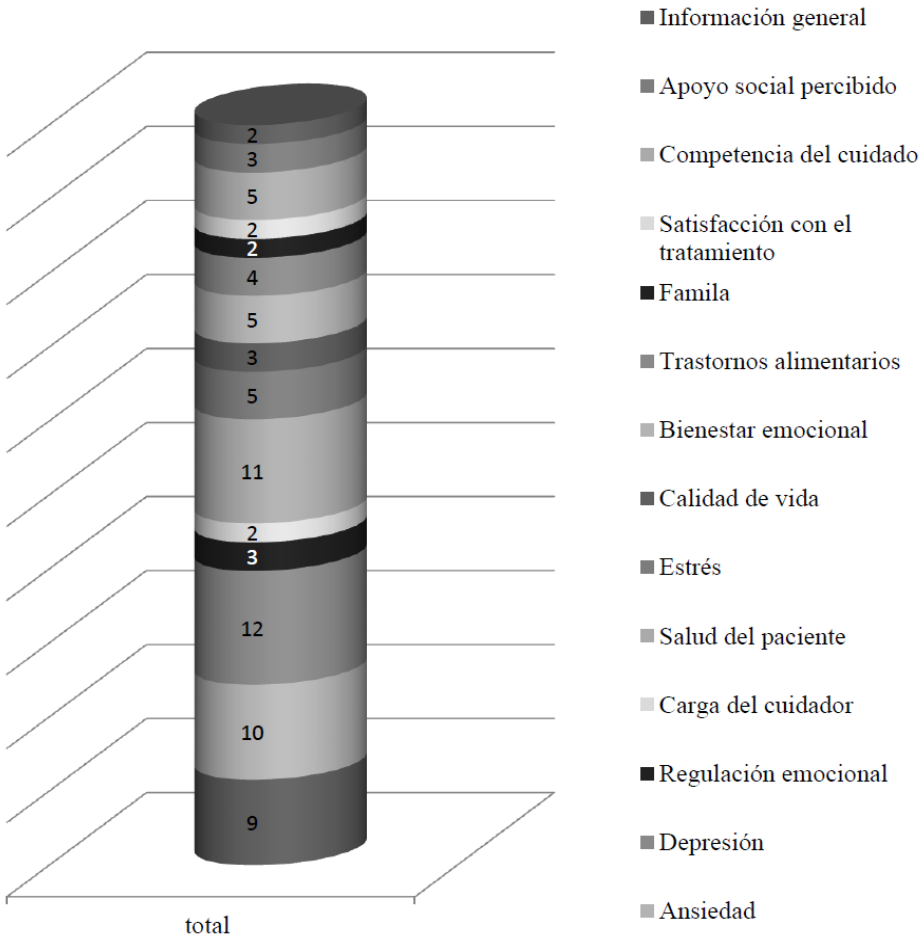
Figure 4 shows the most frequently assessed variables and psychotherapeutic techniques. The most frequently assessed emotional variables were depression and anxiety, with 12 and 10 studies representing the variables, respectively. The Hospital Anxiety and Depression Scale (HADS), the Geriatric Depression Scale, the Goldberg Anxiety and Depression Questionnaires, the Center for Epidemiologic Studies Depression Scale, the Beck-II, and the State-Trait-Anxiety Inventory stand out as the main instruments used to assess anxiety and depression.

The instruments that assessed patient health included the Patient Health Questionnaire-9 (PHQ-9), the 36-item Brief Health Survey (SF-36), the General Health Questionnaire-12, and the Health-Related Quality of Life Questionnaire for Children and Adolescents. Among the instruments focusing on caregiver reactions, such as tension, guilt, fear, and helplessness, the most notable are the Caregiver Reaction Assessment (CRA), the Fear of Progression Questionnaire for Caregivers of Young People with CF (FoP-QC), and the Caregiver Guilt Questionnaire.

Analysis of the psychotherapeutic techniques used

Regarding stress, the most notable instruments are the Coping Inventory for Stressful Situations (CISS), the Perceived Stress Scale-14 (PSS-14), and the Perceived Stress Scale. Two instruments were identified for assessing caregiving competency: the Sense of Competence Questionnaire and the Caregiving Competence Scale. On the other hand, the Emotional Well-being Scale (Nursing Outcomes Classification – NOC), the World Health Organization Well-being Index-Five (WHO-5), and the Emotional Functioning (EF) subscale of the ALS Assessment Questionnaire (ALSAQ-40) focused on emotional well-being.

Figure 4.
Frequency of the variables evaluated by the instruments and techniques



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DISCUSSION

It was found that, compared to other forms of psychological treatment used in previous studies, CBT is characterized by being more directive, goal-oriented, focusing on modifying cognitions or behaviors, and frequently using repeated practice of learned skills (Sun et al., 2022; Vlachou et al., 2022). These characteristics make it a very useful and effective tool, as they promote the active participation of caregivers (Norris et al., 2023).

Furthermore, the most prevalent modality of cognitive-behavioral interventions currently is virtual, internet-supported, web-based, and mobile app-based. This is valued as a significant methodological advantage, as it emerges as an alternative modality for reducing negative or unpleasant emotional states in the caregiver population. Likewise, other modalities stand out, such as group and individual psychological interventions, and a combination of both modalities (Kwok et al., 2014; Fidika et al., 2015; Meichsner et al., 2019).

Emotional Regulation Therapy and Problem-Solving Therapy stand out for their effectiveness as practical tools within psychological interventions for emotional management in caregivers (Ferré-Grau et al., 2014; Applebaum et al., 2018). Given their high degree of flexibility, they adapt to each person's specific needs and allow greater flexibility in addressing emotional and behavioral problems, as they provide the individual with concrete and practical tools to manage their emotions in caregiving. These results are consistent with those found in the studies by Livingston et al. (2020) and Özgül et al. (2023), which support the effectiveness of both therapies in emotional management in the caregiver population.

It is important to highlight that the most frequently used methodological design was a randomized controlled trial, and the sample was randomly selected; this is an important methodological requirement. These data are consistent with research confirming the effectiveness of interventions aimed at improving caregivers' quality of life using randomized trials and random sample selection (Losada et al., 2015; Duran et al., 2019).

It was found that symptoms of depression, caregiver burden, and anxiety levels are the most frequent emotional variables among the caregiver population. These findings are consistent with multiple studies conducted on caregivers (Adashek & Subbiah, 2020; Mercedes & Rivera, 2018; Duran et al., 2019; Muñoz, 2019; Salazar-Barajas et al., 2019).

The most commonly used psychotherapeutic techniques were problem-solving techniques, coping strategies, and breathing techniques, as well as cognitive restructuring, role-playing, thought management, and relaxation techniques. These results are consistent with other previous research and support our findings (Losada et al., 2015; Hurtado-Vega, 2021).

Regarding the design of the intervention program, there was wide diversity, and most interventions had a generic name based on the psychological alternative to be implemented. The most commonly used format was individual, with face-to-face interventions being the most widely used. The results obtained by Machado and Barletta (2015), Lee et al. (2020), and Gómez et al. (2021) constitute benchmarks that also support those achieved for the present review.

Proposal for methodological considerations

Based on the results obtained in the review, theoretical and methodological considerations are proposed for the design and implementation of cognitive-behavioral interventions in the caregiver population for emotional management:

- Develop programs tailored to the needs of caregivers.
- Design psychotherapeutic-oriented intervention programs or strategies that provide effective strategies for emotional management related to caregiving.
- Provide a theoretical foundation for the model underpinning the program.
- Define the research and program objectives in the studies, considering that they are diverse and nonspecific.
- Include in intervention programs not only emotionally affected caregivers, as this can lead to a floor effect, which makes it difficult to find significant improvements.
- Adopt theoretical approaches that value cognitive-behavioral intervention based on specific modalities for working with caregivers.
- Incorporate virtual interventions with internet support, web-based interventions, and mobile applications.

- Employ group and individual intervention modalities, and a combination of both.
- Establish a representative sample size for the study population.
- Define the intervention and control groups for the program.
- Establish the duration and session periods, according to the specifics of the care provided.
- Describe the specifics of each intervention implementation context, the resources and means for implementing them, as well as alternatives for monitoring progress.
- Use randomized sampling, randomized controlled trials, open-label trials, and non-randomized pragmatic designs.

CONCLUSIONS

Interventions based on cognitive-behavioral therapy have proven to be a prominent option, characterized by their directive and goal-oriented approach, focused on modifying cognitions and behaviors, and supported by the practical repetition of learned skills. Their effectiveness is reinforced by the active participation of caregivers, making them a valuable tool in this context.

Furthermore, the growing prevalence of virtual modalities, web-based or mobile applications, offers a significant alternative for mitigating negative emotional states in caregivers, which in turn complements traditional interventions, both group and individual. Emotion regulation and problem-solving therapies have proven particularly effective in caregivers' emotional management, as they are notable for their flexibility and adaptation to individual needs.

Randomized controlled trials, which constitute the most commonly used methodological design in these studies, underscore the rigor and validity of the interventions, concurring with the existing literature on their effectiveness in improving caregivers' quality of life. The most common emotional variables in this population, such as symptoms of depression, caregiver burden, and anxiety levels, reflect a constant concern that has been widely documented in previous research. The most commonly used psychotherapeutic techniques, such as problem-solving, coping strategies, and breathing techniques, along with cognitive restructuring and relaxation, are consistent with previous findings, reaffirming their relevance in this context.

Finally, a diversity of intervention program designs is observed, with a predominant tendency toward individual and in-person interventions. These findings confirm the relevance of the results obtained in this review and highlight the need to continue exploring and refining these interventions to improve caregiver well-being.

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The authors declare that there is no conflict of interest.

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