

● Original article

COGNITIVE DECLINE: KNOWLEDGE, ATTITUDES AND PREVENTIVE PRACTICES OF OLDER ADULTS IN THE COMMUNITY*

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Objective: to evaluate the knowledge, attitudes and practices for the prevention of cognitive decline carried out by older adults. **Method:** a cross-sectional study was carried out with 557 older adults attended at the Family Health Units of a municipality of Mato Grosso from February to May of 2015. The data were collected through an interview using a structured questionnaire with questions on knowledge, attitudes and practices for the prevention of cognitive decline based on Knowledge, Attitude and Practice surveys. A bivariate analysis was performed between the variables knowledge, attitudes and practices for the prevention of cognitive decline, as well as Poisson multiple regression by the forward stepwise method. **Results:** 469 (84.2%) of the older adults presented unsatisfactory knowledge; 523 (93.9%) a favorable attitude; and 307 (55.1%) performed practices to prevent cognitive decline. An association was found between satisfactory knowledge and practices for the prevention of cognitive decline ($p=0.027$). **Conclusion:** These findings provide support for health actions that aim to increase the performance of preventive practices in this population. **KEYWORDS:** Cognition; Knowledge, attitudes and practice in health; Older adult; Geriatric nursing; Disease prevention.

DECLÍNIO COGNITIVO: CONHECIMENTOS, ATITUDES E PRÁTICAS PREVENTIVAS DE IDOSOS EM COMUNIDADE

Objetivo: avaliar o conhecimento, as atitudes e as práticas preventivas do declínio cognitivo realizadas pelos idosos. **Método:** estudo transversal, desenvolvido com 557 idosos atendidos nas Unidades de Saúde da Família de um município de Mato Grosso, nos meses de fevereiro a maio de 2015. Os dados foram coletados por meio de entrevista, utilizando questionário estruturado com perguntas sobre conhecimentos, atitudes e práticas preventivas de declínio cognitivo baseado nos inquéritos: Conhecimento, Atitude e Práticas. Realizou-se análise bivariada entre as variáveis conhecimento, atitude e práticas preventivas de declínio cognitivo e regressão múltipla de *Poisson* pelo método *stepwise forward*. **Resultados:** os idosos com conhecimento insatisfatório foram 469 (84,2%); atitude favorável, 523 (93,9%); e desenvolvem práticas preventivas do declínio cognitivo, 307 (55,1%). Foi encontrada associação entre conhecimento satisfatório e práticas preventivas de declínio cognitivo ($p=0,027$). **Conclusão:** Tais achados fornecem subsídios para ações em saúde, com a finalidade de elevar a realização das práticas preventivas nessa população. **DESCRITORES:** Cognição; Conhecimentos, atitudes e prática em saúde; Idoso; Enfermagem geriátrica; Prevenção de doenças.

DECLIVE COGNITIVO: CONOCIMIENTOS, ACTITUDES Y PRÁCTICAS PREVENTIVAS DE ANCIANOS EN COMUNIDAD

Objetivo: evaluar el conocimiento, las actitudes y las prácticas preventivas del declive cognitivo que ocurre en ancianos. **Método:** estudio trasversal, desarrollado con 557 ancianos atendidos en las Unidades de Salud de la Familia de un municipio de Mato Grosso, en los meses de febrero a mayo de 2015. Se recogieron los datos por medio de entrevista, utilizándose cuestionario estructurado con preguntas acerca de conocimientos, actitudes y prácticas preventivas de declive cognitivo considerándose las investigaciones: Conocimiento, Actitud y Prácticas. Se realizó análisis bivariado entre las variables conocimiento, actitud y prácticas preventivas de declive cognitivo y regresión múltiple de *Poisson* por el método *stepwise forward*. **Resultados:** los ancianos con conocimiento insatisfactorio fueron 469 (84,2%); actitud favorable, 523 (93,9%); y desarrollan prácticas preventivas del declive cognitivo, 307 (55,1%). Hubo asociación entre conocimiento satisfactorio y prácticas preventivas de declive cognitivo ($p=0,027$). **Conclusión:** Esos hallazgos dan subsidios para acciones en salud y pueden elevar la realización de las prácticas preventivas en esa población. **DESCRIPTORES:** Cognición; Conocimientos, actitudes y práctica en salud; Anciano; Enfermería geriátrica; Prevención de enfermedades.

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● INTRODUCTION

Dementia is a chronic and progressive syndrome, characterized by impairment of cognitive functions such as memory, thinking and behavior, which impairs the performance of the Activities of Daily Living (ADL).⁽¹⁾ This syndrome affects both older adults and their family members in personal emotional and economic ways. Of the subtypes of dementia, Alzheimer's Disease (AD) is the most frequent (50% to 75%).⁽²⁾ Dementia has a high prevalence in the global population and mainly affects older people, with an increased likelihood of developing it after age 65.⁽²⁾ In 2010, 35.6 million people had this condition and it is estimated that there will be a doubling of cases every 20 years, reaching 115.4 million people with dementia in the year 2050. In developing countries and those in demographic transition, such as Brazil, an increase in cases of dementia greater than the global average is expected.⁽¹⁾ In 2010, there was a great deal of expenditure on medical, social and informal care for patients with dementia. The total estimated costs were US\$604.000 billion worldwide⁽²⁾ and US\$7.209 billion in Brazil.⁽³⁾

Cognitive Decline (CD) may result from physiological changes expected during the aging process; however, changes of varying degrees that affect cognition more than is expected for age and schooling, may be the transition stage to dementias.⁽⁴⁾ Mild Cognitive Impairment (MCI) is considered the intermediate stage between CD due to normal aging and dementia, and can begin without compromising the autonomy and independence of the older adult or even develop into dementia with total functional disability.

Recent scientific evidence indicates that certain practices may delay CD and reduce the risk of developing dementia. Physical activity, Mediterranean type diet, social interaction, cardiovascular risk management, such as hypertension, diabetes and hypercholesterolemia, and cognitive stimulation through reading, board games, crossword puzzles and computer use, for example, are practices recommended for the prevention of CD.^(2,6) Some factors have been associated with practices for the prevention of CD, such as sex, age, education, marital status, income, self-perception of health, physical and mental capacity, mood and motivation, type, duration and intensity of activities, social interaction and family support.⁽⁷⁻⁹⁾ Factors such as the lack of and/or imprecise knowledge and misconceptions about CD are a global problem and concern for both governmental and non-governmental bodies.^(2,10) These factors can generate fear and feelings of insecurity, provoke stigmas and social isolation, cause delays in the detection, treatment and care of the disease and influence the practice and engagement of people in the prevention of CD.^(1,11)

From this perspective, there is a growing interest in investigating the knowledge, perceptions, stigma and beliefs about CD, particularly AD^(10,12), with the theoretical argument that the way people think and interpret things determines their emotional and behavioral responses.⁽¹¹⁾ Therefore, it is important to develop studies with this theme, in order to contribute to the knowledge about this phenomenon, as well as to help in the planning of effective interventions, in order to promote the cognitive health of the older adult population. The aim of this study was to evaluate the knowledge, attitudes and practices for the prevention of cognitive decline carried out by older adults.

● METHOD

A quantitative, cross-sectional analytical study was performed in the city of Tangará da Serra - MT, from February to May 2015. Older adult living in the urban perimeter of the municipality, attended in the Family Health Units (FHUs) registered in the National Registry of Health Establishments (*Cadastro Nacional de Estabelecimentos de Saúde* - CNES) participated in the study. The proportionally stratified probabilistic sample was calculated using the formula for finite populations, with a margin of error of 4%, a prevalence of the event of 50%, and a confidence level of 95%, giving a total of 557 participants.

This sample was divided into 10 strata, each represented by a FHU. The number of older adults that would participate in the study was divided by proportionally calculated stratum, based on the representativeness of each FHU in relation to the study population. After the calculation, the participants from each stratum were selected by means of a simple random sample.

The inclusion criteria were: to present the capacity to communicate and preserved cognitive functions, evaluated through the Mini Mental State Examination (MMSE). The cut-off point adopted was according to the education level, since this factor interferes in the performance of the test: illiterate = 19 points; 1 to 3 years of schooling = 23 points; 4 to 7 years of schooling = 24 points; and >7 years of schooling = 28 points.⁽¹³⁾ A different older adult was chosen through a draw in cases of non-fulfillment of the inclusion criteria, death or after having not been found at home on three consecutive attempts, at different times and days. In addition to these cases, during the data collection, 116 older adults presented cognitive alterations after applying the MMSE and were therefore not included in the study.

The data were collected through an interview at the participant's home, using a questionnaire formulated by the researcher, containing questions regarding sociodemographic variables and health conditions. The questions regarding knowledge, attitude and practices for the prevention of CD performed by the older adults were elaborated from existing models from Knowledge, Attitude and Practice (KAP) surveys⁽¹⁴⁾ and followed the recommendations contained in the literature on the subject.^(2,6) A pilot test was carried out in January 2015, with 14 elderly people in Cuiabá - MT, with the questionnaire being adjusted prior to the data collection, performed by the principal researcher and a properly trained master's student.

The sociodemographic variables were sex, age, marital status, occupation, income and education. Those of the health conditions were health problems, use of medications and self-assessment of health.

Knowledge was defined as the knowledge of the older adult regarding CD⁽¹⁵⁾ and was evaluated through 17 questions about CD and prevention practices, with yes/no/do not know answer options and only one correct alternative with 1 point. The knowledge score ranged from 0 to 17 points. Based on 50% correct responses to the questions plus one, the knowledge was considered satisfactory for those who obtained a score greater than or equal to 10 points and unsatisfactory for those who scored up to 9 points.

The attitude, defined from the concept presented in a KAP-type study,⁽¹⁶⁾ covers the opinions, beliefs and dispositions that the older adults had regarding CD, and was evaluated through 19 questions, with yes/no response options and only 1 correct alternative. The score ranged from 0 to 19 points. A favorable attitude was considered when there were 50% of correct responses to the questions plus one, that is, for the participants that obtained scores greater than or equal to 11 points, and unfavorable for those with scores of up to 10 points.

The dependent variable - practices for the prevention of CD was verified through self-reports and defined as the various activities performed by the older adults that are considered in the literature to be protective factors against CD.⁽¹⁵⁾ The criterion adopted to classify the older adults as practitioners (yes) or non-practitioners (no) of preventive practices was based on the recommendations of activities in multiple domains, due to being considered more effective in the prevention of CD.⁽²⁾ Thus, the older adults that were considered to be practitioners were those that reported performing at least three practices, one from each of the domains: (1) physical (physical activity, healthy eating, moderate consumption of alcoholic beverage and/or not smoking); (2) social (visiting family or friends and/or traveling, walking and/or having moments of relaxation); (3) mental (crafts, reading books or newspapers and/or playing cards, crosswords, draughts, chess or using a computer).

A descriptive analysis of the study data was carried out. Subsequently, the independent variables 'knowledge and attitude', as well as the dependent variable 'preventive practices' were dichotomized for verification of a statistically significant association through Pearson's χ^2 test and Poisson multiple regression analysis. For the construction of the final model, those variables that presented $p < 0.20$ in the univariate analysis using the forward stepwise method were included in the analysis. The study was developed after approval of the Research Ethics Committee of the Júlio Müller University Hospital, via the *Plataforma Brasil*, under authorization number 924.964/2014.

● RESULTS

Of the 557 study participants, the majority were female 344 (61.8%); married, 302 (54.2%); retired, 397 (71.2%); and received up to one minimum wage, 392 (70.3%). The majority, 283 (50.8%), were between 60 and 69 years of age; and were illiterate, 235 (42.2%). Regarding health conditions, 513 (92.1%) had two or more health problems, with cardiovascular problems, 403 (72.4%), and musculoskeletal problems, 388 (69.7%), being the most frequent. Almost all of the older adults, 464 (83.3%), used medications and the majority, 245 (43.9%), self-evaluated their health as regular.

Considering the knowledge of the older adults regarding CD, 538 (96.6%) had heard about memory loss in older people and knew about the consequences ('can lead to the need for a caregiver' - 553 - 99.3%; and 'can lead to hospitalization and health expenses' - 539 - 96.8%). In addition, almost all the older adults (91.6%) knew that because they were elderly they could lose their memory. However, 389 (70%) did not know that CD can be prevented and were not aware of practices to prevent memory loss, such as avoiding obesity, 519 (93.2%); playing video games and using the computer, 488 (87.6%); and traveling, sightseeing or having moments of relaxation, 477 (85.6%). (Table 1).

Table 1 - Distribution of the older adults attended in the Family Health Units, according to knowledge about cognitive decline. Tangará da Serra, MT, Brazil, 2015

Variables	Yes		No		Do not know	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Have you heard about memory loss in older adults?	538	96.6	19	3.4	--	--
Do you know that you can lose your memory when you are elderly?	510	91.6	--	--	47	8.4
Do you know that memory loss can be prevented?	168	30.2	--	--	389	69.8
Do you know that memory loss can lead to the need for a caregiver?	553	99.3	--	--	4	0.7
Do you know that memory loss can lead to hospitalization and health expenses?	539	96.8	--	--	18	3.2
Do video game and using the computer prevent memory loss?	55	9.9	140	2.5	488	87.6
Do card games, crossword puzzles, draughts or chess prevent memory loss?	103	18.5	5	0.9	449	80.6
Does reading books or newspapers prevent memory loss?	142	25.5	9	1.6	406	72.9
Do handicraft activities prevent memory loss?	135	24.2	6	1.1	416	74.7
Do traveling, walking or having moments of relaxation prevent memory loss?	56	10.1	24	4.3	477	85.6
Do visiting and receiving visits from family and/or friends prevent memory loss?	70	12.6	19	3.4	468	84.0
Does physical activity prevent memory loss?	93	16.7	7	1.3	457	82.0
Does not being obese prevent memory loss?	24	4.3	14	2.5	519	93.2
Does healthy eating prevent memory loss?	169	30.3	3	0.5	385	69.2
Does controlling diseases like high blood pressure and diabetes prevent memory loss?	87	15.6	10	1.8	460	82.6
Does consuming alcohol in moderation prevent memory loss?	73	13.1	46	8.3	438	78.6
Does not smoking prevent memory loss?	194	34.8	6	1.1	357	64.1

In relation to the attitudes of the older adults regarding CD, 551 (98.9%) believed that memory loss is a serious problem; 377 (67.7%) considered that they could lose their memory; and 545 (97.8%) thought they could depend on someone if they lost their memory. A total of 553 (63.4%) also worried about the possibility of losing their memory; and 402 (72.2%) about preventing this happening. When questioned about what they believed would prevent memory loss, there was a predominance of respondents who believed that all of the options, with the exception of moderate consumption of alcohol (25.9%), prevented CD. (Table 2).

Table 2 - Distribution of the older adults attended in the Family Health Units, according to attitudes about cognitive decline. Tangará da Serra, MT, Brazil, 2015

Variables	Yes		No	
	n	%	n	%
Do you think memory loss is a serious problem?	551	98.9	6	1.1
Do you think you could lose your memory?	377	67.7	180	32.3
Do you think you can depend on someone if you lose your memory?	545	97.8	12	2.2
Are you worried about losing your memory?	353	63.4	204	36.6
Are you worried about preventing memory loss?	402	72.2	155	27.8
Do you think that memory loss can be prevented?	450	80.8	107	19.2
Do you think you should look for information about prevention?	525	94.3	32	5.7
Do you believe that video games and using the computer prevent memory loss?	280	50.3	277	49.7
Do you believe that card games, crosswords, draughts or chess prevent memory loss?	402	72.2	155	27.8
Does you believe that reading books or newspapers prevents memory loss?	471	84.6	86	15.4
Do you believe that handicraft activities prevent memory loss?	487	87.4	70	12.6
Do you believe that traveling, walking or having moments of relaxation prevent memory loss?	482	86.5	75	13.5
Do you believe that visiting and receiving visits from family and/or friends prevent memory loss?	488	87.6	69	12.4
Do you believe that physical activity prevents memory loss?	476	85.5	81	14.5
Does you believe that not being obese prevents memory loss?	400	71.8	157	28.2
Do you believe that healthy eating prevents memory loss?	524	94.1	33	5.9
Do you believe that controlling diseases like high blood pressure and diabetes prevents memory loss?	493	88.5	64	11.5
Do you believe that consuming alcohol in moderation prevents memory loss?	144	25.9	413	74.1
Do you believe that not smoking prevents memory loss?	507	91.0	50	9.0

The practices for the prevention of CD more performed by the older adults were visiting family or friends, 445 (79.9%); traveling, walking and/or having moments of relaxation, 343 (61.6%); reading books or newspapers, 239 (42.9%); and physical activity, 199 (35.7%). The evaluation of the study variables by previous classification showed that the majority, 469 (84.2%), of the older adults presented unsatisfactory knowledge; favorable attitudes, 523 (93.9%); and performed preventive practices, 307 (55.1%). (Table 3).

Table 3 - Distribution of the older adults attended in the Family Health Units, according to knowledge, attitude and practices for the prevention of cognitive decline. Tangará da Serra, MT, Brazil, 2015

Variables	Frequency (n)	Percentage (%)
Knowledge		
Satisfactory	88	15.8
Unsatisfactory	469	84.2
Attitude		
Favorable	523	93.9
Not favorable	34	6.1
Preventive Practices		
Yes	307	55.1
No	250	44.9
TOTAL	557	100

The bivariate analysis showed a statistically significant association between knowledge and preventive practices ($p=0.014$). The Poisson multiple regression was performed with both variables (knowledge and attitude), in order to achieve the study objective; and, after adjusting for age, sex and schooling, the association was maintained. The prevalence of preventive practices among the older adults was higher (21%) among those with satisfactory knowledge (PR=1.21; CI=1.02-1.43) when compared to those who had unsatisfactory knowledge, regardless of attitude, age, sex and education. (Table 4).

Table 4 - Poisson Multiple regression model: variables associated with practices for the prevention of cognitive decline among older adults attended in the Family Health Units. Tangará da Serra, MT, Brazil, 2015

Variables	Prevalence (%)	Gross PR (95% CI) †	Adjusted PR (95%CI) ‡	P value
Knowledge				
Satisfactory	67.0	1.26 (1.06-1.50)	1.21(1.02-1.43)	0.027
Unsatisfactory	52.9	1	1	
Attitude				
Favorable	55.6	1.18 (0.82-1.70)	1.14(0.79-1.64)	0.459
Not favorable	47.1	1	1	

†PR: Prevalence ratio; CI: confidence interval. ‡ Adjusted for age, sex and education.

● DISCUSSION

This is the first known study that explores the knowledge, attitudes, and practices of older adults about CD together. Other studies have investigated these factors separately^(10,12,17). Furthermore, it is the first study to investigate the association between these variables.

Although the majority of the participants had a general comprehension of CD, their knowledge of prevention was unsatisfactory. They were unaware that CD can be prevented and that recommended preventive practices can delay or prevent its onset. This finding can probably be attributed to the low income and education of the population studied, characteristics usually associated with low levels of knowledge. This indicates that older adults need more information about CD. Knowledge contributes to people being aware of their health problems and taking preventive measures.⁽¹⁸⁾

One of the relevant findings of this study was the participants' concern about CD and its prevention, which is in agreement with studies performed both with older adults and with younger people.^(12,17) Another result found in this study was that the majority of the participants believed that practices for the prevention of CD do actually prevent it. Many of the people believed that staying mentally active, having a healthy diet, and engaging in physical activity help prevent AD.⁽¹¹⁾ This finding is important because there are people who believe that nothing can be done to prevent CD. Probably, the older adults in this study had favorable attitudes towards the practices for the prevention of CD because they perceived themselves as vulnerable to the condition. The perception of vulnerability to the disease and the probability of developing it is a factor that may influence preventive health behaviors.⁽¹²⁾

In this study, although the majority of the participants presented unsatisfactory knowledge about the practices for the prevention of CD, their attitudes toward them were favorable. This divergence shows that attitudes do not always depend on people's knowledge about a given subject. They are constructed throughout a person's life and are influenced by knowledge, however, also by culture, interactions and experiences.⁽²⁰⁾ This also shows that attitudes should be a factor to be considered and worked on in the prevention actions of health providers when they relate to older adults.

In this investigation, it is surprising that many of the older adults spontaneously performed the practices for the prevention of CD presented to them. The studies on practices for the prevention of CD found were of interventions that evaluate the effects of CD prevention programs on the cognitive function of older adults⁽²¹⁻²²⁾ with the adherence of people to prevention practices generally being greater in supervised

programs.⁽²³⁾ The older adults studied probably practiced preventive activities because they had favorable attitudes towards them. Even though they did not know that they prevent CD, the older adults believed that they could benefit from them in some way.

The association between practices for the prevention of CD and knowledge was the main finding of this study. Even though the proportion of older adults with unsatisfactory knowledge was higher, the prevalence of preventive practices was higher in the older adults with satisfactory knowledge. As previously mentioned, studies on knowledge, attitudes and practices of older adults related to CD were not found in the literature. Therefore, the comparison of these finding with other studies is not possible.

The characteristics of the study population may be a probable explanation for this association. The majority of the participants were female. It may be that as women seek healthcare more often and perform more preventive practices,⁽²⁰⁾ with them having more access to information about health problems. Likewise, the age profile of the majority of the studied population was one of young older adults. It is assumed that, because they were younger, they had more contact with information provided by means of communication and technologies. Greater knowledge about CD can be attributed to the increased dissemination of information about the disease in the media, as well as the growing efforts of governmental and non-governmental institutions to increase awareness of this condition and its prevention.

A limitation of this study is the fact that there are no validated instruments that allow the evaluation of the object of investigation, therefore, the data were obtained through self reports. This method, however, may be considered appropriate for particular situations,⁽²⁴⁾ as well as being discreet and able to distinguish between intentional and unintentional adherence and behaviors.⁽²⁵⁾

● CONCLUSION

In this study, the majority of the older adults presented unsatisfactory knowledge, favorable attitudes about the condition and performed practices for the prevention of CD. The prevalence of preventive practices was higher in those with satisfactory knowledge. This is probably due to the characteristics of the studied population, which would have more knowledge of CD from seeking and accessing information about this condition.

The results contribute to the comprehension of the knowledge and attitudes that older adults have about CD, which can be used in the planning of interventions by health providers, especially nurses, as well as in carrying out health education on the causes and consequences, as well as behaviors that help prevent cognitive decline in the general population. In addition, they can support authorities in the adoption of public policies for healthy aging. These findings also reinforce the need for primary healthcare providers, especially nurses, to develop actions to promote the health of the aging population, through programs for the prevention of CD that include the preventive practices already evidenced by science, as contributors to cognitive health.

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