

## COPING IN AGED PEOPLE WITH ALZHEIMER'S DISEASE

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JN Souza, EC Chaves, P Caramelli. Coping in aged people with alzheimer's disease. Rev Latino-am Enfermagem 2007 janeiro-fevereiro; 15(1):93-9.

*The intensity of stress experiences and elaboration of coping essentially depend on individuals' cognitive assessment. Considering the cognitive impairment of elderly persons with Alzheimer's disease (DA), this study aimed to identify their coping style. The Jalowiec Coping Inventory was applied to 60 elderly, 30 in the control group and 30 in the DA group. The results demonstrated a predominance of emotion-focused coping in the DA group and problem-focused coping in the control group, but the difference was not statistically significant ( $p=0.124$ ). In addition, it was observed that individuals with better cognitive development in the DA group selected problem-focused coping strategies ( $p=0.0074$ ). Thus, it seems there is a tendency to select evasive and emotional control strategies in demented elderly with worsened cognitive performance, rather than attempting to solve the problem or minimize its consequences.*

**DESCRIPTORS:** nursing; aged; adaptation psychological; stress; cognition; Alzheimer disease

## COPING EN ANCIANOS CON LA ENFERMEDAD DE ALZHEIMER

*La elaboración de estrategias de ataque a las situaciones estresantes depende de la evaluación cognitiva hecha por el individuo. Considerando el déficit cognitivo de los ancianos con la enfermedad de Alzheimer (DA), este estudio tuvo por objetivo verificar el estilo de coping predominantemente utilizado por ellos. Para esto, fue aplicado el inventario de Coping de Jalowiec en 60 ancianos, de los cuales 30 individuos eran cognitivamente saludables (grupo control) y 30 individuos con DA. Se observó un predominio del coping enfocado en la emoción en el grupo DA y enfocado en el problema en el grupo control, aunque no hubo una diferencia significativa. Así, parece haber una tendencia, en los ancianos con demencia, a elegir estrategias evasivas y de control emocional, en detrimento de la tentativa de solucionar el problema o minimizar sus consecuencias.*

**DESCRIPTORES:** enfermería; anciano; adaptación psicológica; estrés; cognición; enfermedad de Alzheimer

## COPING EM IDOSOS COM DOENÇA DE ALZHEIMER

*A intensidade da experiência do estresse e a elaboração do coping dependem, fundamentalmente, da avaliação cognitiva feita pelo indivíduo. Considerando o déficit cognitivo de idosos com doença de Alzheimer (DA), este estudo teve por objetivo identificar o estilo de coping utilizado por eles. Para isso, foi aplicado o Inventário de Coping de Jalowiec em 60 idosos, sendo 30 do grupo controle e 30 com DA. Os resultados evidenciaram o predomínio do coping focado na emoção no grupo DA e focado no problema no grupo controle, porém, não houve diferença significativa ( $p=0,124$ ). Além disso, observou-se que, quanto melhor o desempenho cognitivo dos idosos com DA, maior a tendência em utilizar estratégias de coping focadas no problema ( $p=0,0074$ ). Assim, parece haver tendência à seleção de estratégias evasivas e de controle emocional nos idosos dementes com pior desempenho cognitivo, em detrimento da tentativa de solucionar o problema ou minimizar suas consequências.*

**DESCRIPTORES:** enfermagem; idoso; adaptação psicológica; estresse; cognição; doença de Alzheimer

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## INTRODUCTION

The countless changes elderly people with Alzheimer's Disease (AD) experience in their daily lives as a result of physical, mental or social cognitive alterations can represent a threat to their biopsychosocial maintenance, thus constituting a stressing factor to the extent that they demand adjustment strategies<sup>(1)</sup> and exert a strong emotional impact<sup>(2)</sup>.

Psychological stress consists in "a particular relation between people and the environment, which these people assess as going beyond their coping resources and threatening their well-being"<sup>(2)</sup>. This definition gives rise to the concept of "cognitive assessment"<sup>(2)</sup> as a non-biological mediator that is capable of intervening in the stress response. This assessment comprises two (primary and secondary) interdependent steps and consists in a process that defines why and to what extent a certain relation between individuals and the environment that surrounds them is stressful<sup>(2)</sup>. In this relation, it is not the quality of the event but the way we perceive it that will classify it as stressing. After the assessment steps, a judgment phase starts, in which the person analyzes whether environmental or internal (fear, anxiety) demands are greater than the personal efforts to modulate the stress experience. This conflict between demands and efforts made to act upon them is called coping<sup>(2)</sup>.

According to the Cognitive Interactionist Model<sup>(2)</sup>, coping consists in "constant cognitive change and behavioral efforts to handle specific external and/or internal demands that are assessed as something that goes beyond the person's resources" and can be classified in two distinct divisions: problem-centered and emotion-centered<sup>(2)</sup>. Problem-centered coping refers to any of the individual's attempts to manage or modify the problem. Emotion-centered coping, on the other hand, describes the attempt to replace or regulate the emotional impact of stress in the individual, mainly deriving from defensive processes that make the person realistically avoid confronting the threat<sup>(2)</sup>.

Considering the progressive cognitive and functional impairment caused by AD, deriving from a neurodegenerative physiopathological process, the elaboration of coping strategies and the perception of conflicting events can occur differently, as the

cognitive function and, therefore, planning, abstract thinking and judgment are progressively impaired.

Hence, according to the presented theoretical premise<sup>(2)</sup>, individuals suffering from AD will possibly face difficulties or impossibility, depending on the disease's evolution stage, to assess the threat potential of a certain stressful event, as well as to judge if personal resources to cope with environmental or internal demands are sufficient to modulate the stress experience. This requires access to regions in the limbic system and cortical areas related to cognition, emotion and behavior, whose functions are impaired in elderly people with AD.

Thus, it is not known whether assessment of performance capacity itself is accessible in order to identify the available internal and external resources, allowing for the elaboration of efficient coping strategies to deal with the conflicting situation, or if coping becomes predominantly defensive, in which the individual avoids any conscious confrontation with the threatening reality.

The influence cognitive impairment can exert on how demented persons assess, react to and manage adverse situations gives rise to the hypothesis that coping in persons with mild AD is predominantly emotion-centered, whose coping strategies mainly derive from defensive processes, decreasing the potential to act on the problem.

The significant lack of research focusing on the resources elderly persons who experience a degenerative process have at their disposal to cope with or handle stressful situations, as well as how they react to them, is a relevant factor to explore this theme.

Thus, this study aims to identify the predominant coping style of individuals with AD in comparison with cognitively healthy elderly persons, indirectly attempting to explore AD patients' capacity to access the arsenal of coping possibilities that were constructed throughout their existence.

## POPULATION AND METHOD

The study was developed at the Cognitive Neurology and Behavior Outpatient Clinic of the University of São Paulo Medical School *Hospital das Clínicas* (HC-FMUSP). Data were collected after the Research Ethics Committees at the clinic and at the USP School of Nursing had analyzed and approved the research.

This research included 60 individuals, who were subdivided in two different groups: Control group: including 30 elderly with cognitive-functional autonomy, randomly chosen from a group of elderly who were registered at the University of São Paulo School of Nursing Secretary of Culture and University Extension (SCEU -EEUSP) because they had previously participated in at least one cultural activity at this institution; AD Group: comprising 30 elderly medically diagnosed as mild AD, who were randomly chosen from a population of elderly with AD who received clinical follow-up by the Cognitive Neurology and Behavior Group at the HC-FMUSP (GNCC-HC-FMUSP). The study only included those patients classified as mild AD, thus constituting a convenience sample.

The diagnosis of AD and the determination of symptom intensity were performed by the medical team at the GNCC-HCFMUSP, based, respectively, on criteria by the National Institute of Neurological and Communicative Disorders and Stroke - Alzheimer's Disease and Related Disorders Association (NINCDS-ADRDA)<sup>(3)</sup> and by the DSM-III- R<sup>(4)</sup>.

Elderly diagnosed with any other neurological or neurodegenerative disease were excluded from the study, as well as those with a history of alcohol or drugs abuse during the previous year or during a long period before that, illiterate persons, elderly from the control group taking psychoactive drugs, medically diagnosed as depressive or anxiety disorder or with evidence of cognitive alterations that were incompatible with normality for their age.

Initially, after surveying the files of patients with mild AD from the above mentioned outpatient clinic and from elderly registered at the SCEU-EEUSP, during an individual interview, a questionnaire was applied in both groups to collect personal characteristics, as well as one cognitive assessment (MMSE)<sup>(5-6)</sup> and one coping instrument (Jalowiec Coping Scale)<sup>(7)</sup>. A functional assessment scale (IQCODE - Informant Questionnaire on Cognitive Decline in the Elderly)<sup>(8)</sup> was also applied to elderly from the control group, in order to exclude cases with cognitive alterations and/or dementia, as the association between a cognitive and a functional assessment instrument, the latter applied to a caregiver or responsible, presents good sensitivity and specificity levels to detect dementia features<sup>(9)</sup>.

The MMSE<sup>(5-6)</sup> consists of different questions, typically grouped in seven categories, with a view to

a global cognitive function assessment. Its score can range from a minimum of zero to a maximum of 30 points. Cut-off scores for individuals without cognitive complaints are:  $\geq 28$  for subjects with more than seven years of education,  $\geq 24$  for those with between four and seven years of education,  $\geq 23$  for people with between one and three years of study<sup>(10)</sup>. In our study, this instrument was used to assess the normal elderly persons' cognitive performance, as well as to confirm and support that only elderly with mild AD were included.

The Coping Scale<sup>(7)</sup> aims to identify individual characteristics of strategies to cope with stressors. It consists of 60 positive statements, divided in eight coping styles that are based on cognitive and behavioral elaboration, which are: confrontive, evasive, optimistic, fatalistic, emotive, palliative, supportive and self-reliant.

The IQCODE<sup>(8)</sup> assesses cognitive decline, based on an interview with a caregiver or another person close to the patient. It consists of 26 questions, through which the informant analyzes the patient's current performance in different daily activity situations in comparison with the performance observed ten years earlier.

Answers to all assessment instruments were obtained on the basis of an individual interview, always held by the same researcher, with questions being asked to each individual from the control group and from the AD group.

In view of the importance of ethical aspects involved in any research, all individuals and/or their respective legal responsables received the consent term, so that participants could choose to be included or not in the study and were informed that refusing would not entail any onus whatsoever.

## RESULTS

The AD group included 30 elderly, mainly women (70%), mean age 78.9 years, predominant age range between 83 and 90 years, mean education 5.5 years, predominantly ranging between one and six years of study. The control group consisted of 30 elderly, 25 of whom were women (83.3%), mean age 72.6 years, predominant age range between 69 and 75 years, mean education 6.5 years, predominantly distributed between one and six years of study (Tables 1 and 2).

Table 1 - Distribution of elderly groups according to age. São Paulo, 2005

Age	Group			
	Alzheimer's disease		Control	
	N	%	N	%
62   69	2	6.7	8	26.7
69   76	9	30.0	12	40.0
76   83	9	30.0	9	30.0
83   90	10	33.3	1	3.3
<b>Total</b>	<b>30</b>	<b>100</b>	<b>30</b>	<b>100</b>

Table 2 - Distribution of elderly groups according to education. São Paulo, 2005

Education	Group			
	Alzheimer's disease		Control	
	N	%	N	%
1   6	20	66.7	16	53.4
6   12	8	26.7	10	33.3
12   18	1	3.3	3	10.0
18   22	1	3.3	1	3.3
<b>Total</b>	<b>30</b>	<b>100</b>	<b>30</b>	<b>100</b>

Although elderly from both groups were distributed in different age and education ranges, we decided to analyze data using mean values of these variables, as some ranges included few individuals, which made it difficult or impossible to perform data comparisons and statistical correlations.

Thus, when comparing mean values for gender, age and education, we found no statistically significant differences between both groups, except for age ( $p < 0.001$ ). Therefore, we considered the groups as practically homogeneous in terms of sociodemographic characteristics, representing greater reliability in mutual comparisons and correlations.

As to cognitive performance, the mean score was 20.6 in the AD group, with 14 as the minimum and 28 as the maximum score. In the control group, the mean score was 27.4, with 23 as the minimum and 30 as the maximum. As expected, the difference between both groups was statistically significant ( $p < 0.001$ ), as different cognitive performance was exactly the reason for distributing the elderly in two categories.

With respect to coping style, in the AD group, the optimistic style predominated in the 21 elderly who were capable of answering the instrument questions, which means that these individuals use optimistic thoughts, mental elaboration and positive comparisons about the problem. In the control group, the confrontive style was observed, evidencing that elderly without pathological cognitive alterations solve the situation in a combative way, by confronting the

stressful situation. However, this difference was not statistically significant (Table 3).

Table 3 - Distribution of elderly groups according to coping styles. São Paulo, 2005

Coping style	Group			
	Alzheimer's disease		Control	
	N	%	N	%
Confrontive	4	19.2	12	40.0
Evasive	0	0.0	1	3.3
Optimistic	7	33.4	7	23.4
Fatalistic	0	0.0	1	3.3
Emotive	1	4.8	3	10.0
Palliative	1	4.8	0	0.0
Supportive	2	9.3	1	3.3
Self-reliant	4	19.2	1	3.3
Self-reliant and palliative	0	0.0	1	3.3
Confrontive, emotive and supportive	0	0.0	1	3.3
Confrontive and supportive	2	9.3	2	6.8
<b>Total</b>	<b>21*</b>	<b>100</b>	<b>30</b>	<b>100</b>

$p = 0.341$ . \* Nine out of 30 individuals in this group presented difficulties to understand the questions they were asked, which made it impossible to continue applying the inventory during the interview.

As the frequency of many coping styles was low in both groups, we decided to regroup the eight different coping types and classify them on the basis of the characterization of the coping action focus (emotion and problem). This new division allowed for appropriate statistical treatment for comparative analysis with the other variables.

Hence, after this regrouping, we found that emotion-focused coping predominated in the AD group (61.9%) and problem-focused coping in the control group (40%), although statistical significance was not achieved ( $p = 0.124$ ).

A comparison of individuals' coping styles with their respective education shows that, in both groups, elderly with higher mean values for education use the problem as a strategic focus in the attempt to administer or modify the stressful situation, although this difference was not significant for either of the groups (Table 4).

Table 4 - Distribution of groups' median education according to coping style. São Paulo, 2005

Education	Coping style (AD group)		Coping style (control group)	
	Emotion	Problem	Emotion	Problem
Frequency	13.0	8.0	12.0	18.0
Mean	4.2	7.3	5.3	7.7
Standard deviation	2.2	6.9	3.1	4.7
Median	4.0	4.0	4.0	7.5

Mann-Whitney's non-parametrical test,  $p = 0.5207$  AD group;  $p = 0.1376$  control group.

Considering the involvement of cognition in the elaboration of coping strategies and the definition of the coping style, we decided to analyze how this variable behaved in individuals with AD, whose cognitive performance is pathologically impaired in comparison with the control group.

Thus, we found a significant difference in cognitive performance and coping style in the AD group only.

Table 5 - Distribution of groups' median MMSE scores according to coping style. São Paulo, 2005

MMSE	Coping style (AD group)		Coping style (control group)	
	Emotion	Problem	Emotion	Problem
Frequency	13.0	8.0	12.0	18.0
Mean	19.4	23.5	26.7	27.8
Standard deviation	3.0	2.7	2.0	1.4
Median	20.0	23.0	27.0	28.0

Mann-Whitney's non-parametrical test,  $p = 0.0074$  AD group;  $p = 0.1602$  control group.

Table 5 evidences that, in the demented elderly group, participants with better cognitive performance tend to select the stressful situation itself as the focus of action for coping strategies.

## DISCUSSION

"Cognitive assessment" is associated with lived, vicarious experiences and learning. Moreover, coping efficacy and quality also establish theoretically direct relations with individuals' learning and mental elaboration capacity. Hence, choosing the problem-focused or emotion-focused coping style will not only depend on how individuals interpret a threat, but also on the resources at their disposal to elaborate strategies that are coherent with their individual capacity to react and face a certain adverse situation.

In view of these theoretical premises, hypothetically, elderly with AD tend to elaborate predominantly defensive and resignation strategies, as the cognitive impairment deriving from their disease can affect the elaboration of confrontive coping with the stressful situation.

In this study, when analyzing the coping strategies individuals listed to handle situations they perceive as conflicting, we observed that emotion-focused coping was predominant in participants with AD and problem-focused coping in the control group, although this difference was not statistically significant.

Moreover, in both groups, more than one style of coping strategy predominated. This result is in line with another study of an elderly group without cognitive alterations, whose data revealed a network of relations between different styles, in which some styles predominated, but no single style was used<sup>(11)</sup>.

In this study, we found that the optimistic style (emotion-focused) predominated in the AD group and the confrontive style (problem-focused) in the control group.

Although not statistically significant, this difference in the selection of coping strategies makes us reflect about this group's behavioral efforts to handle specific demands they analyze as something that threatens their personal integrity. Thus, by primarily choosing emotion-focused coping, AD group members express their difficulty to recruit resources that allow them to change the situation, in the attempt to remove the problem or decrease its impact capacity as a source of stress.

In view of the neuropsychological limitation to elaborate cognitive strategies, these elderly select defensive and distancing processes as coping strategies, focusing their actions on the regulation or substitution of the emotional impact of stress. In the control group, on the other hand, the opposite happened. In view of the possibility to select adaptive strategies to confront the stressing situation, these elderly predominantly use problem-focused coping.

When a specific coping style is adopted, this is not inherently good or bad. On the opposite, when assessing the efficacy of the coping style an individual adopts, the context in which the stressing event occurs needs to be analyzed, as a certain coping style can be effective in on situation but not in another. When preparing for a test, for example, focusing the action on coping with the problem is adaptive. When awaiting the result, on the other hand, it is interesting to direct coping actions at the control of the emotional impact deriving from the waiting time. In the same way, when dealing with inexorable situations, such as the death of a partner for example, initially, it may be more adaptive to involve in palliative coping to handle the emotion-focused situation and then, afterwards, after emotional balance is restored, to select a more instrumental coping in order to elaborate future plans<sup>(12-13)</sup>.

Moreover, when assessing coping efficacy, not only the possibility of solving, but also of controlling the problem should be verified<sup>(13-14)</sup>. This approach

mainly refers to unsolvable and permanently stressing situations, like in the case of chronic diseases for example, in which the absence of cure perspectives requires many more emotional and situational control strategies than confrontive actions<sup>(13-15)</sup>.

Furthermore, literature data appoint emotional control, achieved on the basis of emotion-focused coping, as a favorable and effective strategy to cope with stressing situations, in which there is little control capacity<sup>(13)</sup>.

Thus, based on the presented theoretical premises and the chronic context of their situation, the predominance of emotion-focused coping among AD group members may have been an adaptive and defensive strategy these individuals elaborated to minimize the emotional impact deriving from their perception of their limitations and losses. In view of this perception, confronting the situation could result in more threatening emotions than the event that originated the stress itself.

However, some authors suggest that, although the emotion-focused strategy seems to be adaptive in the short term, if individuals continue using it for a long time, they may tend towards passiveness and repeatedly focus their action on negative emotions and on the possible consequences of these feelings<sup>(13)</sup>.

As to education, we observed in both groups that individuals with higher education levels tended to select the problem as the strategic focus to cope with adverse situations, although this difference is not statistically significant.

Hence, education may have exerted a positive influence on problem coping, as individuals tended to selected combative strategies, whose elaboration requires the use of acquired knowledge and experiences.

With respect to cognitive performance, we found that, in the AD group, elderly with better

performance on the MMSE primarily chose problem-focused coping strategies, to the detriment of emotion. This difference was statistically significant. Again, this information seems to indicate that, depending on the evolution stage of the disease, these individuals use the knowledge acquired and stored in their semantic memory in the attempt to fight the problem. Although predominant coping in this group focused on emotion, these data show that, in individuals with better cognitive performance, some neuropsychological, anatomic-functional and neurophysiologic resources are still available to handle stressful situations in a more combative way. The same fact was found in the control group, but without statistical significance.

## CONCLUSION

In this study, elderly people with AD tended to use emotion as an adaptive strategy to cope with adverse situations, attempting to act on the emotional impact daily difficulties provoke in their daily life, as their cognitive impairment affected the elaboration of confrontive and problem-solving actions. However, among the elderly with AD, those with a less intense cognitive impairment tended to cope with the stressing situation by selecting confrontive coping strategies in the attempt to solve the problem or minimize its consequences.

Although these data permit the above mentioned conclusions, we suggest that future research studies larger groups, uses more refined cognitive assessment and coping instruments and includes stress assessment indicators when analyzing the correlations among these factors, so that we can advance in the construction of knowledge about this complex network of interactions which is the human mind.

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