Original Article

Depressive symptoms in the elderly: analysis of the items of the Geriatric Depression Scale*

Sintomas depressivos em idosos: análise dos itens da Escala de Depressão Geriátrica

Síntomas depresivos en ancianos: análisis de los items de la Escala de Depresión Geriátrica

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ABSTRACT

Objectives: To verify the factor structure of the *Geriatric Depression Scale* of 15 items (GDS 15) in a sample of elderly people assisted by the Family Health Strategy, to describe their social profile, and to analyze the responses to items on the Scale. **Methods:** A cross-sectional study interviewing 503 elderly assisted by the Family Health Strategy, in Dourados, MS (Brazil). To analyze the responses of the GDS 15, we used the Mantel-Haenzsel chi-square test ($p < 0.05$) was used. A factor analysis, internal consistency and generalization of the results for the population was performed. **Results:** Of the 503 elderly interviwed, 69.0% were women, 53.1% were illiterate, 53.7% were 70 years or older, and 34.4% presented depression. Factor analysis identified four factors (apathy, hopelessness, lack of motivation, and isolation). The structure of the GDS 15 did not prove appropriate for the generalizability of results. **Conclusion:** Among elderly patients with depression, apathy and isolation predominated. Health care teams must promote physical, recreational and cultural activities to minimize this situation. Further research is needed, especially to analyze the factorial structure.

Keywords: Depression; Signs and symptoms; Aged; Family health; Factor analysis, statistical

RESUMO

Objetivos: Verificar a estrutura fatorial da Escala de Depressão Geriátrica de 15 itens em uma amostra de idosos assistidos pela Estratégia Saúde da Família, descrever o perfil social e analisar as respostas aos itens da Escala de Depressão Geriátrica. **Métodos:** Estudo de delineamento transversal com 503 idosos assistidos pela Estratégia Saúde da Família, em Dourados, MS. Para analisar as respostas da EDG 15, utilizou-se o teste de Qui-quadrado de Mantel-Haenzsel ($p < 0,05$). A análise fatorial, a consistência interna e a generalidade dos resultados para a população foram realizadas. **Resultados:** Dos 503 idosos pesquisados 69,0% eram mulheres, 53,1% não letrados, 53,7% tinham 70 anos ou mais e 34,4% apresentavam depressão. A análise fatorial identificou quatro fatores (apatia, desesperança, desmotivação e isolamento). A estrutura da EDG 15 não se mostrou apropriada para a generalização de resultados. **Conclusão:** Dentre os idosos com depressão, predominaram a apatia e o isolamento. Cabe às equipes de saúde promover atividades físicas, recreativas e culturais para minimizar esse quadro. Novas pesquisas serão necessárias, sobretudo para análise da estrutura fatorial.

Descritores: Depressão; Sinais e sintomas; Idoso; Saúde da família; Análise fatorial

RESUMEN

Objetivos: Verificar la estructura factorial de la Escala de Depresión Geriátrica de 15 items en una muestra de ancianos asistidos por la Estrategia Salud de la Familia, describir el perfil social y analizar las respuestas a los ítems de la Escala de Depresión Geriátrica. **Métodos:** Estudio de delineamiento transversal realizado con 503 ancianos entrevistados y 503 asistidos por la Estrategia Salud de la Familia, en Dourados, MS (Brasil). Para analizar las respuestas de la EDG 15, se utilizó la prueba del Chi-cuadrado de Mantel-Haenzsel ($p < 0,05$). Se llevó a cabo el análisis factorial, consistencia interna y la generalidad de los resultados para la población. **Resultados:** De los 503 ancianos investigados, el 69,0% eran mujeres, el 53,1% no alfabetizados, el 53,7% tenían 70 años o más y el 34,4% presentaban depresión. El análisis factorial identificó cuatro factores (apatía, desesperanza, desmotivación y aislamiento). La estructura de la EDG 15 no se mostró apropiada para la generalización de resultados. **Conclusión:** En los ancianos con depresión, predominaron la apatía y el aislamiento. Cabe a los equipos de salud promover actividades físicas, recreativas y culturales para minimizar ese cuadro. Serán necesarias nuevas investigaciones, sobre todo para el análisis de la estructura factorial.

Descriptores: Depresión; Signos y síntomas; Ancianos; Salud de la familia; Análisis factorial

**Study extracted from the doctoral thesis entitled "Avaliação da capacidade funcional, do estado de saúde e da rede de suporte social do idoso atendido na Atenção Básica"(Evaluation of functional capacity, state of health and social support network of the elderly attended in Primary Health Care) presented to the School of Nursing, University of São Paulo – USP – São Paulo (SP), Brazil.*

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INTRODUCTION

Depression is a disturbance in the affective area or of mood, with strong functional impact in any age group. In old age, depression involves biological aspects (frail health resulting from chronic diseases), psychological (widowhood, lack of social activities and changes in role) and social factors (poverty, schooling, loneliness and changes in social support)[1].

In the elderly, depression is frequently under-diagnosed and even ignored, because in general, health professionals see depressive symptoms as normal manifestations resulting from the aging process [2]. However, the presence of these symptoms may be responsible for loss of independence and aggravation of pre-existent pathological conditions [3]. Frequently, depression is associated with elevation of risks of morbidity and mortality, causing an increase in the use of health services, negligence of self-care, and reduced adhesion to therapeutic treatments. Moreover, the presence of comorbidities and the use of many medications, common among the elderly, make the diagnosis and treatment of depression even more complex [3].

In spite of its relevance, depression is difficult to measure, since the depressive condition is composed of symptoms that translate states of feelings that differ remarkably. Cultural differences may influence the interpretation of symptoms and significance attributed to them, due to the degree of stigma attached to mental health, making access to available health services difficult and reducing the social support of these elderly persons [4].

In Brazil, the prevalence of depression among the elderly ranges from 4.7 to 36.8%, depending on the instrument used, and the cut-off points for detecting symptoms [1]. Therefore, it is necessary to conduct systematic research on depression among the elderly and one of the instruments that may be used for this purpose is the Geriatric Depression Scale (GDS), already validated in Brazil [5-6].

The GDS is widely used throughout the world and in Brazil for tracing depressive symptoms, and is well accepted in clinical practice and research. Nevertheless, there are few studies that analyze the responses to its items with regard to the difference between the pattern of responses in relation to the sociodemographic variables and conditions of health [7-10]. Many researches evaluate the validity and the reliability of the internal consistency of the GDS, particularly in specialized services, and few do so in Primary Health Care.

There are few studies on the factorial structure of the Scale [9-12]. The factorial structure analysis of the GDS allows to detect whether the elderly present low self-esteem, lack of energy, anxiety, loss of enthusiasm and hope (apathy) or social isolation, and determine whether the results may be generalized.

Thus, the aim of this study is to verify the factorial structure of the Geriatric Depression Scale of 15 items in a sample of elderly persons assisted by the Family Health Strategy in Brazil, describe their social profile and analyze the responses to the items of the Geriatric Depression Scale, according to gender, schooling, age-range and presence of chronic diseases.

METHODS

A cross-sectional Study, with elderly persons assisted by the Family Health Strategy (FHS), in the municipality of Dourados, MS, Brazil. Data were collected between June 2007 and March 2008, with 28 FHS teams in the urban area.

The inclusion criteria were as follows: persons of both genders, of an age equal to or over 60 years and assisted by the FHS. The exclusion criteria were: persons who were incapable of communicating, indigenous living in tribal villages and those who refused to participate or sign the Term of Free and Informed Consent.

For sample calculation, a level of significance of 5% was considered, a power of the test 80%, an estimated proportion, $p = 0.181$ of elderly persons with depression[13] and precision of 9.3%, which resulted in a *n* minimum of 497 subjects. To determine the subjects who would compose the sample, the simple random sampling technique was used in 672 elderly persons. Of these, five refused to participate in the study, 135 were not at home at the time of data collection and 29 were excluded due to being incapable of communicating, resulting in a final sample of 503 participants, a sufficient number to perform factor analysis of the GDS.

Home interviews were held, in which the elderly were evaluated as regards depressive symptoms, by means of the reduced version of the GDS containing 15 items[7]. The GDS was developed for the elderly population, in such a manner that its items take into account the characteristics of depression in these individuals. Depending on the target population, it can be self-administered, or applied by personnel without medical or psychiatric training. It allows the interviewees to classify the items as present or absent, by means of dichotomous yes/no answers. Four interviewers were trained for application of the GDS-15.

The study adopted the cut-off point 5/6 as no case/case for evaluation of the depressive symptoms. Values below six were considered normal, values equal to or above six were considered indicative of a depressive condition [4,10].

To describe the social profile of the elderly, the following variables were investigated: gender, age-range (60 to 69 and 70 years and older), schooling (illiterate and literate) and number of self-reported chronic diseases (more than four; four and more).

To evaluate the differences between proportions for categorical variables, the Mantel-Haenzsel Chi-square test was used, and all the results were analyzed, considering the value $p<0.05$ as significant difference.

A factorial structure for the geriatric depression scale in the reduced version with 15 items was verified in accordance with

the guidelines described by Hair *et al.*[14]. The *Scree test plot* and characteristic roots (eigenvalues) of the covariance (correlation) matrix greater than the unit (1.0) were the methods used to determine the choice of the number of factors. Models with oblique and orthogonal rotation were also constructed.

In the analysis the communality or common variance of an item in relation to the other items of the factor must not be lower than 0.5[14] or 0.4[15]. Internal consistency was evaluated by the Kuder-Richardson-20 Coefficient of Reliability (KR-20), which considers the value of 0.70 as an acceptable limit [14].

Generalization of the data obtained for the population was tested by dividing the sample of 503 elderly persons into two independent, random sub-samples with 50% of the subjects in each of them.

Ethical Procedures

Procedures were performed in compliance with the demands of Resolution No.196/96. The Research Ethics Committee of the School of Nursing, University of São Paulo, approved the study, in accordance with Process No. 593/2006.

RESULTS

Of the 503 elderly persons researched, 347 (69.0%) were women, 267 (53.1%) illiterate, 270 (53.7%) were in the age-range of 70 years and older and 341 (67.8%) reported up to three chronic diseases. The mean age was 71.4 years (standard-deviation 8.0; median 70 years). The mean years of schooling was 1.6 (standard-deviation 2.4). Among the elderly men, 95 (35.6%) illiterate persons were recorded, and 172 (64.4%) among the women.

Depressive symptoms were identified in 173 (34.4%) elderly persons, with 36.0% being women and 31.0%, men, without significant difference. There was also no statistically significant difference between the illiterate and literate persons and between the two age-ranges. However, the presence of depression was greater among the elderly with a higher number of chronic diseases, as may be observed in the data shown in Table 1.

Table 1. Items answered in the Geriatric Depression Scale, by elderly persons assisted by the Family Health Strategy, according to gender, schooling, age-range and number of self-reported chronic diseases. Dourados/MS, Brazil, 2008

GDS 15 – Items	Total	Gender			Schooling			Age-range			No. of Chronic Diseases		
		Men	Wom.	p Value*	illiterate	literate	p-Value*	60–69 years	≥ 70 years	p-Value	< 4	≥ 4	p-Value*
Number of respondents	503	156	347		267	236		233	270		341	162	
1. (Do not) feel satisfied with life	8.5	7.1	9.2	0.421	8.6	8.5	0.955	10.3	7.0	0.192	6.7	12.3	0.036
2. Have interrupted many of my activities	70.0	70.5	69.7	0.861	76.0	63.1	0.002	67.8	71.9	0.324	66.0	78.4	0.005
3. Think life is empty	40.2	42.9	38.9	0.392	48.3	30.9	<0.001	35.6	44.1	0.054	37.2	46.3	0.053
4. Frequently become annoyed	41.2	33.9	44.7	0.017	41.9	40.3	0.700	45.5	37.4	0.066	36.1	51.9	0.001
5. (Do not) feel good about life most of the time	9.9	8.3	10.7	0.419	13.1	6.4	0.012	10.7	9.3	0.583	7.6	14.8	0.012
6. I am afraid something bad will happen to me	46.9	41.0	49.6	0.076	45.7	48.3	0.558	48.9	45.2	0.402	41.6	58.0	0.001
7. (Do not) feel cheerful most of the time	15.9	14.1	16.7	0.459	14.6	17.4	0.397	17.6	14.4	0.335	11.4	25.3	<0.001
8. Frequently feel lack of support	20.3	16.7	21.9	0.177	21.7	18.6	0.391	18.5	21.9	0.345	16.7	27.8	0.004
9. Prefer to stay at home rather than go out and do new things	72.4	64.1	76.1	0.005	73.4	71.2	0.578	71.7	73.0	0.747	72.4	72.2	0.960
10. Think I have more memory problems than other people do	26.8	28.8	25.9	0.496	33.7	19.1	<0.001	21.5	31.5	0.011	27.0	26.5	0.918
11. (Do not) think it is marvelous to be alive now	2.8	0.6	3.7	0.050	3.7	1.7	0.163	2.1	3.3	0.420	2.3	3.7	0.387
12. (It is not) worth living the way I live now	6.4	8.3	5.5	0.224	6.7	5.9	0.711	6.0	6.7	0.763	3.5	12.3	<0.001
13. (Do not) feel full of energy.	18.9	19.9	18.4	0.705	22.5	14.8	0.029	18.9	18.9	0.999	15.5	25.9	0.005
14. (Do not) think there is a solution to my situation	13.9	14.1	13.8	0.936	16.9	10.6	0.043	11.6	15.9	0.161	12.0	17.9	0.075
15. I think there are many people in a better situation	84.1	85.3	83.6	0.633	83.5	84.7	0.708	84.5	83.7	0.796	82.7	87.0	0.214
Total Score	34.4	30.8	36.0	0.251	37.8	30.5	0.085	34.3	34.4	0.979	27.9	48.1	<0.001

The values are represented in percentages.

[a] Arterial hypertension, Diabetes mellitus, back problems, osteoarthrosis, sequelae of cerebrovascular accidents (CVAs) and respiratory problems.

When each item of the GDS was analyzed, it was observed that there was significant difference between the genders in the answers to questions 4 and 9. However, the illiterate answered questions 2, 3 and 10 affirmatively, and questions 5, 13 and 14, negatively. Question 10 was the only one that showed significant difference between the age-ranges.

The exploratory factor analysis performed in the 15 items of the GDS, with orthogonal rotation (Varimax), revealed four factors that met with the Kaiser eigenvalue criterion greater than 1, explaining 48.9% of the total variance. Factor 1 (composed of items 2, 3, 4, 6, 8, 10 and 15) is that which represents apathy/anxiety; Factor 2 (items 11, 12, 13 and 14), enthusiasm/despair; Factor 3 (items 1, 5 and 7), lack of motivation /unhappiness and Factor 4 (item 9), isolation. These results are presented in the data shown in Table 2. The same analysis procedure performed with oblique rotation – Promax – presented the same items for the four factors.

The estimated value of the Kaiser-Meyer-Olkin (KMO = 0.830) measurement indicated that the sample was adequate for factorial data analysis. Bartlett's Test of Sphericity [Chi-square (105) = 1169.82, $p < 0,001$] indicated that the correlations between the items were sufficient to perform the analysis.

In the determination of the number of factors, the Kaiser criterion with an eigenvalue greater than 1, which

Table 2. Factor analysis matrix of components rotated by Varimax with reference to the construct of GDS_15. Dourados/MS, Brazil, 2008

	Loads rotated by Varimax Factor				Correlation	
Items	**F1**	**F2**	**F3**	**F4**	**Communalities**	**Item-factor**
Q.01_Do you feel satisfied with life?			.688		0.550	0.751
Q.02_Have you interrupted many of your activities?	.568				0.376	0.559
Q.03_Do you think your life empty?	.587				0.491	0.684
Q.04_Do you frequently get annoyed?	.551		.342		0.425	0.621
Q.05_Do you feel well about life most of the time?		.348	.646		0.561	0.770
Q.06_Are you afraid that something bad will happen to you?	.616				0.472	0.585
Q.07_Do you feel cheerful most of the time?			.674		0.570	0.819
Q.08 Do you frequently feel you lack support?	.445				0.312	0.539
Q.09_Do you prefer to stay at home rather than go out and do new things?				.806	0.667	-
Q.10_Do you think you have more memory problems than other people?	.475	.443	-.390	.311	0.669	0.515
Q.11_Do you think that it is marvelous to be alive now?		.676			0.541	0.521
Q.12_Do you think it is worth living the way you live now?		.598	.306		0.492	0.634
Q.13_Do you feel full of energy?		.561		.408	0.526	0.765
Q.14_Do you think there is a solution to your situation??		.511			0.377	0.724
Q.15_Do you think there are many people in a better situation?	.511				0.311	0.421
KMO	0.830	P<0.001			Total	
S.Q.(initial eigenvalue)	3.656	1.492	1.132	1.060	15.00	
Variance (%)	24.37	9.95	7.55	7.06	48.93	
Cronbach's a (KR-20)	0.64	0.57	0.67	0.20		

resulted in four factors; and the Scree plot criterion, which considers the factors to be extracted from those that are to the left of the point of inflection, resulting in two factors were used. As there was no apparent consensus between the two indicators, the option was taken to use the Kaiser criterion with an eigenvalue greater than one, because, with this criterion, there was an increase in the percentage of total variance explained.

In the present configuration of the Scale, four items presented common communality and variance values lower than the recommended minimum and over 50% lower than 0.5. The rotated factor matrix with loadings presented two items that did not reveal practical significance (factorial load lower than 0.5 in all factors) and five items with crossed loads (two or more factors with load higher than 0.3). The crossed loads are understandable, as in some ways, it is possible to think that the psychological factors are related to one another.

The coefficients of reliability KR-20 of the first three factors were 0.64, 0.57 and 0.67, respectively (Table 2), indicating low reliability by the method of internal consistency, which does not guarantee that the same results will be maintained in cases of repeating the study in the same individuals. Factor 4, represented by a single item of the GDS, which of itself, did not constitute a factor. When adding this factor to items 10 and 13 of the GDS, the KR-20 was very low (0.20). Therefore, in factor 4 of the Table 2 the item-factor correlation was not presented.

Finally, the degree of generality of the results for the population was evaluated. This was empirically verified by means of dividing the sample into two distinct and random sub-samples, with 50% of the total of those registered in each of them. As the composition of factors in the two sub-samples did not coincide with that of the sample (Tables 2 and 3), the conclusion is that the structure was not appropriate for generalizing the results for the population.

Table 3. Factorial Model for two independent random samples, with 50% each, extracted from the original sample of elderly persons. Dourados/MS, Brazil, 2008

	Loads rotated by Varimax Factor- Sub-sample 1					**Loads rotated by Varimax Factor- Sub-sample 2**			
Items	**F1**	**F2**	**F3**	**F4**	**F5**	**F1**	**F2**	**F3**	**F4**
Q.01_Do you feel satisfied with life?	0.704	0.395				0.456		0.608	
Q.02_Have you interrupted many of your activities?		0.576					0.531		
Q.03_Do you think your life empty?		0.521		0.361			0.705		
Q.04_Do you frequently get annoyed?			0.333	0.479			0.650		
Q.05_Do you feel well about life most of the time?	0.645	0.321	0.348			0.626		0.406	
Q.06_Are you afraid that something bad will happen to you?				0.658			0.610		
Q.07_Do you feel cheerful most of the time?	0.526	0.436				0.307	0.358	0.517	0.416
Q.08 Do you frequently feel you lack support?		0.737				0.332	0.467		
Q.09_Do you prefer to stay at home rather than go out and do new things?					0.904				0.847
Q.10_Do you think you have more memory problems than other people?		0.325	0.796				0.568		
Q.11_Do you think that it is marvelous to be alive now?	0.677					0.767			
Q.12_Do you think it is worth living the way you live now?	0.599	0.383				0.65			
Q.13_Do you feel full of energy?	0.377		0.722			0.652			0.327
Q.14_Do you think there is a solution to your situation??	0.553					0.661			
Q.15_Do you think there are many people in a better situation?				0.758			0.314	-0.680	

DISCUSSION

The sociodemographic characteristics of the elderly persons interviewed were similar to those of the trends observed in Brazilian population studies: accentuated predominance of the female gender, as a result of male overmortality, characterizing the feminization of aging, and low degree of schooling, particularly among women [16].

The literature has shown that the depressive symptoms among the elderly are also associated with cognitive and functional decline, lack or loss of social contact, widowhood, stressful events, low income, social isolation, lack of social activity, low degree of schooling and use of medications [5]. Snowdon considers women more vulnerable to depression, as they live more socially isolated lives. To the author, poverty, living alone and physical deterioration also predispose the elderly to depression [2].

The 15-item version of the GDS, as a single-structure instrument, was shown to be adequate for tracing depression in Primary Health Care because it has the advantage of being quick to apply. The first question requires special attention, because when it is answered negatively, it present a high positive predictive value for depression [11].

The prevalence of depression in the elderly assisted by the FHS in Dourados was 34.4%, a result similar to those of studies conducted in Fortaleza (CE) (34.2%)[11] and Goiânia (GO) (35.1%) [17].

Research conducted in Spain, with 417 elderly persons found a prevalence of depressive symptoms in 19.7%, and multivariate analysis demonstrated statistically significant association between comorbidities and social risk [18].

In Japan, a prospective cohort study that investigated the prevalence of depression in the elderly, according to the economic conditions and region of residence, found higher indices of depression among the oldest, with lower degrees of schooling and with more incapacities in basic daily life activities [19].

In the present study, four factors were identified, which aggregated the following dimensions: apathy/anxiety (items 2, 3, 4, 6, 8, 10 and 15), enthusiasm/despair (questions 11, 12, 13 and 14), unhappiness/lack of motivation (items 1, 5 and 7) and isolation (question 9). Over 70.0% of the elderly replied that they had interrupted many of their activities (item 2), that they preferred to stay at home rather than go out and do new things (item 9) and that there are many people in a better situation than theirs (item 15).

Social isolation was more present among the illiterate elderly, as this was significant in questions 3 (*do you think your life is empty?*) and 10 (*do you have more memory problems than other people?*). The presence of chronic diseases significantly increased the number of elderly persons who answered that they did not feel satisfied with life. The same occurred in the study developed in Singapore with 4,253 elderly persons, in which the presence of chronic diseases significantly increased the feeling of isolation among the elderly interviewed (8.8% versus 3.5%) [20].

In Japan, a research was developed with 607 elderly persons who lived in community, care facilities, and in hospitals, with the purpose of exploring the characteristics of the depressive symptoms by means of analysis of the replies to the Geriatric Depression Scale of 15 items and correlate them with the cognitive state (Mini Mental State Exam – MMSE) and functional capacity to perform self-care (Barthel's index)[8]. In the investigation, the items of the GDS were grouped into four categories: unhappiness represented by questions 1, 5, 7 and 11, apathy and anxiety related to items 2, 3, 4, 6, 8 and 15, loss of hope and enthusiasm relative to questions 9, 10, 12 and 14, and little energy, represented by item 13.

The elderly residents in long permanence institutions obtained the highest depression scores in comparison with those who lived in the community or who were hospitalized, because questions 1, 2, 5, 6, 7, 8, 9, 10, 11 and 14 were scored by over 50.0% of the residents. However, items 2, 6 and 10 were scored by over 40.0% among all the researched elderly persons, both in the community and those who were institutionalized. Moreover, the study pointed out the correlation between depression, cognitive impairment and functional capacity; that is to say, the higher the depression score, the lower would be the results of the Mini Mental State Exam and Barthel's Index [8].

Studies on the structural validity of the GDS showed the number of factors that varied from 3 to 5, however, there was no similarity in the items that composed each factor among these studies and the research developed in Dourados, MS, Brazil [10,12,-21-22].

CONCLUSION

In this study, the prevalence of depression in the elderly was 34.4% and over 70.0% of the individuals interviewed replied affirmatively to questions 2 (interrupted many of my activities), 9 (prefer to stay at home rather than go out and do new things) and 15 (I think there are man people in a better situation). The presence of depression was also shown to be greater among the elderly with a larger number of chronic diseases. A low degree of schooling also contributed to apathy, lack of motivation and despair.

The limitation on generalization of the findings resulted from the fact that the study sample had been constituted only by elderly persons assisted by the Family Health Strategy. Therefore, it does not portray the total population of elderly persons in Dourados, as FHS coverage is not absolute. However, the characteristics of the sample were similar to those of other Brazilian and international studies.

Nevertheless, the factorial structure analysis of the GDS items revealed that it is not appropriate to generalize the results of this structure for the population in general, so that the results found suggest further researches, particularly with regard to factor analysis of the Scale.

In this sample of elderly persons, the GDS-15 instrument presented psychometric properties below the minimum recommended by the literature, and therefore, it should be used with due care.

In the context of the Family Health Strategy, the work of health professionals, particularly of nursing professions, is directed towards full and continuous assistance to all the members of the family. With respect to the elderly, the family health teams should, at an early stage, identify factors that may negatively affect the elderly persons' conditions of health, detect signs of depression and the associated aspects (apathy, lack of motivation, despair, and social isolation), in order to promote physical, recreational and cultural activities that contribute to minimizing this condition, instituting applicable means to preserve the independence and quality of life of the elderly.

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