

## LIFESTYLES OF MIDDLE-AGED PEOPLE: IMPLICATIONS FOR PRIMARY HEALTH CARE PRACTICE

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*Ana Maria Grego Dias Sobral Canhestro*

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**Abstract: Objective:** To identify how different factors influence the adoption of health-promoting lifestyles among middle-aged people in Baixo Alentejo, Portugal. **Method:** Correlational and cross-sectional population-based study in thirteen municipalities in Baixo Alentejo, Portugal. A self-report questionnaire was used to assess individual characteristics and experiences, risk behaviors, and the Health Promoting Lifestyles Profile Scale (HPLPII) in the version translated and validated for Portugal. **Results:** A total of 894 middle-aged people (aged between 45 and 64 years), living in Baixo Alentejo, enrolled in one of the fourteen Primary Health Care functional units, responded. The typical profile that we can outline is as follows: average age 54 years, pre-obese, with at least one chronic disease, non-smoker, with low alcohol consumption, with a low overall score for the health-promoting lifestyle. Regarding the subscales that make up the HPLP II, Physical Activity was the one that presented the lowest score, Stress Management and Health Responsibility also presented low scores; the remaining subscales presented positive, although moderate, scores. In the inferential analysis carried out, the following aspects stand out: The Health-Promoting Lifestyle correlated negatively with age and BMI. There were significant differences in the Health-Promoting Lifestyle between men and women and also in people with and without chronic disease. A more positive self-perception of health status was associated with higher scores on the Health-Promoting Lifestyle. There was a positive and significant correlation between the variables “Education level”, “Monthly family income”, “Perceived self-efficacy” and the Health-Promoting Lifestyle. **Conclusion:** These results highlight that in order to achieve healthy ageing, specific interventions need to be developed for this age group, taking into consideration, the factors identified in this

study and aiming not only to promote healthy lifestyles, but also to change behaviour. These interventions must be planned, implemented and evaluated with participants so that they become more aware of their lifestyle and the consequences it has on their health, making these interventions more effective.

**Keywords:** Lifestyle; Midlife; Community Health Nursing; Health Promotion; Healthy Aging.

## INTRODUCTION

Health Promotion is increasingly recognized as a key area of Primary Health Care, bridging the gap between the health sector, other social sectors and the community. Nurses are in a privileged position to develop and lead health promotion projects and activities throughout the aging process, through the adoption of strategies based on a more positive vision of people's health (Canhestro, 2018).

It is recognized that a healthy lifestyle is more influential than genetic factors in maintaining health throughout the ageing process and that, although the risk of disease and disability increases with age, poor health need not be an inevitable consequence of ageing (WHO, 2015; Oxley, 2009).

Adulthood is seen as a fundamental phase to maintain the focus on promoting healthy lifestyles and to act on the prevention of chronic diseases, recognizing that the lifestyle adopted up to and during middle age will have a great impact on health in later life (Sanders, 2006; Papalia, Olds, & Feldman, 2006) and that it is never too late to adopt healthy lifestyles (Davim, et al., 2010).

The Alentejo region is one of the oldest regions in Portugal, and also has the highest percentage of people with declining health status as a result of acute and chronic diseases, revealing a greater need for health care (Santana, et al., 2008). In this context, the Baixo Alentejo sub-region simultaneously had a high

aging rate and the lowest life expectancy at birth and at 65 years of age in the entire mainland national territory (INE, 2012; Santana, Alves, Couceiro, & Santos, 2008).

From this perspective, it is crucial to understand the lifestyles of middle-aged people, paying particular attention to health-promoting behaviors and the factors that influence them, as a starting point for more appropriate and reality-adjusted health promotion interventions throughout life that allow the promotion and creation of conditions so that middle-aged people can express their health potential through lifestyles that promote health and allow healthy aging.

## **OBJECTIVE**

Identify how different factors influence the adoption of health-promoting lifestyles by middle-aged people in Baixo Alentejo.

## **METHOD**

The study, of a correlational nature, population-based, was part of a broader investigation that aimed to contribute to a deeper knowledge regarding the promotion and adoption of healthy lifestyles and their determinants with a focus on healthy aging (Canhestro, 2018) and was developed in the sub-region of Baixo Alentejo, Portugal, taking as a starting point the middle-aged population residing in one of the thirteen municipalities of that sub-region and registered in a Primary Health Care Functional Unit of the Local Health Unit of Baixo Alentejo (ULSBA). In this type of study, the relationships between the variables to be investigated must come from a theory (Freixo, 2012) and in this case it comes from Nola Pender's middle-range theory, which gave rise to the Health Promotion Model (Pender, Murdaugh, & Parsons, 2011) and it was in the components of this model as well as in the importance given, by the evidence, to the factors that

influence the adoption of a certain lifestyle, that we anchored our decision on the variables to include in this study.

The target population of this study was defined as middle-aged people - understood in this context chronologically as the period from 45 to 64 years old, according to the classification of Spirduso (2004), living in Baixo Alentejo, registered in one of the fourteen Primary Health Care functional units of this sub-region. A non-probabilistic sampling method was used, using the quota sampling technique where the subjects were chosen for presenting the desired characteristics (Freixo, 2012). 894 middle-aged people agreed to participate in this study.

For data collection, based on the theoretical framework, a self-report questionnaire was constructed, consisting of a first part containing 29 items and which included aspects related to individual characteristics and experiences (which include personal factors categorized as biological, psychological and sociocultural), as well as interpersonal influences and perceived self-efficacy. With regard to lifestyle, risk behaviors (alcohol consumption - assessed through the AUDIT C and tobacco consumption) and health-promoting behaviors were assessed, which were assessed in the second part of the questionnaire using the Health-Promoting Lifestyles Profile Scale in the version translated and validated for Portugal and which includes 52 items (Sousa, Gaspar, Vaz, Gaspar, & Dixe, 2015). Our choice of this scale seemed natural and congruent to us, given that it is one of the instruments considered appropriate for research using the Health Promotion Model (Walker, Sechrist, & Pender, 1995) and measures the Health Promoting Lifestyle overall and in each of the dimensions (six subscales): Health Responsibility; Physical Activity; Nutrition; Interpersonal Relationships; Spiritual Growth; and Stress Management.

The authors recommend the use of averages to calculate the scores obtained and that the metric be kept between 1 and 4 so that comparisons between the results of the different subscales are possible (Walker, et al., 1995). Based on the metric used, obtaining an average score higher than 2.5 was considered a positive result (Al-Kandari, Vidal & Thomas, 2008; Zhang, Tao, Ueda, Wei, & Fang, 2013), and the average scores obtained were categorized as follows: high (when an average higher than 3 is obtained), moderate (when an average between 2.5 and 3 is obtained) and low (when an average lower than 2.5 is obtained) (Al-Khawaldeh, 2014).

To apply the questionnaires, the strategy for contacting participants was focused on nurses from the Primary Health Care Units, whose knowledge and proximity to the community allowed for high participant participation.

The research was approved by the Ethics Committee of the Baixo Alentejo Local Health Unit. Data collection began with the presentation of the study and the signing of the free and informed consent form, anonymity was safeguarded, as well as the secrecy and confidentiality of the information provided.

Statistical analysis of the data was performed using the IBM SPSS (Statistical Package for the Social Sciences) version 21 statistical program, using descriptive statistical analysis and, whenever possible, inferential statistical analysis.

Based on the Health Promotion Model (Pender et al., 2011), an important reference for this research, reinforced by the study framework, we analyzed the relationships between the dependent variable: health-promoting lifestyle and personal factors (biological, psychological and sociocultural), interpersonal influences, perceived self-efficacy and assuming that these factors influence the adoption of a healthy lifestyle in general and/or in each of its components. Taking into consideration, that lifestyle is

usually composed of a mixture of health-promoting behaviors and risk behaviors that influence each other, we also studied the relationships between the health-promoting lifestyle and risk/harmful behaviors (alcohol consumption and tobacco consumption) to try to verify whether and to what extent this relationship occurs in this population group.

## RESULTS

A total of 894 middle-aged people (between 45 and 64 years old) responded to the questionnaire, of which 54.3% were women and 45.7% were men. Through descriptive analysis, we drew up a typical profile of the middle-aged people who make up our sample, referring to the aspects that stood out.

Regarding Body Mass Index [BMI], this varied between 17.2 and 45.2 kg/m<sup>2</sup>, with an average BMI of 26.7 kg/m<sup>2</sup> and a standard deviation of 4.1 kg/m<sup>2</sup>. When distributing the results into the classes defined by the WHO, we found that 36.6% of middle-aged people had a weight considered normal, with pre-obesity being the most prevalent category (43.5%). The majority of respondents (62.7%) were over the recommended weight, that is, they were pre-obese (43.5%) or obese (19.2%). The most prevalent class was pre-obesity, with 41.2% of women and 46.2% of men in this category.

Almost half (49.1%) of the people surveyed reported at least one chronic disease, with five being the maximum number of chronic diseases reported by three respondents. The most frequently reported chronic diseases were High Blood Pressure [HTN] (23.5%), Diabetes (10.7%) and Musculoskeletal Problems (9.1%). Regarding co-morbidities, it is worth noting that 6.6% of the respondents reported having both HTN and Diabetes. The majority of the respondents presented a positive self-assessment of their health status (54.1% rated Very Good and Good, against

7.7% rated Poor or Very Poor). Women and people with chronic diseases presented a more negative self-perception of their health.

With regard to tobacco consumption, the majority declared themselves as Non-smokers (54.4%), and it must be noted that of the remaining categories the Ex-smoker category (19.9%) stood out, and only then the Smoker category (18.1%), which means that 74.3% of the sample reported not smoking at the time of the response. It is also worth noting that tobacco consumption is more prevalent among men. With regard to alcohol consumption, with regard to the classification of the results obtained in AUDIT C, we found that the Low Consumption category was the most prevalent (46%), followed by the Abstinent category (36%) and finally Excessive Consumption (18%). In the bivariate analysis between Alcohol Consumption and Sex, we can see that there was a higher prevalence of abstinent individuals among women (51.8%), while excessive consumption was more prevalent among men (31.5%).

Participants in this study had an average overall score in the Health Promoting Lifestyle of 2.43, which is considered low. Regarding the subscales, the average scores obtained were in the following decreasing order: Spiritual Growth (2.79), Nutrition (2.66), Interpersonal Relationships (2.62), Health Responsibility (2.30), Stress Management (2.23) and Physical Activity (1.90). In other words, the last three components did not reach a value considered positive, and were also categorized as having low scores, and the first three had their results considered positive, although moderate.

Through inferential analysis, we studied the relationship between the different factors and the Health-Promoting Lifestyle, and in this analysis, some aspects stood out and are presented in a summary form. The Health-Promoting Lifestyle is negatively correlated with age and BMI. There are significant

differences in the Health-Promoting Lifestyle between men and women and also in people with and without chronic disease. Regarding the relationship between Self-Perception of Health Status and Health-Promoting Lifestyle, we can state that a more positive Self-Perception was associated with higher scores in the Health-Promoting Lifestyle.

We can affirm the existence of a positive and significant correlation between the Level of Education and the Health-Promoting Lifestyle. Given the importance given to it in the literature, we would like to highlight the importance of this relationship, highlighting the need to continue promoting literacy in general and health literacy in particular.

We can also state that monthly family income was positively and significantly correlated with the Health-Promoting Lifestyle. Given these results, it is important to pay special attention to groups with lower incomes so that health inequalities are not exacerbated.

Regarding the relationship between Perceived Self-Efficacy and Health-Promoting Lifestyle, we found that higher Self-Efficacy scores were associated with higher Health-Promoting Lifestyle scores. This confirms what the Health Promotion Model proposes regarding Self-Efficacy as a good predictor of the adoption of health-promoting behaviors (Pender, et al., 2011). This is a very important aspect because we know that self-efficacy influences lifestyle choices throughout life.

## DISCUSSION

To be overweight was a reality for the majority of people surveyed, in line with the high prevalence of this health problem that affects all age and social groups, at national and European level (OECD, 2016). The prevalence of overweight/obesity in our sample (62.7%) is higher than the European average for adults (52%) (WHO, 2013) and also higher than the national average (51.5%) reported by the

study carried out by the National Observatory of Physical Activity and Sport (Baptista, et al., 2011) and also that reported in the INS 2014 (52.8%) for the population aged 18 or over (INE, 2016), an aspect that may be related to the age group we chose, since the prevalence of overweight and obesity increases with age (Baptista, et al., 2011, WHO, 2013) and in fact a higher BMI corresponded to the older people in our sample.

Almost half of the people surveyed reported at least one chronic disease; a high prevalence of chronic diseases in the adult population (between 25 and 74 years old) was also reported by Barreto et al. (2016). Among the chronic diseases reported by the respondents, we highlight HTA and Diabetes, which can appear in isolation or as co-morbidities. The emphasis we give to these chronic diseases is due to their high prevalence in the sample (as well as at a national level), but also because cross-cutting initiatives aimed at reducing their prevalence, through support for healthy behavior, also have positive impacts on a much larger number of people suffering from other diseases (Crisp et al., 2014).

The results regarding Self-perception of health status are in line with the results of the INS 2014, where women also had a more negative perspective of their health status (INE, 2016). The study of this factor is extremely important because it is considered a predictor of health and well-being and also of people's mortality (Pender et al., 2011; Stone, Schwartz, Broderick, & Deaton, 2010).

In terms of risk behaviors, it is worth noting that tobacco consumption and excessive alcohol consumption are more prevalent among men, results that are in line with other national studies (Balsa, Vital, & Urbano, 2012; INE, 2016; Ribeiro, 2011; SICAD, 2015).

The Health Promoting Lifestyle, as already mentioned, did not reach a value considered positive (average equal to or greater than

2.5), being categorized as a low score, the same occurring in the components: Health Responsibility, Stress Management and Physical Activity, where even lower values are reported. The scores obtained in the components: Spiritual Growth, Nutrition and Interpersonal Relationships, are considered positive but moderate results (average between 2.5 and 3).

In line with these results, with regard to Physical Activity, the study by Lopes, et al. (2017) highlighted the sedentary lifestyle of the Portuguese population, referring to Alentejo as one of the regions with the highest rate of sedentary lifestyle in the adult population. However, this aspect does not seem to be exclusive to our country, as in studies carried out in different countries and with adults of different ages as participants, Physical Activity was the component that obtained the lowest average (Al-Khawaldeh, 2014; Asrami, Hamzehgardeshi, & Shahhosseini, 2016; Chouhan, 2017).

Regarding the negative correlation between age and Health-Promoting Lifestyle, we found some similar results in the literature (for example: Zhang, et al., 2013) but also dissonant ones (for example: Asrami, et al., 2016). Given these differences and given that there are authors who report that the increase in physical constraints related to age, as well as the resulting changes in personal responsibilities, interests and roles, can influence the involvement of older people in health-promoting behaviors (Papalia, et al., 2006; Ammouri, 2008; Pender, et al., 2011), we consider that it will be important to develop future research that deepens these aspects.

Regarding the significant differences between men and women regarding the components of the Health Promoting Lifestyle, previous studies (for example: Ammouri, 2008; Callaghan, 2006; Zhang, et al., 2013) corroborate some of the results we found,

although there are other studies that did not find significant differences between sexes (for example: Al-Khawaldeh, 2014; Nacar, et al., 2014). Given the differences found in the different studies consulted, further research is needed into the aspects that influence the differences between men and women with regard to the Health-Promoting Lifestyle. It was found that people who reported not having a chronic disease had higher levels of the Health-Promoting Lifestyle and the following components: Physical activity, Interpersonal relationships, Spiritual growth and Stress management. Some of these results are in line with the study by Callaghan (2006). The study by Sonmezer, Cetinkaya and Nacar (2012), however, reported that people with chronic diseases had higher scores in the Health-Promoting Lifestyle. Further research is also important at this level, especially considering the importance of adopting health-promoting behaviors for people with chronic diseases and the fact that these are aspects that are usually addressed in monitoring consultations for some chronic diseases (for example: HTA and Diabetes), namely aspects related to nutrition and physical activity.

The results we obtained for the relationship between Self-perceived health status and Health-Promoting Lifestyle are in line with several studies (for example: Huang, Li, & Tang, 2010; Nacar, et al., 2014) and support the proposition that perceived health status influences the adoption of a regular practice of health-promoting behaviors (Pender, et al., 2011).

Previous studies (for example: Arras, Ocletree, & Welshimer, 2006; Sonmezer, et al., 2012) found a positive and significant correlation between Education Level and Health-Promoting Lifestyle. Regarding the positive correlation between Income and Health-Promoting Lifestyle, other studies (for example: Ammouri, 2008; Zhang, et al., 2013) found similar results, suggesting that the social

environment in which adults live influences their access to resources that promote healthy behaviors and at the same time creates behavioral patterns that are normative for that environment, with the association between low income, low educational level and lower levels of health-promoting behaviors being common (Arras, et al., 2006).

Similar to our results, previous studies (Cid, Merino, & Stiepovich, 2008; Beal, Stuifbergen, & Brown, 2009; Agazio & Buckley, 2010) found a positive correlation between perceived self-efficacy and Health-Promoting Lifestyle. Since self-efficacy is considered a strong predictor of the adoption of health-promoting behaviors, strategies must be adopted to promote and maintain it (Agazio & Buckley, 2010).

## CONCLUSION

The results presented allow us to conclude that, from a clinical point of view, this group of middle-aged people presented a high risk of developing chronic diseases (with a large percentage already having them, a situation that can be aggravated) showing a high prevalence of pre-obesity and obesity, which in men was combined with a higher prevalence of risk behaviors (tobacco and alcohol consumption). For both sexes, these aspects are combined with a health-promoting lifestyle with a negative overall score, with special emphasis on the Physical Activity component.

These results highlight that in order to achieve healthy ageing, specific interventions need to be developed for this age group, taking into consideration, the factors identified in this study, and aiming not only to promote healthy lifestyles but also to change behaviour. These interventions must be planned, implemented and evaluated with participants so that they become more aware of their lifestyle and the consequences it has on their health, making these interventions more effective.

In complementary research (Canhestro, 2028), it was considered that nurses who develop their professional practice in a community context play a key role in the development of interventions to promote healthy lifestyles, due to their proximity to individuals, families and communities, their expertise in developing positive interactions with other members of multidisciplinary teams and other community partners, and also through their leadership of interventions and community intervention teams. Therefore, it will be important to maintain the focus on promoting health-promoting lifestyles that begin early but are maintained throughout life, with a view to healthy ageing; to prioritize the development of integrated and intersectoral interventions that seek to maximize community resources; to strengthen existing intersectoral partnerships by reducing barriers and increasing synergies; develop and institutionalize strategies and mechanisms that place citizens and communities at the center of initiatives, facilitating their effective participation through active, inclusive and equity-promoting involvement, with a view to increasing the participation of vulnerable groups (for example: older people, people with chronic illnesses, unemployed people, people

living alone, people with low incomes and low levels of education) in health promotion interventions: at the level of their planning, implementation and evaluation and in all decision-making processes. Also aiming to increase their adherence to health-promoting behaviors.

It will also be important to work towards strengthening health literacy, supporting self-care, protecting and promoting the rights of citizens of all ages, ensuring their participation in decision-making processes in order to increase their capacity, empowerment and responsibility in health.

Given the high risk of developing or worsening chronic diseases presented by middle-aged people, in this research, it is important that specific interventions are developed for this age group, which take into consideration, the factors that were identified, and which aim not only to promote healthy lifestyles, but also behavioral change: increasing health-promoting behaviors and reducing risk factors.

The Health Promotion Model was an important reference for this study, so we suggest that it be used in planning interventions to promote healthy lifestyles.

## REFERENCES

- Agazio, J. G., & Buckley, K. M. (2010). Finding a Balance: Health Promotion Challenges of Military Women. *Health Care for Women International*, 31, 848-868. doi: 10.1080/07399332.2010.486095
- Al-Kandari, F., Vidal, V. L., & Thomas, D. (2008). Health-promoting lifestyle and body mass index among College of Nursing students in Kuwait: a correlational study. *Nursing and Health Sciences*, 10, 43-50. doi: 10.1111/j.1442-2018.2007.00370.x
- Al-Khawaldeh, O. A. (2014). Health promoting lifestyles of Jordanian university students. *International Journal of Advanced Nursing Studies*, 3, 27-31. doi: 10.14419/ijans.v3i1.1931
- Ammouri, A. A. (2008). Demographic differences in health promotion lifestyle of adult Jordanians. *Jordan Medical Journal*, 42 (4), 2-9.
- Arras, R., Ocletree, R., & Welshimer, K. (2006). Health promoting behaviors in men age 45 and above. *International Journal of Men's Health*, 5, 65-79. doi: 10.3149/jmh.0501.65



- Asrami, F. S., Hamzehgardeshi, Z., & Shahhosseini, Z. (2016). Health Promoting Lifestyle Behaviors in Menopausal Women: A Cross-Sectional Study. *Global Journal of Health Science*, 8, 128-134. doi: 10.5539/gjhs.v8n8p128
- Balsa, C., Vital, C., & Urbano, C. (2012). III Inquérito Nacional ao Consumo de Substâncias Psicoativas na População Geral, Portugal 2012. Lisboa: Serviço de Intervenção nos Comportamentos Aditivos e nas Dependências [SICAD].
- Baptista, F., Silva A. M., Marques, E., Mota J., Santos R., Vale S., ... Moreira, H. (2011). Livro Verde da Aptidão Física. Lisboa: Instituto do Desporto de Portugal.
- Barreto, M., Gaio, V., Kislaya, I., Antunes, L., Rodrigues, A. P., Silva, A. C., ... Dias, C. M. (2016). 1º Inquérito Nacional de Saúde com Exame Físico (INSEF 2015): Estado de Saúde. Lisboa: Instituto Nacional de Saúde Doutor Ricardo Jorge (INSA, IP).
- Beal, C.C., Stuifbergen, A.K., & Brown, A. (2009). Predictors of a health promoting lifestyle in women with fibromyalgia syndrome. *Psychology, Health & Medicine*, 14, 343-353. doi: 10.1080/13548500902730093
- Callaghan, D. (2006). The influence of basic conditioning factors on healthy behaviors, self-efficacy, and selfcare in adults. *Journal of Holistic Nursing*, 24, 178-185. doi: 10.1177/0898010106289854
- Canhestro, A. M. G. D. S. (2018). Envelhecer com saúde - Promoção de estilos de vida saudáveis no Baixo Alentejo. Tese de Doutoramento. Universidade de Lisboa. Disponível em: [https://repositorio.ul.pt/bitstream/10451/34565/1/ulsd731954\\_td\\_Ana\\_Canhestro.pdf](https://repositorio.ul.pt/bitstream/10451/34565/1/ulsd731954_td_Ana_Canhestro.pdf)
- Chouhan, S. (2017). Analysing health promoting life styles of medical students in Bhopal, Madhya Pradesh, India by HPLP-II. *International Journal of Community Medicine and Public Health*, 4, 195-199. doi: 10.18203/2394-6040.ijcmph20164737
- Cid, P., Merino, J. P., & Stiepovich, J. (2006). Factores biológicos y psicosociales predictores del estilo de vida promotor de salud. *Revista Médica de Chile*, 134, 1491-1499. doi: 10.4067/S0034-98872006001200001
- Crisp, L. N. (coord.), Berwick, D., Kickbush, I., Bos, W., Antunes, J. L., Barros, P. P., & Soares, S. (2014). Um futuro para a saúde - todos temos um papel a desempenhar. Lisboa: Fundação Calouste Gulbenkian.
- Davim, R., Araújo, M., Nunes, V., Alchieri, J., Silva, R., & Carvalho, C. (2010). Aspects related to healthy aging human. *Journal of Nursing UFPE*, 4, 2018-2024. doi:10.5205/1981-8963-v4i4a6388p1961-1967-2010
- Freixo, M. J. V. (2012). Metodologia Científica. Fundamentos, métodos e técnicas (4ª Ed.). Lisboa: Instituto Piaget.
- Huang, S., Li, R., & Tang, F. (2010). Comparing disparities in the Health-promoting Lifestyles of Taiwanese Workers in Various Occupations. *Industrial Health*, 48, 256-264. doi: 10.2486/indhealth.48.256
- Instituto Nacional de Estatística [INE] (2012). Censos 2011 Resultados definitivos – Portugal. Lisboa: INE.
- Instituto Nacional de Estatística [INE] (2016). Inquérito Nacional de Saúde 2014. Lisboa: INE.
- Lopes, C., Torres, D., Oliveira, A., Severo, M., Alarcão, V., Guiomar, S., ... Ramos, E. (2017). Inquérito Alimentar Nacional e de Atividade Física - IAN-AF, 2015-2016. Porto: Universidade do Porto.
- Nacar, M., Baykan, Z., Cetinkaya, F., Arslantas, D., Ozer, A., Coskun, O., ... Yilmaze, G. (2014). Health Promoting Lifestyle Behaviour in Medical Students: a Multicentre Study from Turkey. *Asian Pacific Journal of Cancer Prevention*, 15 (20), 8969-8974.
- Organização Mundial da Saúde [OMS]. (2015). Relatório Mundial de Envelhecimento e Saúde. (Resumo em português). Genebra: OMS.
- Organização para a Cooperação e Desenvolvimento Económico [OCDE]. (2016). Health at a Glance: Europe 2016 – State of Health in the EU Cycle. Paris: OECD Publishing.

- Oxley, H. (2009). Policies for Healthy Ageing: An Overview. OECD Health Working Papers, 42, OECD Publishing.
- Papalia, D. E., Olds, S. W., & Feldman, R. D. (2006). Desenvolvimento humano. (8ª Ed.). Porto Alegre: Artmed Editora, SA.
- Pender, N., Murdaugh, C., & Parsons, M. (2011). Health Promotion in Nursing Practice. (6th Ed.). New Jersey: Pearsons Education, Inc.
- Ribeiro, C. (2011). Medicina Geral e Familiar e a abordagem do consumo de álcool – Detecção e intervenções breves no âmbito dos Cuidados de Saúde Primários. Acta Médica Portuguesa, 24 (S2), 355-368.
- Sanders, K. (2006). Developing practice for healthy ageing. Nursing Older People, 18, 18-25. doi: 10.7748/nop2006.04.18.3.18.c2417
- Santana, P. [Coord.], Alves, I., Couceiro, L., & Santos, R. (2008). Envelhecimento e saúde em Portugal. PNS em foco - Boletim informativo n.º 2. Lisboa: Alto Comissariado da Saúde – Gabinete de Informação e Prospectiva.
- Serviço de Intervenção nos Comportamentos Aditivos e nas Dependências [SICAD], Direção de Serviços de Monitorização e Informação / Divisão de Estatística e Investigação (2015). Relatório Anual 2014 - A Situação do País em Matéria de Álcool. Lisboa: SICAD.
- Sonmezer, H., Cetinkaya, F., & Nacar, M. (2012). Healthy life-style promoting behaviour in Turkish women aged 18-64. Asian Pacific Journal of Cancer Prevention, 13, 1241-1245. doi: 10.7314/APJCP.2012.13.4.1241
- Sousa, P., Gaspar, P., Vaz, D.C., Gonzaga, S., & Dixe, M. A. (2015). Measuring Health-Promoting Behaviors: Cross-Cultural Validation of the Health-Promoting Lifestyle Profile-II. International Journal of Nursing Knowledge, 26, 54-61. doi: 10.1111/2047-3095.12065
- Spirduso, W. W. (2004). Dimensões Físicas do Envelhecimento. São Paulo: Manole.
- Stone, A., Schwartz, J. E., Broderick, J. E., & Deaton, A. (2010). A snapshot of the age distribution of psychological well-being in the United States. PNAS, 107, 1-6. doi: 10.1073/pnas.1003744107
- Walker, S. N., Sechrist, K. R., & Pender, N. J. (1995). Health Promotion Model - Instruments to Measure Health Promoting Lifestyle: Health Promoting Lifestyle Profile [HPLP II] (Adult Version) - Scoring Instructions.
- World Health Organization [WHO]. (2013). Physical activity and older adults: recommended levels of physical activity for adults aged 65 and above. Geneva: WHO.
- Zhang, S., Tao, F., Ueda, A. Wei, C., & Fang, J. (2013). The influence of health- promoting lifestyles on the quality of life of retired workers in a medium-sized city of Northeastern China. Environmental Health and Preventive Medicine, 18, 458-465. doi: 10.1007/s12199-013-0342-x