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# BENEFITS OF PROMOTING PLAY ACTIVITIES FOR ELDERLY: INTEGRATIVE REVIEWS

# BENEFÍCIOS DA DINAMIZAÇÃO DE ATIVIDADES LÚDICAS PARA OS SENIORES: REVISÃO INTEGRATIVA

# BENEFICIOS DE LA DINAMIZACIÓN DE ACTIVIDADES LÚDICAS PARA PERSONAS MAYORES: REVISIÓN INTEGRATIVA

Helena Realinho Bragança – University Hospital Centre of the Algarve (CHUA), Faro, Portugal.
ORCID: http://orcid.org/0000-0002-2108-3269

Ana Sobral Canhestro – Polytechnic Institute of Beja (IPB), Beja, Portugal.
ORCID: http://orcid.org/0000-0002-5528-3154

Ana Rita Gomes – Unidade de Cuidados na Comunidade D´Alagoa, Lagoa, Portugal.
ORCID: http://orcid.org/0000-0003-2652-1843

Corresponding Author/Autor Correspondente:
Helena Realinho Bragança – Centro Hospitalar e Universitário do Algarve, Portugal. helena.braganca@essp.pt

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# ABSTRACT

**Introduction:** It is necessary to increase the number of healthy life years after the age of 65. To promote active and healthy ageing, the existence of social responses is essential. The nurse has a leading role in boosting activities in the senior community promoting the health of the population.

**Objective:** Analyse the benefits of play and entertainment activities implemented in the community for senior adults.

**Method:** Integrative Review following the Joanna Briggs Institute guidelines, conducted on the B-On® search engine using the descriptors "play activities", "senior*", "benefits", "health promotion" and "nurs*" to give answer the following research question: What are the benefits of play and entertainment activities implemented in the community for senior adults?

**Results:** From the analysis of the ten articles it was found that promoting activities in the senior community brings numerous benefits to the health of participants at physical, psychological, emotional, and social levels. For the intervention to be successful, the seniors' opinion about the promoted activities must be considered.

**Conclusions:** There should be an investment in promoting activities in the senior community in order to promote the health of the population.


**Keywords:** Elderly Centers; Health Promotion; Leisure Activities; Nursing.


# RESUMO

**Introdução:** É necessário aumentar os anos de vida com saúde após os 65 anos de idade. Para promover o envelhecimento ativo e saudável é primordial a existência de respostas sociais. O enfermeiro tem um papel preponderante na dinamização de atividades na comunidade sénior promovendo a saúde da população.

**Objetivo:** Analisar os benefícios das atividades lúdicas e de entretenimento implementadas na comunidade para adultos seniores.

**Método:** Revisão integrativa que segue as diretrizes do Joanna Briggs Institute, realizado no motor de busca B-On® utilizando os descritores "play activities", "senior*", "benefits", "health promotion" e "nurs*", para dar resposta à seguinte pergunta de investigação: Quais os benefícios das atividades lúdicas e de entretenimento implementadas na comunidade para adultos seniores?

**Resultados:** Da análise dos onze artigos foi possível verificar que dinamizar atividades na comunidade sénior traz inúmeros benefícios para a saúde dos participantes a nível físico, psicológico, emocional e social. A opinião dos seniores sobre as atividades dinamizadas deve ser tida em conta para que a intervenção tenha sucesso.

**Conclusões:** Deve haver um investimento na dinamização de atividades na comunidade sénior, de forma a promover a saúde da população.

**Palavras-chave:** Atividades de Lazer; Centros Comunitários para Idosos; Enfermagem; Promoção da Saúde.

# RESUMEN

**Introducción:** Es necesario aumentar los años de vida sana después de los 65 años. Para promover el envejecimiento activo y saludable, la existencia de respuestas sociales es primordial. El enfermero es muy importante na dinamización de actividades en la comunidad de personas mayores promuevendo la salud de la población.

**Objetivo:** Analizar los beneficios de las actividades lúdicas y entretenimiento implementadas en la comunidad para adultos mayores.

**Método:** Revisión Integrativa que sigue las directrices de lo Joanna Briggs Institute, realizado en la base de datos B-On® utilizando los descriptores "play activities", "senior*", "benefits", "health promotion" y "nurs*", a fin de dar respuesta a la siguiente cuestión de investigación: ¿Cuáles son los beneficios de las actividades lúdicas y entretenimiento implementadas en la comunidad para adultos mayores?

**Resultados:** Después del análisis de los once artículos se descubrió que dinamizar las actividades en la comunidad de personas mayores trae numerosos beneficios para la salud de los participantes a nivel físico, psicológico, emocional y social. La opinión de los adultos mayores sobre las actividades dinamizadas debe tenerse en cuenta, para que la intervención tenga éxito.

**Conclusiones:** Debería haber una inversión en la dinamización de las actividades en la comunidad de ancianos para promover la salud de la población.

**Descriptores:** Actividades Recreativas; Centros para Personas Mayores; Enfermería; Promoción de la salud.

# INTRODUCTION

It is estimated that the world population will increase 2 billions($10^9$) over the next 30 years, from 7,7 billions($10^9$) to 9,7 billions($10^9$) in 2050. In 2019, Europe and North America present the oldest population in the world, with 18% of the population being 65 years old or over.

The report *"World Population Prospects 2019: Highlights"*, highlights the aging population as one of the biggest demographic trends with important implications in economic development, social development and environmental sustainability[1].

The projections point that, in 2050, there will be twice more elderly people in relation to the number of infants aged 5 or less. On countries where the population is older it is necessary to take measures and adopt public programs for the new needs of the population[1].

Portugal has a life expectancy above Europe's average, however, the healthy years that the population live are diminished in comparison to other European countries[2]. Factors like income and education have a major impact in the population's health, these variables are very important to the improvement of the quality of life of the population[3]. The Portuguese elderly, from 65 onwards, live more years without life quality than with life quality.

Due to all the demographic shifts that Portugal has been suffering, it is fundamental to gather resources and create services to fulfil the needs and preferences of the elderly population, so they can remain in the community for the maximum length of time and with the maximum quality of life[3].

It is necessary to increase the number of healthy life years after the age of 65, knowing that elderly health is intimately connected with the adoption of healthy promoting life styles and catalyse active aging. "The term 'active' refers to the continued participation in the social, economic, cultural, spiritual and civic life of the community, meaning it goes far beyond the possibility of just being physically and professionally active"[4:8] ("*O termo 'ativo' refere-se à participação contínua na vida social, económica, cultural, espiritual e cívica, ou seja, vai muito além da possibilidade de ser física e profissionalmente ativo*"[4:8]). In the National Strategy for Active and Healthy Aging 2017-2025 (*Estratégia Nacional para o Envelhecimento Ativo e Saudável 2017-2025*), elaborated by the Portuguese Health Direction (*Direção-Geral da Saúde*), it is possible to verify that to promote active and health aging, the existence of social answers is required firstly, like the social centers for the elderly or senior centers, these will give support dynamic activities organized with the participation of the elderly of a community[4].

Dynamic, recreational and playful activities are entertaining activities that promote the conviviality, fun, and leisure and playful moments, being considered one of the best forms for transmitting a message, promoting education on a specific theme. These activities are carried out in a free, carefree way, practised spontaneously and promote leisure, consequently improving the quality of life of the communities[5].

Executing dynamic activities that promote the development and maintenance of cognitive, physical and social competences, translates into an improvement on the individual health of the elderly. It is essential to alert the "community actors, with decision-making power, for the need to create the means that enable the practice of this type of activity"[6:37] ("*intervenientes da comunidade, com poder de decisão, para a necessidade de se criarem os meios que possibilitem a prática desse tipo de atividade*"[6:37]), that promotes the well-being and health of the elderly population.

The Public Health and Community Nursing specialized nurse is highly skilled to promote the health of the population in the community scope, undertaking health diagnosis and actively intervening in the community with the purpose of satisfying the needs felt by the population[7], this way, it is very important that the health professional adapts the activities developed to the target population, requiring mastering and broadening knowledge about activities that promote health development in the community.

With the presented theme as base, this report has, as main objective, the analysis of the benefits of recreational and entertainment activities for elderly implemented in the communities where they live.

# METODOLOGY

It was written an integrative review of the literature given that this allows a systematization of the scientific knowledge produced over the theme under investigation, through diverse sources of bibliography information[8].

With the process of decision making  in health has base, this integrative review is developed over 6 phases: identification of the theme and formulation of the research question according to PICo (P – Patient; I – interest area; Co – Context), determination of inclusion/exclusion criteria for the various studies or articles, selection and extraction of pertinent information from the research carried out, evaluation of the various selected literary materials, analysis and interpretation of data and synthesis of the results achieved[9].

In order to guide the integrative review on the required theme, an investigation question was elaborated according to the acronym PICo:

- P (Patient): elderly;
- I (Interest area): recreational and playful activities;
- Co (Context): Community.

The investigation question is very important to undertake a correct search, selection and critic evaluation of the literature, allowing that the best evidence is selected[10].

Therefore the following review question was elaborated: What are the benefits of the recreational and playful activities implemented in the community for the elderly?

On the 4th of November 2019 an electronic research was undertaken on the platform B-On® (Online Knowledge Library) (*Biblioteca do Conhecimento Online*), with a complementary research being undertaken in the Complementary Index, Academic Search Complete e Business Source Complete, using the descriptors in English language: play activities", "senior*", "benefits", "health promotion" e "nurs*". The boolean operators were "AND" and "NOT", translating into the research formula "play activities AND senior* AND benefits AND health promotion AND nurs* NOT pathology".

Inclusion and exclusion criteria were established for the research documents so that the selected literature respects the investigation question and its objective[11]. the inclusion criteria applied were: Elderly population and benefits of the dynamic activities. Exclusion criteria we established: children and adults with specific pathologies associated.

The interval of time select was January 2015 to November 2019, and all the literature published before that interval was excluded. Research limits were applied for integral text, reviewed by the pairs, and the descriptor "senior*" is to be present on the title of the article. The duplicated articles were excluded. Therefore from the initial bibliography research were identified 45 articles, from that total 20 were excluded for their title, 14 after the summary was read or because they do not fulfill the defined research criteria. During the reading and analyze of the 11 selected articles from the initial research, it points out one new articles obtained by reference, given then a total of 12 articles selected. One article was excluded due the low level of evidence according to the criteria established by JBI. In the end 11 articles were selected and the Figure 1↗ represents the flowchart of the selection process of the articles, elaborated based on the "*The PRISMA Group (2009)*"[12].

After the selection of the articles, they were analyzed to ascertain ts level of evidence and its methodological quality. So that each of the articles included in this integrative review, was necessary to submit each and every one of them to a critic evaluation, through the use of evaluation grids from Critical Appraisal Tool do JBI[13], namely JBI Critical Appraisal Checklist for Qualitative Research, and JBI Critical Appraisal Checklist for Quasi-Experimental Studies (non-randomized experimental studies), JBI Critical Appraisal Checklist for Case Series, JBI Critical Appraisal Checklist for Analytical Cross Sectional Studies and JBI Critical Appraisal Checklist for Randomized Controlled Trials, in order to determine the level of evidence and the degree of recommendation accordingly to the JBI[14].

It was included in this revision the articles[15-25] that present the methodological quality necessary after the application of the grid for its evaluation as per the JBI as illustrated in the Chart 1↗, attached. The evaluation of the quality of the included in the present integrative review and the extraction of data was undertaken by two revisers, in order to minimize the risk of errors either in the evaluation of quality and in the extraction of data.

At all stages of carrying out this present integrative review of literature, we accounted for all the ethical principles and the academic integrity in the investigation fulfillment, by referencing all the authors whose documents had contributed for the fulfillment of the present revision[26].

# RESULTS

After the analysis of the contents of the 11 articles selected, that can be seen on Chart 2↗, it is possible to verify that there are several types of activities that can be developed with the elderly population living in the community and that it promotes numerous benefits for their health.

In all the articles selected, the playful activities undertaken by the elderly have occurred in their community, without the inclusion of institutionalized population. The privileged places to carry out recreational activities are the Elderly Centers and Elderly Universities, with only one article contemplating the health promotion activity during a nursing consultation in the context of primary health care.

During the analysis of the articles, it has been verified that is very important to consider the opinions of the elderly of the community so that the playful activities promoted are successful and bring benefits. Their opinion should be the basis of the criteria used to select the number of participants and the frequency of the activities[20,25].

The analysis of the documents can be divided in two parts, the analysis of the perception of the elderly about determined dynamic activity carried on in the community and the analysis of the benefit of the dynamic of a determined activity for the health of the population. In all the analyzed literature it is possible to analyse these two strands on the theme. The Chart 3↗, attached, contemplates the summary of the data extracted after the critic evaluation of the articles.

# DISCUSSION OF RESULTS

*Perception of the streamlining of activities developed in the community by the Elderly*

It is essential that the specialist nurse in communal and public health nurse have in consideration the perception of the population relatively to the several activities developed in the heart of the community. Listen to what the population has to say about specific performed activities is very important so that strategies are adapted to the population, with respect for its specificity. Analyzing studies that investigate opinions of the elderly population about specific activities, can be a starting point to help the health professionals in the carry over of interventions on the elderly community, in viewing the promotion of the health and prevention of sickness.

Criteria should be establish based on the opinion of the elderly that will participate on the playful activities, to select the number of participants, the duration and the frequency of the activities. With the analysis of the literature, we can verify that the elderly felt that the group singing programs in the community are beneficial, but should attend to a pack of requisites so that it can be enjoyable for the participants. The personal motivation, the pleasure in singing and socializing are pointed by the participants has very important criteria to be in the signing group[18]. The elderly enumerate a set of criteria that should be held account in order pep the playful activities[20,25], like singing. The activities should be carried on in group, with 5 to 12 participants, the activity should have as principal objective the recreation[20]. The place where those activities are carried should be near their homes[20], and outdoor spaces such as parks are an option that elderly point to as beneficial[25]. The duration of the activity should be varied between 30 and 60 minutes, and occurring preferentially in the afternoons, with a weekly frequency[20]. The elderly have also elected the nocturnal period for performing dance and cinema activities[25].

Nurses are essential health professionals in the process of health/sickness of the general population, and particularly of the elderly, being considered a vulnerable population, needing a higher attention from nurses[9]. When analyzing opinions of the elderly about

a health promotion intervention lead by nurses in the Netherlands, it was verified that in general the participants felt more motivated to change behaviors and take decisions. The participants in the study have referred understanding the nurses' intervention has being a moment of emotional support and of verification of their own state of health/ sickness at physical state, similar to a check-up appointment. The elderly participants referred that the nurses had transmitted professionalism and trust[15].

Both elderly centers and universities are privileged spaces to the streamlining of several activities with the elderly population[18-20]. Understanding the perspective that the population has about the activities held on those organizations, and about the organizations itself, it is of major importance, to evaluate the impact of their existence and the activities developed there, in order to improve both the spaces and the streamlined activities. The elderly refer that they feel friendships that were created during the activities on those elderly centers are of great value for themselves[19]. In the study developed by Jo, Jo, Kari, Veblen & Potter[20] it is possible to verify that the elderly have the opinion that the developed activities at the elderly university they attend to, offer them great social support, even expressing a feeling of belonging to the community program developed.

Another environment that is also conducive to the streamlining of communal activities with the elderly population are outdoor parks. A transversal study has reported that the elderly population seeks to undertake activities in the open space, green spaces, with the intention to interact with other people and promote its own health through walks and other physical activities[23].

There are a lot of activity types that can be streamlined in the community. Some scientific articles selected analyze the opinions of the elderly, about very specific activities like creation of singing groups[16,18,25], the use of new communication technologies[17], the undertaking of memory games and cognitive stimulation[21], the practice of physical exercises with specific goals[22] and the practice of community volunteering[24].

Focusing on the analysis of the streamlining of singing programs for elderly in the community, there are 3 studies that approach this activity[16,18,25]. One quasi-experimental study with the application of pre-test and post-test, verified that the elderly population after participating in a group singing program for twelve weeks in the community, referred to be highly satisfied with the said activity[16]. Also on a randomized clinic trial controlled by Coulton, Clift, Skingley & Rodriguez[23], the satisfaction of the elderly population was also verified, in relation to their own participation on the singing groups, once that it is possible to verify that from the quality analysis in this study, that the participation in the community  group singing was highly positive and that they felt pleasure during the activity.

Another activity that can be streamlined in the community with the elderly population is based on the use of new technologies. The use of new technologies while intervening in promoting health in the community, has been discussed in the last few years and it is seen has beneficial for the individual as well for the community[27].

It is frequent for nurses to use technology during their assistance to children, women and elderly in the primary health care[27]. In then quasi-experimental study Judges, Laanemets, Stern & Baecker[17] that explores the effects of using a communication tool called "InTouch" by elderly, during a period of three months, it was verified that the elderly that have used new technologies like "InTouch" refer they feel a positive change in their communication and have the perception of being closer of their family and friends. The majority of the participants has reported positive feelings in using this communication technology.

Regarding the performance of memory games and cognitive stimulation, it is possible to analyze that elderly showed a feeling of greater control over their cognitive abilities, after being exposed to this type of activities. In general, the participants in this quasi-experimental study with a control group[21] expressed positive opinions and feelings about playing memory games and cognitive stimulation. In the opinion of the elderly, they improved their memory capacity due to performing these activities.

It is known that sedentary lifestyles, where physical activity is non-existent or practically non-existent, are closely related to the increased risk of developing chronic non-communicable diseases, which currently kill 41 million individuals per year, accounting for 71% of all deaths worldwide[1]. In Portugal, the promotion of physical activity is one of the Priority health programs of the General Directorate of Health (*Direção Geral da Saúde*), for the achievement of medium-term health goals, which is why it is very important to streamline activities that involve the promotion of physical activity in the population[4]. In a quantitative descriptive study developed by Walters & Jordan[22], the opinion of the elderly was analyzed after the implementation of a community-based activity that included physical activity. The elderly reported that they enjoyed participating in the activity in question, giving positive feedback about the performed physical activity.

One of the selected articles addresses volunteering as a streamlined activity in the community with the aim of promoting the health of the population. This is an observational study that analyzes the perception of volunteers regarding their participation in this type of activity. It was found that elderly who volunteer and go to the homes of other weaker elderly to provide support feel that helping others has many benefits for themselves. They report that they feel recognized and useful by society, that they have gained matu-

rity and more experience in social interaction with others. Volunteers conveyed positive feelings after performing this type of community activity[24].

*Benefits from the promotion of activities developed in the community for the health of the elderly*

In a study published in 2019 that evaluates a nurse-led health promotion intervention, it can be seen that it brought real benefits to the elderly who participated in it. Elderly people became aware of their own aging process and the importance of adopting a healthy lifestyle. They became aware that it is necessary to accept the restrictions in life that aging has brought them and that it is necessary to take advantage of the new opportunities that arise[15]. Being aware of your health status and what you should do to improve or maintain it is essential for the individual to make more conscious and correct choices.

Assessing the physical spaces where activities for the elderly can be carried out at the community level, the studies analyzed showed benefits for the health of the elderly in activities carried out in elderly centers, elderly universities, and outdoor parks. Elderly centers provide emotional support and facilitate access to other services in the community, having a relationship with successful active aging, translating into benefits for the health of the participants[19]. In the study that assesses the impact on the quality of life of the elderly who participated in a community program at a elderly university, it is possible to verify that there were positive effects on the health and quality of life of the participants[20]. This study revealed that participants had an effective reduction in the perception of body pain and that their emotional state improved after participating in the community program. There was also an increase in vitality, a decrease in isolation and social exclusion of the participants. Regarding parks, the study analyzed indicates that attending these spaces brings important physiological and psychological benefits for the elderly, improving their health, well-being and quality of life[23].

Regarding singing programs, the selected studies mention several benefits for the health of the elderly who participated in this type of activity. Effectively, it was verified in two selected studies benefits at the cognitive level with the improvement of the memory, information and language processing capacity, and at the physical level there was an improvement in the respiratory muscle strength[16,18]. One of the studies also mentions the psycho-social benefits that are associated with the activity, as interaction with other elderly people is constant during singing. Despite the benefits found, these did not translate into an effective improvement in the quality of life of the participants[18]. In a randomized controlled clinical trial, participating in a community singing group was found to have potential benefits for older people's mental health-related quality of life. At the end

of the performed intervention, anxiety and depression levels were significantly lower in the singing group[25].

Assessing the streamlining of activities that include the use of new communication technologies by the elderly, in the quasi-experimental study with application of pre-test and post-test, it was found that there were social benefits for the elderly who used the "InTouch" technology during and after the study[17]. Increasing the communication between the elderly and other people reduces social isolation and combats loneliness. It was found that the fact that the elderly learn to use a technological device offers benefits for their emotional well-being, as the elderly feel self-effective.

The promotion of activities that involve playing games that promote cognitive vitality also have real benefits for the health of participants, both physically and mentally, promoting cognitive health and active and healthy aging, with a positive impact on their well-being[21].

In the case of activities that involve the practice of physical activity, in a study carried out by Walters & Jordan[22] it was found that there was an increase in social activity and their predisposition to include the practice of physical exercise in their daily routine. Using a community program that promotes the practice of physical activity keeping the elderly moving, reduces muscle stiffness and reduces the risk of falls, thus translating into a benefit for the health of the participants.

Volunteering in the community is another activity that can be promoted in order to promote active aging and, consequently, the health of those who practice it. Being an elder volunteer promotes the experience of aging in a productive way and increases the social support network for those who are targets of volunteer work. Boosting activities that involve volunteering for the elderly brings countless benefits to the entire community, which is why it is an excellent activity to boost this population[24].

*Implications for practice*

In order to improve the practice of Nurses specializing in Community Nursing and Public Health, it is recommended that nurses take into account the opinion of the elderly who will participate in recreational activities in order to establish criteria such as number of participants, duration and frequency of activities. Elderly report that activities such as singing should be carried out in groups, with 5 to 12 participants, with the main purpose of leisure[20]. The activity should take place in a place close to their homes[20], with outdoor spaces such as parks being an option[25]. The duration of the activity should vary between 30 and 60 minutes, preferably taking place in the afternoon and with a frequency

of once a week[20]. Elderly also elect the night period to carry out activities such as dances and movie sessions[25].

Performing streamlined activities that promote the development and maintenance of cognitive, physical and social skills improve individual health[8]. Elderly centers and universities are privileged spaces for the development of dynamic activities in the community with the elderly population, in order to promote their health. It should be taken into account that seniors want to carry out outdoor activities, in green spaces such as parks.

# FINAL CONSIDERATIONS

Like Portugal, many countries in the world have a high average life expectancy, however, the years of healthy life and quality of life are lower in our country. There is currently a set of demographic changes worldwide that change the structure of the population, and it is therefore essential to mobilize resources and create services to meet the new needs and preferences of the elderly population, so that it can remain in the community for the maximum period and with the highest possible quality of life.

Nurses specializing in Community and Public Health Nursing are key professionals in the promotion and protection of health, and should be at the forefront in promoting activities that promote the health of individuals, their families and communities.

Activities that the elderly enjoy should be promoted for the intervention to be successful. It was found that elders appreciate the promotion of activities such as singing groups, using new communication technologies, performing memory games and cognitive stimulation, physical exercise and volunteering in the community. It was also found that this type of activities brings countless benefits to the health of those who practice them and to the entire community in general, whether physically, mentally, socially, economically and emotionally.

More studies and investigations on the subject should be carried out, in order to understand the perceptions of seniors about various activities carried out in the community and thus be able to assess, adapt and innovate the various intervention strategies in the community. The benefits for elders associated with participation in certain community activities should also be studied, in order to understand the effective gains for the health of the population in question.

Authors Contribution

HB: Study design, data collection, storage and analysis, review and discussion of results.
AC: Study design and coordination, data collection and analysis, review and discussion of results.
AG: Data collection, storage and analysis, review and discussion of results.
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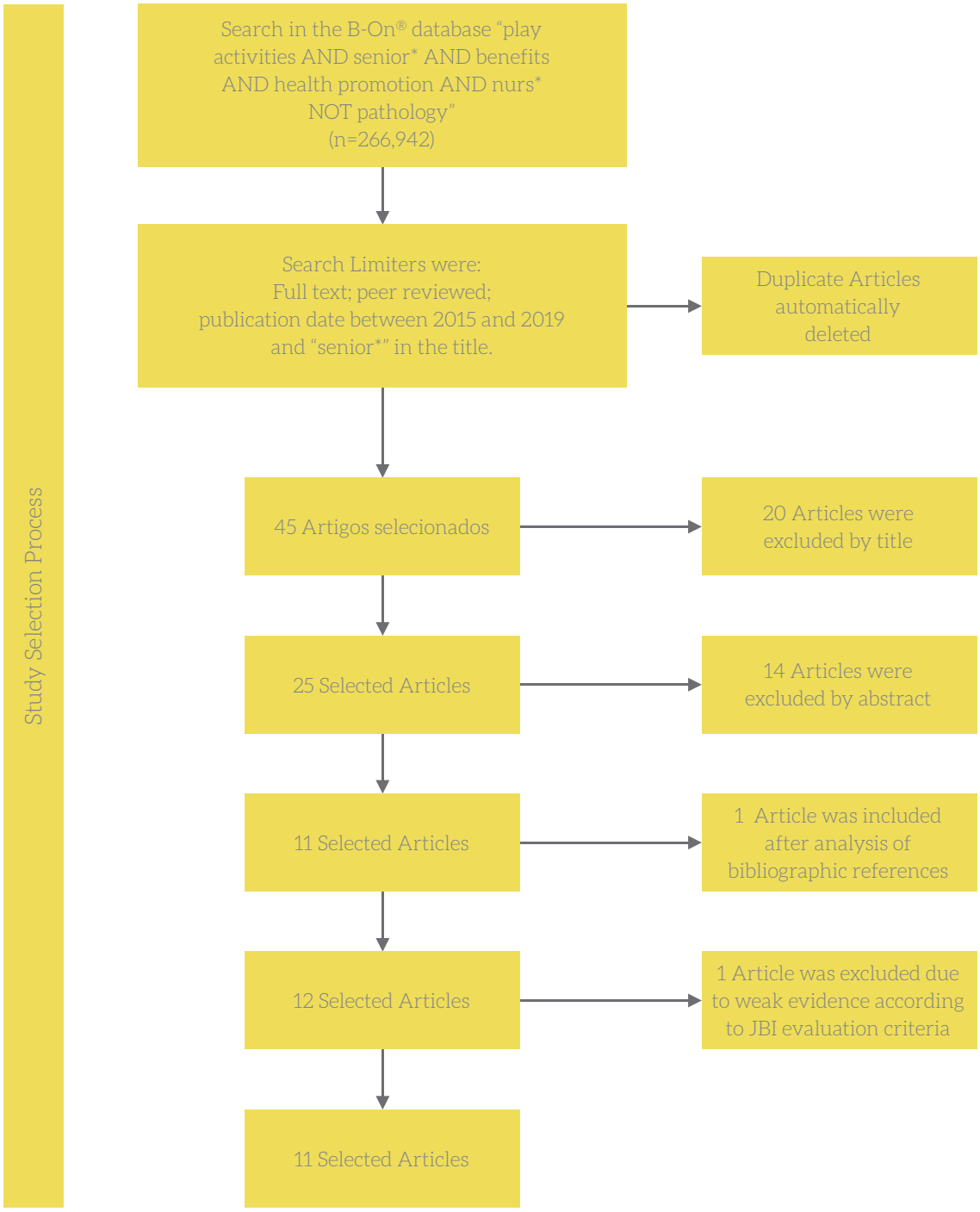


Figure 1 – Flowchart of the selection process of the articles (self-composed).

Chart 1 – Evidence and Recommendation Levels.↖

| Article | Study Type | Evidence Level | Recommendation Level |
|---|---|---|---|
| A[15] | Qualitative, Exploratory and Descriptive Study. | 4.b | A |
| B[16] | Quasi-experimental study with pre and post test. | 2.d | A |
| C[17] | Quasi-experimental study with pre and post test. | 2.d | A |
| D[18] | Qualitative, Exploratory and Descriptive Study. | 4.b | A |
| E[19] | Mixed and descriptive study. | 4.a | A |
| F[20] | Mixed study with pre-test and post-test | 2.d | A |
| G[21] | Quasi-experimental study with control group and application of pre-test and post-test | 2.c | A |
| H[22] | Quantitative descriptive study with application of pre-test and post-test. | 4.b | A |
| I[23] | Cross-sectional qualitative study. | 4.b | A |
| J[24] | Descriptive observational qualitative study. | 4.b | A |
| L[25] | Randomized Controlled Clinical Trial. | 1.c | A |

Self-composed.

Chart 2 – Identification of the scientific articles under analysis.↖

| Id | Authors | Year |
|---|---|---|
| A[15] | Varwijk, A.; Madjdian, D.; Vet, E.; Mensen, M.; Visscher, T.; Ranchor, A.; Slaets, J. & Smits, C. | 2019 |
| B[16] | Musetta, C. F.; Belza, B.; Nguyenc, H.; Logsdond, R. & Demoreste, S. | 2018 |
| C[17] | Judges, R. A.; Laanemets, C.; Stern, A. & Baecker, R. M. | 2017 |
| D[18] | Fu, M. C.; Lin, S.; Belza, B. & Unite, M. | 2015 |
| E[19] | Aday, R. H.; Wallace, B. & Krabill, J. J. | 2018 |
| F[20] | Jo, H. E.; Jo, J. S.; Kari K.; Veblen, K. K. & Potter, P. J. | 2017 |
| G[21] | Laforest, S.; Lorthios-Guilledroit, A.; Nour, K.; Manon Parisien, M.; Michel Fournier, M.; Ellemberg, D.; Danielle Guay, D.; Desgagnés-Cyr, C. & Bier, N. | 2017 |
| H[22] | Walters, C. & Jordan, M. T. | 2018 |
| I[23] | Shea, J. | 2016 |
| J[24] | Yoo, S. H. | 2017 |
| L[25] | Coulton, S.; Clift, S.; Skingley, A. & Rodriguez, J. | 2015 |

Self-composed.

Chart 3 – Summary of extracted data.

| ID | Objectives | Planning | Participants | Interventions | Results | Conclusions |
|---|---|---|---|---|---|---|
| A[15] | Study opinions and experiences in a health promoting intervention lead by Dutch Nurses. | Qualitative, Exploratory and Descriptive Study. | 19 Dutch elderly (62-92 years old) that live in the community. | Health promoting nursing appointments. 19 semi-structured interviews were carried out (Jan-Mar of 2014). QUAGOL based Data Analysis and WEB-QDA software. | Participants showed awareness of aging, highlighted a healthy lifestyle, referring that it is necessary to deal with opportunities and accept restrictions. In the interaction with the nurse, they considered her professional and trustworthy. They received advice and felt motivated to change behavior and make decisions. The appointment was perceived as a physical check-up and/or moment of emotional support. | It is important that health promoting nursing interventions include personal views of the elderly about healthy living and opinions about the interventions. The study demonstrates a wide range of expectations, views and experiences. Health promoting nursing interventions are beneficial, but they must be individualized. |
| B[16] | Evaluate feasibility, acceptability and impact of a singing program (12 weeks in group) on cognitive function, lung health and quality of life. | Quasi-experimental study with pre and post test. | 49 participants (average age of 83.6 years old) from three US communities. | In the pre-test, cognitive function, respiratory function and quality of life were evaluated. In each singing session, peripheral oxygen saturation was evaluated. The (weekly) intervention included: muscle stretching, deep breathing, vocal exercises, singing and socialization. In the post-test, the pre-test evaluation was repeated. | Participants highly satisfied with the intervention, confirming its feasibility and acceptability. Significant improvement in selected cognitive domains and respiratory muscle strength, but that did not translate into better quality of life. | This intervention can promote memory, information processing, improve language, executive function and respiratory muscle strength in the elderly. |

Self-composed.

Chart 3 – Summary of extracted data.

| ID | Objectives | Planning | Participants | Interventions | Results | Conclusions |
|---|---|---|---|---|---|---|
| C[17] | Explore InTouch usage patterns by seniors over 3 months. To explore the relationships between the demographics, health and social profile of older adults and the adoption of InTouch and its effect on older adults' socio-emotional well-being. | Quasi-experimental study with pre and post test. | 10 elderly (68-92 years old) and 10 volunteers (26-80 years old). | In the pre-implementation phase, an elderly and a volunteer were paired for a group training session (2 h led by the research team), with individual semi-structured interviews being carried out. Participants were exposed to the use of InTouch and after 12 weeks post-implementation monitoring was carried out, with individual semi-structured interviews. | Audio messages to family and friends were the most common. Seniors more motivated to communicate, without health limitations and receiving more messages, more easily adopted InTouch. More than half reported feeling positive change in communication with family and friends (increased frequency) and greater ease in using InTouch than in other media. They improved the relationship with family and friends, feeling closer to younger family members. Most reported positive feelings with using InTouch. | Information and Communication Technologies bring several benefits to seniors. Learning to use a technological device brings benefits for emotional well-being, such as pleasure and increased self-efficacy. |

Self-composed.

Chart 3 – Summary of extracted data.

| ID | Objectives | Planning | Participants | Interventions | Results | Conclusions |
|---|---|---|---|---|---|---|
| D[18] | Identify information for building a group singing program for seniors by exploring personal perspectives on music and singing. | Qualitative, Exploratory and Descriptive Study. | 28 elderly people (average age of 88 years old) and 6 workers at a senior center (average age of 42 years old). | 4 focus groups (each group with 5 to 12 participants) conducted with interview guides. | Elderly people reported that the purpose of the singing group should be clear, in a leisure format, in a place close to their home, lasting between 30 and 60 minutes, in the afternoon and once a week. Familiar songs that are easy to learn. The group must have a leader who can sing well and with knowledge about singing. Physical presence of melodic musical instruments. There must be personal motivation like the personal pleasure of singing and socializing. A comfortable environment and music sheets can facilitate positive experiences. | Participating in a singing group can bring numerous health benefits for the elderly, such as promoting cognition, helping to bring back good memories, promoting psycho-social health and respiratory health. |
| E[19] | Document the effectiveness of the senior center as a community meeting place, where strong social relationships are established and activities that promote healthy aging are developed and there is access to other services. | Mixed and descriptive study. | 385 participants (average age of 72.7 years old) from 2 senior centers in the community. | Applying a questionnaire. | Senior centers play a major role in improving the physical and mental health of older people, with benefits in promoting health and well-being. The friendship relationships created are valued. | Senior centers are very important in the social life of the elderly, they are a base of emotional support, they facilitate the access of the elderly to services outside the senior center, being linked to successful long-term aging. |

Self-composed.

Chart 3 – Summary of extracted data.

| ID | Objectives | Planning | Participants | Interventions | Results | Conclusions |
|---|---|---|---|---|---|---|
| F[20] | Evaluate the impact of a community program for seniors (Senior College) on the quality of life of Korean immigrants in Canada. | Mixed study with pre-test and post-test (between April and October 2014). | 79 elderly (average age of 74.1 years old) who lived in the community. | A quality of life and well-being questionnaire was applied before the implementation of the community program and the same questionnaire after the program. 11 semi-structured interviews were carried out after the completion of the community program. | The quantitative exploratory study indicated positive effects of the community program on the health of the participants (reduction in the perception of body pain and improvement in the emotional state) and on the quality of life. With benefits in promoting health and vitality, reducing isolation and social exclusion, it promotes a renewed perspective on aging and on oneself. Offers social support and a sense of belonging. | Activities such as singing, short talks, birthday celebrations, dancing, playing musical instruments, writing and using technology can all be incorporated into a community program for seniors. This type of activities has benefits for the health and quality of life of the elderly. |
| G[21] | To verify the effects of Jog your Mind (a multifactorial community program that promotes cognitive vitality in elderly people without cognitive impairment) on attitudes and behaviors associated with lifestyle related to cognitive vitality. | Quasi-experimental study with control group and application of pre-test and post-test (between 2009 and 2013). | 294 elderly people (average age of 71 years old) who lived in the community. | 23 community organizations were assigned to the experimental group (offering the program) or the control group (creating a waiting list). Participants were assessed in various areas of their health before and after being exposed or not to the Jog your Mind program. | It revealed that this type of program can significantly improve attitudes and behaviors related to cognitive vitality, however it did not reveal a significant impact on the participants' cognition in the short term. The experimental group reported feeling more control over cognitive skills and improved use of memory strategies. There was an improvement in the participants' physical activity and stimulating activities. | Playing games that promote cognitive vitality in the elderly has physical and mental health benefits. Mind-stimulating games promote not only cognitive health, but also active, healthy aging and overall well-being. |

Self-composed.

Chart 3 – Summary of extracted data.

| ID | Objectives | Planning | Participants | Interventions | Results | Conclusions |
|---|---|---|---|---|---|---|
| H[22] | To verify the effectiveness of using the Matter of Balance/ Volunteer Lay Leader Model (AMOB/VLL), in reducing the fear of falling and increasing the involvement of the elderly in physical activity. | Quantitative descriptive study with application of pre-test and post-test. | 171 elderly people (average age of 75.79 years old). | 20 AMOB/VLL sessions between 2012 and 2014. A pre-test (questionnaire) was performed before the intervention. At the end of the 8th session, the post-test questionnaire was applied (including the same pre-test questions). | The program showed effectiveness. There was an increase in social activity and readiness to include physical exercise in the daily routine. There were significant changes in self-efficacy in preventing falls. Participants gave positive feedback on the use of the AMOB/ VLL. | Falls are a very costly and debilitating occurrence that can lead to loss of independence. Using a movement promoting program reduces stiffness and reduces the risk of falls, translating into a health benefit. |
| I[23] | Investigate older people's needs and preferences for parks. Check if preferences change taking into account the ethnicity of the elderly and what are the reasons for them to frequent the existing parks. | Cross-sectional qualitative study. | 39 elderly (62-91 years old) living in the community. | Literature review on the state of the art on the subject. Conducting a focus group based on a structured interview. | Participants mention 6 desirable characteristics in the parks: safety against human threats and environmental risks, good accessibility, presence of natural elements such as vegetation, recreational activities, opportunities for hiking, physical activity and programs that encourage social interaction. It has not been proven that preferences change depending on the ethnicity of the elderly. Participants reported avoiding existing parks because they do not feel safe, showing concern with the activities carried out there by young people. | Visiting parks provides important physiological and psychological benefits for the elderly, improving their health, well-being and quality of life. Seniors seek outdoor activities that allow them to interact with others at events such as dances, movie nights in the park, cultural celebrations, farmers' markets and the like. |

Self-composed.

Chart 3 – Summary of extracted data.

| ID | Objectives | Planning | Participants | Interventions | Results | Conclusions |
|---|---|---|---|---|---|---|
| J[24] | Analyze how senior volunteers see their experience of volunteering for other seniors. Assess the meanings of volunteer work for these seniors. Relate volunteer work to active aging and support networks for the elderly. | Descriptive observational qualitative study. | 24 senior volunteers (50-70 years old). | Research carried out over three consecutive summers (2012 to 2014), through formal interviews, focus groups and field observations. | Volunteers saw their experience as a balance between promoting their own active aging and social support for other seniors. They felt that help-ing the elderly resul-ted in personal benefits, making them more useful and recognized. They expressed feelings of true care and respect and a true desi- re to help others. There was an increase in maturity in social in-teraction, improving their social skills. | Voluntary service by seniors for seniors brings numerous health benefits. Helping others promotes productive aging and increases the support network for the most needy elderly in a community context. The benefits outweigh the disadvantages. |
| L[25] | To assess the effectiveness of active participation in a community singing group in improving quality of life, depression, and anxiety related to mental and physical health in the elderly and to assess the cost-effectiveness of active involvement in the community singing group for older people. | Randomized Controlled Clinical Trial. | 258 participants (average age of 69 years old). 127 participants in the control group and 131 participants in the intervention group. | The intervention group participated in group singing sessions (90-minute duration for 14 weeks). The control group continued with normal activities and was told they could join a singing group at the end of the study | The interest shown by the groups and the willingness of participants to get involved in singing groups is an indicator of the feasibility and acceptability of this type of intervention. Anxiety and depression levels were significantly lower in the intervention target group. | Participating in a community singing group has potential benefits for older people's mental health-related quality of life. Community singing groups should be considered an important element in any public strategy for promoting mental health in the elderly population. |

Self-composed.