



QUALITY OF LIFE OF ELDERLY PEOPLE WITH ALZHEIMER'S DISEASE: AN INTEGRATIVE REVIEW

QUALIDADE DE VIDA DOS IDOSOS COM DOENÇA DE ALZHEIMER: UMA REVISÃO INTEGRATIVA

CALIDAD DE VIDA DE LOS ANCIANOS COM ENFERMEDAD DE ALZHEIMER: UMA REVISIÓN INTEGRADORA

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RESUMO

Objetivo: analisar as produções científicas sobre a Qualidade de Vida (QV) dos idosos com Doença de Alzheimer. **Método:** revisão integrativa, com período de coleta de dados de 20/03/2015 a 06/04/2015, nas bases de dados Lilacs, BDENF, IBECs e PubMed/Medline, entre os anos de 2011 e 2015 com a finalidade de responder à questão norteadora << *Quais os conhecimentos produzidos sobre a qualidade de vida dos idosos com Doença de Alzheimer?* >>. **Resultados:** os fatores encontrados que influenciam na QV dos idosos com Doença de Alzheimer são identificação de medidas não farmacológicas que melhorem a perspectiva destes idosos e destaque da escala de avaliação da QV na Doença de Alzheimer nos estudos. **Conclusão:** os resultados obtidos por meio dos estudos selecionados nesta revisão mostraram evidências de que a Doença de Alzheimer causa um grande impacto na QV de idosos acometidos por esta enfermidade. **Descritores:** Qualidade de Vida; Idoso; Doença de Alzheimer; Enfermagem.

ABSTRACT

Objective: to analyze the scientific production on the Quality of Life (QOL) of elderly people with Alzheimer's disease. **Method:** it is an integrative review, with data collection occurred from 03.20.2015 to 04.06.2015, in the databases Lilacs, BDENF, IBECs and PubMed/Medline, between the years 2011 and 2015 in order to answer the guiding question << *What is the knowledge produced on the quality of life of elderly people with Alzheimer's disease?* >>. **Results:** factors that influence the QoL of elderly people with Alzheimer's disease are identification of non-pharmacological measures to improve the prospects of these elderly patients and highlight for the QoL in Alzheimer's Disease Scale in the studies. **Conclusion:** the results obtained by the selected studies in this review showed evidence that Alzheimer's disease causes a great impact on the QoL of elderly patients with this disease. **Descriptors:** Quality of Life; Elderly Person; Alzheimer's Disease; Nursing.

RESUMEN

Objetivo: analizar las producciones científicas sobre la Calidad de Vida (CV) de los ancianos con Enfermedad de Alzheimer. **Método:** revisión integradora con período de recolección datos de 20/03/2015 a 06/04/2015, en las bases de datos Lilacs, BDENF, IBECs y PubMed/Medline, entre los años de 2011 y 2015 con la finalidad de responder a la pregunta guiadora << *¿Cuáles son los conocimientos producidos sobre la calidad de vida de los ancianos con Enfermedad de Alzheimer?* >>. **Resultados:** los factores encontrados que influyen en la CV de los ancianos con Enfermedad de Alzheimer son identificación de medidas no farmacológicas que mejoren la perspectiva de esos ancianos y destaque de la escala de evaluación de la CV en la Enfermedad de Alzheimer en los estudios. **Conclusión:** los resultados obtenidos por medio de los estudios seleccionados en esta revisión mostraron evidencias de que la Enfermedad de Alzheimer causa un grande impacto en la CV de ancianos acometidos por esta enfermedad. **Descritores:** Calidad de Vida; Ancianos; Enfermedad de Alzheimer; Enfermería.

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INTRODUCTION

The aging process is determined by changes in the biological, social, psychological and functional aspects of individuals, and can be described by different perspectives. For this reason, Nursing Gerontology must be attentive to the aging process, observing the cultural and social changes that occur in the elderly population.¹

Alzheimer's disease (AD) accounts for approximately 55% of the cases of neurodegenerative diseases, which are the most disturbing in this population over 65 years of age. It is a chronic degenerative, progressive and irreversible brain disease with insidious onset, marked by gradual loss of cognitive function, behavioral disorders and affection. By presenting slow manifestation and deteriorating evolution, daily activities and the elderly's social performance are impaired.² One of the most commonly observed cause is the progressive decline in cognitive functions linked to perception, learning, memory, reasoning and psychomotor functioning, as well as the emergence of neuropsychiatric conditions with several severe manifestations.³

The old person becomes dependent and needs to receive care from another person, whether a family member or not, who must provide assistance to meet the temporary or permanent functional disability. These limitations require more financial resources to carry out rehabilitation, home care and institutionalization for longer periods, affecting the quality of life of older people due to the demand of care required by AD. So that living with the implications caused by the disease is possible, the family members need to re-organize their lives, and this causes significant changes on the QoL of all.² The various factors related to AD must be understood and addressed by both the family and especially by health professionals, in order to help families to cope with conflicts and other external factors that can impair this relationship of care to the elderly.⁴

QoL can be defined in various ways, because cultural, ethical, religious and personal aspects influence how it is perceived by individuals and their consequences.⁵

The concept of QoL is broad and includes a variety of dimensions that are not limited to health conditions, control of symptoms and medical interventions but also to the assessment that the individual makes of their own well-being, in addition to the multidimensionality that includes several areas of human nature, such as: physical,

mental, emotional, social, economic, spiritual and others, and that include many meanings derived from experiences, values and individual and collective knowledge.⁶

Impairments cause in the individual a condition of dependence, either to specific equipment or to help from others to perform daily activities, as there is loss of functional abilities and later in basic activities in daily living, influencing their ability to maintain autonomy and independence.⁷

The fundamental principles of successful aging describe the elderly as proactive, setting goals and striving to achieve them, gathering resources that are useful in adapting to changes and actively involved in maintaining their well-being. QoL models range from the "satisfaction with life" or "social well-being" to models based on concepts of independence, control, social and cognitive skills. However, over the years, it is not always possible to keep track of these determinants.⁶

The emotional burden experienced by the caregiver can interfere with patient care. Caring for a family member with AD for several years makes it a very special experience that probably depends on the history and dynamics of each family. For this reason, the present study aims to analyze the scientific production on the Quality of Life (QoL) of the elderly with Alzheimer's Disease.

METHOD

This is an integrative review, with data collection occurred from March, 20 2015 to May, 10 2015. The integrative review is a research method that enables the synthesis of knowledge on a particular subject, includes studies with different methodological approaches and identifies knowledge gaps that need to be filled with new research.⁸ This methodological approach is broader, allowing the inclusion of experimental and non-experimental studies for a better understanding of the phenomenon in question. It also combines data from theoretical and empirical literature, definition of concepts, theories and evidence review.⁹

The integrative review method consists of six steps (1) identification of the theme and elaboration of the guiding question; (2) establishing criteria for inclusion and exclusion of studies; (3) definition of the information to be extracted from selected studies; (4) evaluation of the studies included in the integrative review; (5) interpretation of results and (6) presentation of review/synthesis of knowledge.⁸

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The first step is the identification of the theme and the elaboration of the guiding question, which was: "What is the knowledge produced on the quality of life of older people with Alzheimer's disease?".

The second step was the establishment of inclusion criteria of articles, which for this study were: adherence to the objective and to the proposed theme, articles published in Portuguese, English and Spanish languages, full articles that addressed the Alzheimer's disease and Quality of Life and articles published and indexed in these databases in the past five years. The exclusion criteria were published articles that were repeated, articles that did not address the Alzheimer's disease, articles that were not published in full, nor in the past five years.

The search was conducted in the databases Latin American and Caribbean Health Sciences (LILACS), Databases in Nursing (BDENF), Spanish Bibliographical Index of Health Sciences (IBECS), Medical Literature Analysis and Retrieval System Online (MEDLINE) and through the Medical Publications (PubMed), between the years 2011 and 2015.

The articles collected through this combination and the path taken are presented below in figure 1 and 2.

The third step was the definition of the information to be extracted from selected studies. At this stage, the aim was to organize and summarize the information in a concise way, forming an easy access and management

Quality of life of elderly people with Alzheimer's...

database. The information of the studies covered: selected articles (journals, year of publication, database, language, title of the article, type of study), as noted in Figure 1 and Summary of articles of the integrative review in Figure 2.

In the fourth step, it was carried out the assessment of the studies included in the integrative review and the critical analysis, correlating them. In the fifth step, researchers conducted the interpretation and discussion of results, highlighting the evidence of the quality of life of older people with Alzheimer's disease. And finally, in the sixth stage, it was presented the review and synthesis of knowledge produced about the QoL of older people with Alzheimer's disease.

It is worth mentioning that the descriptors used to search in these databases were: quality of life; elderly people; Alzheimer's Disease, respectively.

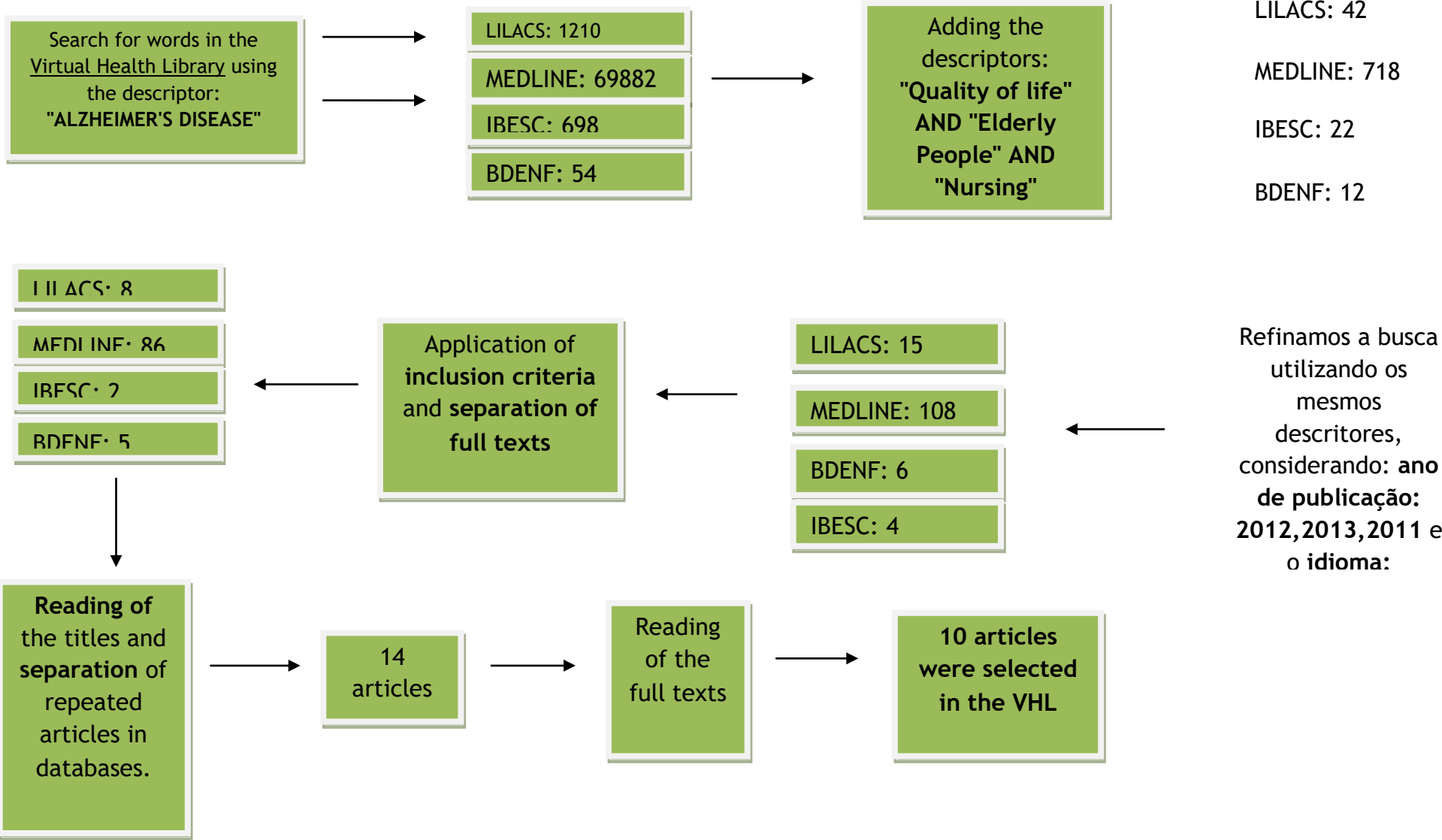


Figure 1. Flowchart of the survey of researches in databases.

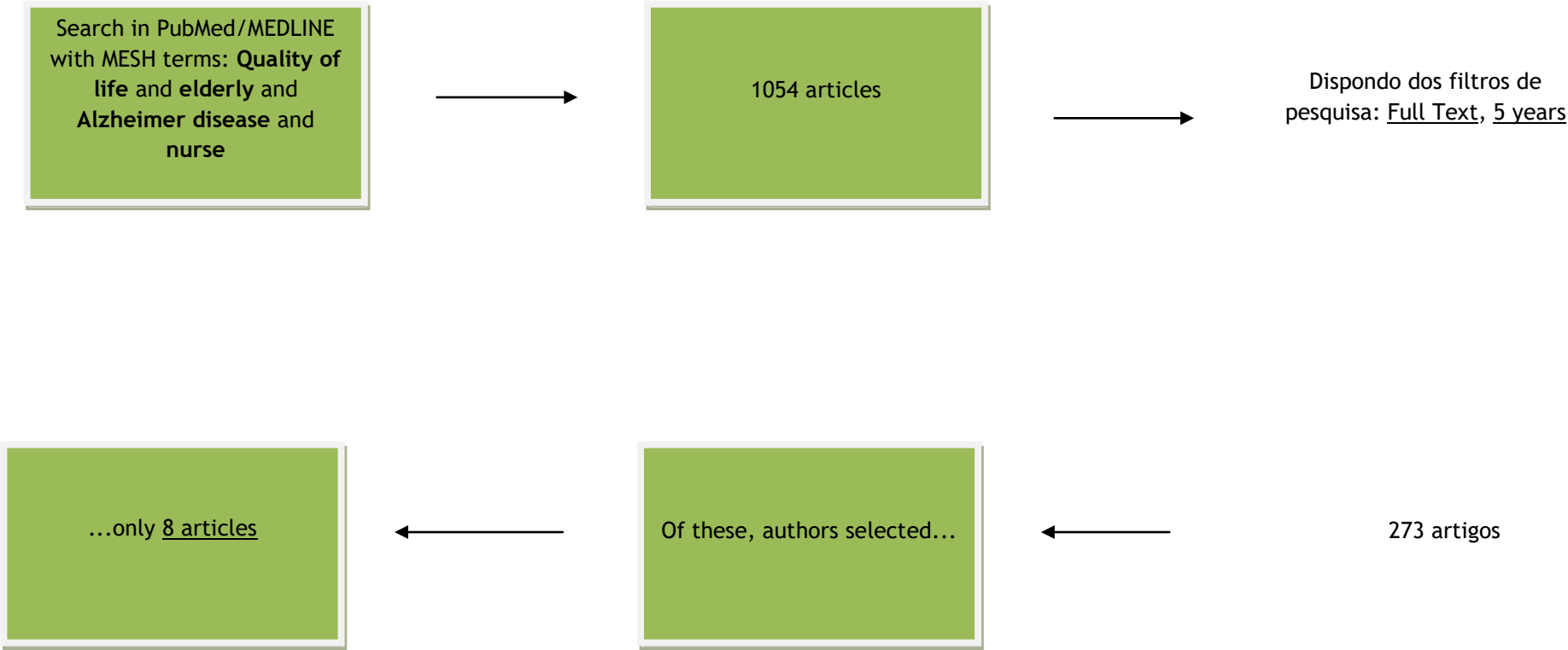


Figure 2. Flowchart of the survey of researches in database.

RESULTS

As shown in the schemes organized in the previous section, author obtained 18 references. The following figures present the main features of the articles selected for this study.

In Figure 1, there is the distribution of articles according to journals, year of publication, database where the article was published, language, title of the article and type of study; and Figure 2 shows the summary of articles of the integrative review.

Journal	Year	Database	Language	Title	Type of Study
1. Rev Med Chile	2013	Medline	Spanish	Impact of a psychomotor re-education guide on the quality of life of patients with Alzheimer's disease	Experimental Study
2. Rev Bras Psiquiatria;	2012	Lilacs	English	Intervenção com um programa de reminiscência para melhorar qualidade de vida de residentes com Alzheimer com cuidados prolongados: ensaio controlado randomizado	Randomized trial
3. Am J Psychiatry Geriatr	2011	Medline	English	Preditores de autoavaliações de qualidade de vida de pacientes na doença de Alzheimer: resultados transversais a partir da doença de Alzheimer canadense	Cross-sectional study
4. Clinics	2011	Lilacs	English	Effects of a multidisciplinary cognitive rehabilitation program for patients with mild Alzheimer's disease	Randomized study
5. Rev Gaucha Enferm	2011	BDENF	Portuguese	Qualidade de vida de idosos com doença de Alzheimer e de seus cuidadores	Descriptive-Exploratory Study
6. International Psychogeriatrics	2012	Medline	English	Determinants of quality of life in Alzheimer's disease: perspective of patients, informal caregivers, and professional caregivers	Cross-sectional study
7. International Psychogeriatrics	2012	Medline	English	Proxy-rated quality of life in Alzheimer's disease: a three-year longitudinal study	Longitudinal study
8. International Psychogeriatrics	2012	Medline	English	Quality of life in Alzheimer's disease: different factors associated with complementary ratings by patients and family carers.	Cross-sectional study
9. Rev. bras. educ. fís. Esporte	2012	Lilacs	Portuguese	Efeitos de um programa de atividade física sobre os sintomas depressivos e a qualidade de vida de idosos com demência de Alzheimer	Observational study
10. Geriatr Gerontol Int	2011	Medline	English	Effects of cognitive function and depressive mood on the quality of life in Chinese Alzheimer's disease patients in Hong Kong	Cross-sectional study
11. Exp Aging Res.	2014	PubMed	English	Confirmatory factor analysis of the quality of life in Alzheimer's disease scale in patients with Alzheimer's disease.	Cross-sectional study
12. Int J Geriatr Psychiatry	2014	PubMed	English	Do changes in specific cognitive functions predict changes in health-related quality of life in people with Alzheimer's disease?	Longitudinal study
13. J Alzheimers Dis	2014	PubMed	English	Discrepancies regarding the quality of life of patients with Alzheimer's disease: a three-year longitudinal study.	Longitudinal study

14. Arch Gerontol Geriatr.	2013	PubMed	English	Quality of life (QoL) in community-dwelling and institutionalized Alzheimer's disease (AD) patients.	Cross-sectional study
15. Alzheimer Dis Assoc Disord	2013	PubMed	English	Determining the predictors of change in quality of life self-ratings and carer-ratings for community-dwelling people with Alzheimer disease.	Longitudinal study
16. Am J Geriatr Psychiatry.	2014	PubMed	English	Severity of dementia, anosognosia, and depression in relation to the quality of life of patients with Alzheimer disease: discrepancies between patients and caregivers.	Analytical and cross-sectional study
17. Am J Alzheimers Dis	2013	PubMed	English	Application of behavior-based ergonomics therapies to improve quality of life and reduce medication usage for Alzheimer's/dementia residents.	Cross-sectional study
18. Neuropsychiatr	2012	PubMed	English	Quality of life in mild cognitive impairment, patients with different stages of Alzheimer disease and healthy control subjects	Cross-sectional study

Figure 3. Selected articles (journals, year of publication, database, language, title of the article, type of study).

Title	Study design	Intervention	Result	Implications for practice
Impact of a psychomotor re-education guide on the quality of life of patients with Alzheimer's disease	The PSEG was applied to 64 participants with AD aged from 64 to 87 years (55% women) during 12 months.	At the beginning and at the end of the intervention, cognitive skills (Mini Mental State), physical ability (Chair test bench), level of independence (Barthel Index) and quality of life (QoL) (SF-12) were evaluated.	The application of PSEG resulted in a significant improvement in physical function and QoL of patients with AD. The cognitive capacity decreased with the progression of the disease.	These results show the effectiveness of the guideline in mild and moderate stages of AD, improved physical ability and quality of life.
Intervention with a reminiscence program to improve the quality of life for residents with Alzheimer's disease under long-term care: randomized controlled trial	A total of 135 residents were recruited from two private nursing homes.	In the intervention group the used focus was the history of life, whereas the control group received friendly talks. The social commitment scale (SCS), and the self-reported quality of life scale (SRQoL) were the outcome measures, examined at the baseline, twelve weeks and six months after the intervention.	The scores of univariate logistic regression showed that the change predictors were associated with lower levels of baseline anxiety and lower levels of depression.	The intervention produced significant differences between the three groups over time, showing a significant improvement in quality of life and commitment of residents in the intervention group.(AU)
Preditores de autoavaliações de qualidade de vida de pacientes na doença de Alzheimer	Patients with AD (n = 370) with Mini-Mental State Examination (MMSE).	Patients assessed their QoL by using two utility indexes, the Quality of Well-Being Scale (EQ-5D), a visual analogic scale for overall QoL, and the QoL-AD, specific instrument for this disease.	The quality of life measures had only a small to moderate correlation between them. For all quality of life measures, the classifications of patients were significantly lower in patients with more depressive	These results confirm the importance of identifying and treating depression in patients and endorse the use of self-rated measures of depressive symptoms and QoL as outcome in clinical trials on AD.

		Cognition was assessed with the Cognitive Evaluation for AD Scale and the MMSE with the function Evaluation of disability for dementia, and behavioral and psychological symptoms were assessed with the Neuropsychiatric Inventory (NPI) and the Geriatric Depression Scale (GDS).	symptoms. In multivariate analysis, the GDS score was the only significant independent predictor of patients' self-evaluations for all four QoL measures.	
Effects of a multidisciplinary cognitive rehabilitation program for patients with mild Alzheimer's disease	The study included 25 Alzheimer's patients and their caregivers. The comparison group consisted of 16 Alzheimer's patients on waiting lists for future interventions.	It included memory training, cognitive stimulation assisted by computer, expressive activities (painting, verbal expression, and writing), physical therapy and physical training. The assessment included the following tests: Mini Mental State Examination, Short Cognitive test, Quality of Life in AD, Neuropsychiatric Inventory and the Geriatric Depression Scale.	The measures of global cognitive function and performance in attention tasks indicated that patients in the experimental group remained stable, whereas the controls showed slight but significant worsening. The intervention was associated with reduced symptoms of depression for patients and caregivers, and decreased neuropsychiatric symptoms in patients with AD. The treatment was also beneficial for the quality of life of patients.	The multimodal rehabilitation program was associated with cognitive stability and significant improvements in the quality of life of Alzheimer's patients. There was a significant decrease in depressive symptoms and in overload for the caregiver. The structured non-pharmacological interventions may yield benefits.
Quality of life of elderly people with Alzheimer's disease and of their caregivers	The study included 50 elderly and their caregivers.	Data were collected with application of the Quality of Life in Alzheimer's Disease Scale.	The mean total scores for patients and caregivers were respectively 26.36 and 35.04 points. The items housing (98%) and family (72%) had higher satisfaction for caregivers and elderly people, whereas the items memory and tasks (92%) for the caregivers and leisure (52%) for the elderly patients reached higher dissatisfaction rates.	It is considered that the caregiver's QOL directly reflects the care provided and therefore should also be considered in the planning and implementation of care to the elderly with AD.
Determinants of quality of life in Alzheimer's disease: perspective of patients, informal caregivers, and professional caregivers	A sample of 102 patients, their primary caregivers, and 15 members of the health team.	Participants were evaluated by QoL-AD scale. Demographic and clinical data (cognitive function, neuropsychiatric symptoms, depression, and burden of caregivers) were considered as	In linear regression analysis adjusted to multivariate, authors observed that patients were mainly affected by their mood, whereas caregivers were also negatively influenced by irritability and burden of patients.	The results suggest that depression is the main variable related to the quality of life of patients and that there is need of a more careful management of neuropsychiatric disorders. The perspective of the different informants should be considered

			predictors of quality of life for patients and caregivers.	According to evaluations, both psychotic and epileptics were associated with lower QoL.	separately.
Proxy-rated quality of life in Alzheimer's disease: a three-year longitudinal study	The sample consisted of 102 patients with mild AD and their primary caregivers.	Assessments applied were the Quality of Life in Alzheimer's Disease Scale (QOL-AD) and EuroQuol Visual Analogue Scale (EQ-VAS), the Cornell Scale for Depression in Dementia (CSDD), the Alzheimer's Disease Cooperative Study, Activities of Daily Living Scale (ADCS-ADL), the Mini-Mental State Examination (MMSE) and the Neuropsychiatric Inventory (NPI-Q).	There was a significant decline in quality of life assessed by both the QoL-AD and the EQ-VAS (p <0.001). There was a big difference in the scores of quality of life in both scales and a significant baseline change in QoL-AD was associated with changes in CSDD, ADCS-ADL and MMSE scores.	QoL is a subjective concept and cannot be influenced by the degree of cognitive dysfunction. Future studies should investigate the risk factors for individual variations in order to understand the nature of QOL changes in AD and the wide variation in quality of life scores over time.	
Quality of life in Alzheimer's disease: different factors associated with complementary ratings by patients and family carers.	80 patients living in the community with the probable diagnosis of Alzheimer's disease (AD) of mild or moderate severity according to NINCDS-ADRD criteria, and their 80 family caregivers.	Authors collected self-reported assessments of quality of life of patients and caregivers reported two types of assessments of quality of life: caregiver-patient and caregiver-caregiver perspectives. Explanatory variables included demographic and lifestyle data and clinical information of patients and caregivers, together with cognition, consciousness, psychopathology, and functionality in daily life.	Patients and their caregivers showed agreement in their quality of life assessments, although the total scores of caregivers (regardless of perspective) were lower than the scores of patients.	Patients with mild to moderate AD living in the community and their caregivers maintain different perspectives within an acceptable range in quality of life assessments, but evaluations are conducted by different factors, and therefore are not interchangeable, but complementary.	
Effects of a physical activity program on depressive symptoms and quality of life of elderly people with Alzheimer's dementia	Six elderly women participated in a physical exercise program for six months, other six elderly women made up the control group.	The Mini-Mental State Examination, the Quality of Life Scale and the Geriatric Depression Scale were applied to evaluate the variables.	The results showed that the proposed program can assist in reducing depressive symptoms in patients with AD, but did not promote significant improvements in the perception of QoL of these patients nor of their caregivers.	However, minor impairments in the perception of quality of life were observed in patients and caregivers who were physically active.	
Effects of cognitive function and depressive mood on the quality of life in Chinese Alzheimer's disease patients in Hong Kong	The study included 111 patients and their caregivers.	The Chinese version of the QoL-AD, which was adapted from the Mandarin language and from English versions of the QOL-AD, was applied.	The Chinese version of the QoL-AD showed good internal consistency, test-retest and reliability among evaluators. The reports of QOL of patients and	Among Chinese patients with AD in Hong Kong, depressed mood can negatively affect the QoL-AD patients, but not the caregiver's perspectives.	

				caregivers were moderately correlated; both varied significantly in relation to the severity of cognitive impairment. The mean QoL-AD scores of both reports of patients and caregivers were also significantly lower in depressed patients than in groups of non-depressed patients.	
Confirmatory factor analysis of the quality of life in Alzheimer's disease scale in patients with Alzheimer's disease.	139 patients with mild to moderate AD were assessed according to the QoL-AD scale.	The factor structure of the QoL-AD Scale in patients with AD was verified.	Confirmatory factor analysis indicates poor fit for both the initial model and the single-factor model. Two models showed a good fit: three-factor model (perceived health, perceived environment and perceived functional capacity) and a two-factor model (perception of physical health and perceived psychological health).	These results provide evidence supporting the construct validity of the QoL-AD scale. This instrument seems to measure the perception of two correlated constructs (behavioral competence and environment).	
Do changes in specific cognitive functions predict changes in health-related quality of life in people with Alzheimer's disease?	47 residents diagnosed with probable AD of mild or moderate severity (NINCDS-ADRD criteria) and their family caregivers.	An instrument on quality of life (QoL-AD) was applied in a period of 18 months.	26 of the 47 subjects with AD showed evidence of stable or increased QoL-AD for more than 18 months according to self-reports and caregivers' reports.	Changes in specific cognitive functions are not associated with changes in HRQOL ratings in AD. The results suggest that interventions that limit their focus to improve the cognitive function of people with mild to moderate AD living in the community may fail to have an impact on quality of life of participants.	
Discrepancies regarding the quality of life of patients with Alzheimer's disease: a three-year longitudinal study.	A group of 119 non-institutionalized patients.	Evaluated by Quality of Life in AD (QoL-AD) Scale.	The study analyzed the influence of functional and cognitive status and behavioral problems in patients, and the burden of mental health on caregivers. During the evaluation, the ratings of the patients remained stable, while the assessments of caregivers showed a decline. In the analysis of discrepancies, patients with agnosia had higher ratings, whereas the caregiver's assessments were lower when the patient showed greater agitation,	Assessment of QoL by the patient had remained generally stable over time, whereas the assessment of caregivers showed a decline, with significant discrepancies in relation to the specific factors of the patient and the caregiver.	

			apathy and disability.	
Quality of life (QoL) in community-dwelling and institutionalized Alzheimer's disease (AD) patients.	The study included 200 patients with AD (mean age 79.3 ± 8.2 years, 74% female). 54% of the subjects were living in a nursing home and 46%, at home.	The Quality of Life in Alzheimer's Disease Scale was used.	The total score of QoL-AD was higher (i.e. better quality of life) for patients living at home than for institutionalized patients. Neuro-psychiatric symptoms, severity of dementia, depression and functional dependence were significant predictors of poor quality of life.	Once these variables were controlled, a marginal effect of quality of life setting has been found, which favored the nursing home ($\beta = 0.20$, $p < 0.05$).
Determining the predictors of change in self-ratings and caregivers' ratings of quality of life for community-dwelling people with Alzheimer's disease.	80 adult residents diagnosed with probable AD of mild or moderate severity (NINCDS-ADRD criteria) and their family caregivers.	The Quality of Life in Alzheimer's Disease Scale was used.	The explanatory variables included demographic data, lifestyle, cognition, consciousness, psychopathology, load-of-care, medication use, and functionality in everyday life. We found a significant decline (8.7%, $P = 0.003$) in QoL-AD in the caregiver assessments, but not in self-assessments.	Interventions designed to optimize the quality of life of people with AD should carefully consider the various factors of the self-assessments made by patients, and not only by caregivers.
Severity of dementia, anosognosia, and depression in relation to the quality of life of patients with Alzheimer disease: discrepancies between patients and caregivers.	141 patients and their caregivers.	The instruments used were the Quality of Life in AD, the Global Deterioration Scale (GDS), the Geriatric Depression Scale, and Anosognosia Questionnaire for Dementia.	The discrepancy between the patient and the caregiver in QoL ratings increased according to the stages of GDS. In the regression model, the discrepancies in QoL reports were associated with higher anosognosia, less depression, and better cognitive status in patients with females among caregivers. Cluster analysis showed that patients with lower QoL ratings had better cognitive status, more depression and less anosognosia.	Factors associated with higher discrepancies between patient and caregiver in QoL ratings were severity of dementia, anosognosia, depression and cognitive status in female patients and in female caregivers.
Application of behavior-based ergonomics therapies to improve quality of life and reduce medication usage for Alzheimer's/dementia residents	The study evaluated the effect of BEBER in the quality of life and use of behavioral medications in a dementia care unit with 18 beds.	Behavior-based ergonomics therapy (BBET) had been proposed in the past as a non-pharmacological and individualized intervention.	By comparing a target cohort during the pre-implementation period of 6 months with the post-implementation period of 6 months, this study indicates that BBET seems to have a positive impact on quality of life.	The number of days with behavioral episodes decreased 53%, the total of Minimum Data Set (MDS) mood scores decreased by 70% and total scores of MDS behavior decreased by 65%.
Quality of life in mild cognitive impairment, patients with different stages of Alzheimer disease and healthy	The study comprises a series of 92 elderly patients: 23 healthy subjects,	The Quality of Life in Alzheimer's Disease Scale was used.	Significant differences were found between the diagnostic groups in the scales: general	The results confirm that humor appears to be the strongest predictor of quality of life in elderly patients

control subjects	24 individuals diagnosed with mild cognitive impairment, 28 patients with early AD and 17 patients with moderate AD.	health perception, vitality, limitations in the performance of their role due to emotional problems and general mental health. Healthy control subjects and patients with moderate AD had better quality of life.	and in different stages of cognitive decline.
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Figure 4. Summary of articles of integrative review.

Regarding the main characteristics of the selected articles, the year of publication 2012 had a percentage of 33% (six articles). The years 2011, 2013 and 2014 had a percentage of 22% (4 articles), respectively.

The most published language was English was 83% (15 articles), the Portuguese had a percentage of 17% (three articles). There was no occurrence of articles in Spanish.

Most studies were found in PubMed/MEDLINE (14 articles), then in LILACS (three articles), and only one article in BDNF.

The methodological approach of the studies was mostly cross-sectional, with a percentage of 50% (nine articles), randomized trial, with 20% (two articles), longitudinal study 22% (four articles), and exploratory, descriptive-exploratory, and observational studies with 10% (one article), respectively.

By analyzing the studies' thematic, all are concerned about the quality of life of patients/elderly people with Alzheimer's disease. Studies suggest different ways of intervention to improve the quality of life, which go beyond the pharmacological options.

Authors report on interventions through rehabilitation programs that improve the perspective of quality of life of this population in 28% of the studies (five articles). There is a percentage of 72% (13 articles) of studies aimed at identifying the different factors that influence the quality of life of older people through the caregiver and the actual carrier of the disease by using the application of scales, the more specifically the QoL in Alzheimer's Disease Scale.

DISCUSSION

Relevant data were reported by the authors on the QoL of older people with Alzheimer's disease because it generates profound disabilities and weaknesses, affecting emotional, psychological and functional dimensions that enhance the impairment of quality of life, as they jeopardize the psychosocial adaptation and the old person's interaction with the environment.¹⁰ The maintenance of daily life will no longer be the same because of the limitations produced by the disease, which affects the physical domain, the feelings and the emotions, as well as social relationships.¹¹

Scientific studies on non-pharmacological treatment in patients with AD often have inherent methodological limitations regarding difficulties of forming appropriate control groups, and, in most cases, they do not have the participation of with blind evaluators in

relation to the intervention under study. Although the number of trials on non-pharmacological treatment for cognitive impairment in AD has been increasing significantly, there is still a growing need for research in this area to prove the utility and the good cost-benefit ratio of this therapeutic modality.¹²

The non-pharmacological measures, such as reminiscence therapy, aim to stimulate the recovery of information through pictures, photos, music, games and other stimuli related to patients' youth. This technique has been widely used to rescue emotions previously experienced, generating greater socialization and entertainment as part of therapy.¹³ However, physical exercises also help to stimulate cognitive functions, with its neuroprotective effect on the activity of the cerebral cortex, resulting in increased long-term memory and greater learning ability.¹¹

Techniques for cognitive stimulation, for orientation to reality and for training specific skills are recommended as they are possibly effective in cognitive treatment of patients with mild to moderate AD, and individualized programs of physical activity are beneficial for the functionality of people with mild to moderate AD.¹²

Studies believe that the loss of autonomy is not caused solely by the disease, but by bradykinesia and physical inactivity. Improving physical and functional autonomy reduces the risk of the triad fall-fracture-dependence.⁸

Quality of life can be assessed by the Quality of Life in Alzheimer's Disease Scale, which was widely used by the selected authors; it is an instrument to assess the QoL of caregivers and AD patients, which has three versions: one for the patients themselves to assess their QoL (PQoL-AD), one for the caregiver to assess the QoL of the elderly (CQoL-AD) and one for the caregiver to assess themselves (CPQoL-AV). This instrument was designed to explore areas identified as important, including interpersonal, environmental, physical and psychological functioning. The scale has simple language, addressing issues related to memory, the patient's relationship with friends and family, concerns regarding finance, physical condition, humor and overall evaluation of QoL. The score ranges from 13 to 52 points, in which higher scores predict better QoL.²

The functional disability level of the subject can be assessed through the Activities of Daily Living, currently being one of the criteria for classification of dementia stages.¹³

It is known that, to provide this care, the caregiver of a person with dementia should get enough information about the disease/treatment, and great emotional support. There is a growing need to educate caregivers of these seniors about the progress of the disease, its manifestations, complications and what can be expected of an elderly with dementia. The chronological response time to the care provided in people with dementia is different because the care received depends on the disease conditions faced. This fact leads us to affirm that the care method should take time into consideration, since this care should not be collective, but individual, according to the specific demands presented by the patient.¹⁴

In addition to the changes in cognitive functions, this cognitive impairment brings as a consequence the loss of functional capacity, increasing the demand for care, which is generally more complex.

CONCLUSION

The results obtained from the selected studies in this review showed evidence that Alzheimer's disease causes a great impact in the QoL of elderly patients, since with the aggravation of the disease, the patient develops psychotic symptoms or behavioral changes, often disruptive, which causes great wear for the patient and burden for the caregiver.

However, rehabilitation programs by various means, such as performing tasks that require attention, have been associated with cognitive stability and significant improvements in Alzheimer's patients' quality of life.

It is noteworthy that most studies used the Quality of Life in Alzheimer's Disease Scale, which highlights its usefulness in assessing the QoL in this dementia.

This review has as limitation the low number of selected articles, although the overall number of searches has showed a large number of articles, but many did not meet the inclusion criteria. Thus, there is an urgent need for further research that might guide new approaches and serve as the basis for planning of care and programs aimed at the main needs of this population in order to make the quality of life of elderly people more satisfactory.

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