

# The perception and understanding of health professionals and undergraduate students regarding aging and the elderly

PERCEPÇÃO E COMPREENSÃO DE PROFISSIONAIS E GRADUANDOS DE SAÚDE SOBRE O IDOSO E O ENVELHECIMENTO HUMANO

PERCEPCIÓN Y COMPRENSIÓN DE PROFESIONALES Y ESTUDIANTES DE SALUD SOBRE EL ANCIANO Y EL ENVEJECIMIENTO HUMANO

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## ABSTRACT

This qualitative study was developed with 117 healthcare professionals and undergraduate students who were participants of a non-verbal communication training program in gerontology, with the objective to identify the perception and understanding of healthcare undergraduates and graduates regarding aging and the elderly. The results allowed the construction of the following categories: an evolution of life that brings a variety of experiences; natural, mysterious and with accumulated experiences; a decrease in overall happiness due to an increase in isolation; a time of valuing affection and respect; an inevitable stage including distress, prejudice, and limitations worthy of attention; a natural consequence of life; and the presence of disease and the global physiological process. Regarding perceptions of the elderly, the answers were classified as positive, negative, mixed and neutral. We considered that the understanding regarding the elderly and aging was limited and pessimist, indicating a need to become aware that one's views affect the way we relate to others.

## DESCRIPTORS

Aged  
Aging  
Nonverbal communication  
Geriatric nursing

## RESUMO

Estudo qualitativo desenvolvido com 117 profissionais e graduandos na área da saúde, que participaram da capacitação em comunicação não verbal em gerontologia, com objetivo de identificar a percepção e compreensão de graduandos e graduados da área da saúde, sobre o que é o idoso e o envelhecimento humano. Os resultados sobre o entendimento sobre envelhecimento humano permitiu a construção das categorias: evolução da vida que traz experiências; natural, misteriosa e com experiências acumuladas; perda da alegria e ganho do isolamento; época de valorização do carinho e respeito; etapa inevitável com desgaste, preconceito, limitações e exige atenção; consequência da vida e presença de doenças e processo fisiológico global. Quanto à percepção do idoso, as respostas foram classificadas em positivas, negativas, mistas e neutras. Consideramos que a compreensão do idoso e do envelhecimento foi limitada e pessimista, sendo necessário que tenhamos a consciência de que a visão que se possui interfere na maneira pela qual nos relacionamos.

## DESCRITORES

Idoso  
Envelhecimento  
Comunicação não verbal  
Enfermagem geriátrica

## RESUMEN

Estudio cualitativo desarrollado con 117 profesionales y estudiantes de salud que participaron de capacitación en comunicación no verbal en gerontología objetivando identificar la percepción y comprensión de graduados y estudiantes del área de salud acerca de la ancianidad y el envejecimiento humano. Los resultados respecto del entendimiento sobre envejecimiento permitieron construir las categorías: Evolución de la vida que acarrea experiencia; Natural, misteriosa y con experiencia acumulada; Pérdida de la alegría y ganancia de aislamiento; Época de valorización del cariño y respeto; Etapa inevitable con desgaste, prejuicios, limitaciones y exigencia de atención; Consecuencia de la vida y presencia de enfermedades y Proceso fisiológico global. Respecto a percepción del anciano, las respuestas fueron clasificadas en positivas, negativas, mixtas y neutras. Consideramos que la comprensión del anciano y del envejecimiento fue limitada y pesimista; es necesario tener conciencia de que la visión que se posee interfiere en la manera de relacionarnos.

## DESCRIPTORES

Anciano  
Envejecimiento  
Comunicación  
Enfermería geriátrica

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## INTRODUCTION

Brazil is a country with a new composition, consisting of many individuals over 60 years of age, the elderly. The last census, conducted in 2000 by the Brazilian Institute of Geography and Statistics, revealed that the number of people aged sixty or older was approaching 14.5 million. With projections of around 32 million in 2025, Brazil is placed in the sixth position among the countries with the highest proportions of elderly in the world. There was a rise from 7.3% of elderly in 1991 to 8.6% in 2000, with projections of 15.1% in 2025. This population growth is attributed as a consequence of the demographic and epidemiological transitions<sup>(1)</sup>.

It appears that the demographic factors, which denote the increasingly significant incidence of the number of elderly people in the country, refer to the decrease in birth rates and fertility in recent years. They also refer to the increase in life expectancy, resulting from, among other factors, progress achieved in the areas of sanitation and health<sup>(2)</sup>. This change in the epidemiological profile brings high costs regarding medical and hospital treatments, while at the same time it configures a challenge for the health authorities, particularly regarding the implementation of new models and methods for addressing the problem. The elderly consume more of the health service resources, their hospital stays are more frequent and the length of hospital bed occupancy is greater than that of other age groups. In general, the diseases of the elderly are chronic and multiple, they last for several years and require medical monitoring, as well as permanent and continuous interventions by multidisciplinary teams<sup>(3)</sup>.

The majority of the chronic diseases that affect the elderly individual have age itself as their main risk factor. Aging, regardless of the presence of chronic disease(s), is a current reality that needs to be regarded in a technical manner by the health team dealing with the elderly. The elderly cannot be generalized nor associated to the diseases and/or their fragility, because, even with chronic disease, the elderly can manage their own lives and direct their day-to-day in an active, creative and independent way<sup>(4)</sup>. In fact, there is a heterogeneity of the Brazilian elderly segment, with people in the group in full physical and mental vigor and others in situations of greater vulnerability<sup>(5)</sup>.

Old age should be comprehended in all its fullness and entirety, since it is a universal biological phenomenon with highly diverse psychological and social consequences. Like any human situation, aging has an existential dimension, which modifies the relationship of the person with time, generating changes in their relationships with the world

and with their own history<sup>(6)</sup>. Aging is a bio-psycho-socio-cultural process and, due to its nature, generates complex demands and requires differentiated care<sup>(7)</sup>. This does not mean that it is a disease, but a stage of life with its own characteristics and values. In this stage modifications occur in the individual, in the organic structure, as well as in the metabolism, biochemical balance, immunity, nutrition, in the functional mechanisms, the emotional and intellectual conditions, and even in communication itself. Our beliefs generate our behavior, which generates our way to care. The comprehension that healthcare professionals have of the elderly impacts in the way of caring for them and treating them. Only by knowing this perception and comprehension can training programs be developed and paternalistic/authoritarian positions, which inhibit the autonomy and independence of the elderly, reviewed.

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The premise is defended that through training and skills development it is sought to improve not only the formation, but the attitudes of the healthcare professionals so that they can evaluate and treat the conditions that afflict older people, providing them with tools and strengthening them in the direction of healthy aging<sup>(7)</sup>.

## OBJECTIVE

The aim of this study was to identify the perception and comprehension of undergraduates and graduates of the health area about what the elderly and human aging<sup>8</sup> are.

## METHOD

This field study with a qualitative approach was developed in São Paulo State after the approval of the Human Research Ethics Committee (Protocol CEP/HRA No. 167/08) with undergraduate students and healthcare professionals who participated in the training in nonverbal communication in gerontology<sup>(8)</sup>.

The guiding questions *What is your understanding of human aging?* and *What is your perception of the elderly individual?* were applied immediately after the first meeting (of three meetings carried out in the training) and consisted of evaluating the degree of assimilation of the participants regarding the content approached. The meeting where this theme was discussed lasted for four hours and was conducted in 2009.

Data analysis was performed through the interpretation of the responses of the participants, based on the

<sup>(8)</sup> Partial data from the thesis entitled Qualification for nonverbal communication: a way for taking effective/affectionate care of elderly people. USP School of Nursing, 2010

content analysis method. This method involves the application of a set of techniques for analysis of communications, which seeks to obtain, by systematic and objective procedures the description of the content of the messages, indicators that allow the inference of knowledge relative to the perceptions of care, in the hospital environment<sup>(9)</sup>.

## RESULTS

A total of 117 people took part in the training, composed of: 71.8% (84) healthcare professionals and 28.2% (33) undergraduates in the area of health. In relation to gender and age, 80.3% (94) were women with a mean age of 35.7 years and 19.7% (23) men with a mean age of 29.6 years. The mean age of the participants, regardless of gender, was 34.5 years, with the youngest being 20 and the oldest 59 years of age.

Asked what human aging was for them, they suggested seven categories: part of the evolution of life that brings experience, part of the nature in which experiences are accumulated which is a mystery, loss of happiness and increase in isolation, a time of valorization of affection and respect; an inevitable stage that brings deterioration, prejudice, limitations and requirements for care; a consequence of life and the presence of disease; an overall physiological process.

The first category created, *part of the evolution of life that brings experience* (appeared in 18.8% of the responses), included the understanding of aging linked to experiences that may, in some way, not only be exposed, but also employed by people who show the accumulation of knowledge, maturity, and are able to teach and learn from others.

It is the accumulation of knowledge, of life experience and even if diseases emerge that do not limit the elderly they manage to expose their knowledge in practice, they talk and people take their advice (D18)

Today, it is very difficult, but I believe that becoming old is yet another start, because I can be happy, I can be with the people I love, spend quality time with them, I can teach and learn from them (D29)

The second category, *part of the nature in which experiences are accumulated which is a mystery* (appeared in 4.3% of the responses), emphasized human aging as a period in which experiences were combined, but that there is no sense to this, the reasons that trigger the process are unknown, they are a *mystery*. The responses below exemplify well the characteristics of this group:

Life experience is accumulated and we do not know why it works like this (D91)

It is a stage of life, part of nature, where the daily experiences lead to you knowing more than the younger people. I know we have a natural deterioration of our cells and system, but everything is very strange and no one is quite sure why this happens (D26)

The category, *loss of happiness and increase in isolation* (appeared in 6% of the responses) encompassing the understandings with emphasis on the loss of laughter, the loss of the happiness for living, the possibility of suffering. Here, social isolation was shown to be important, as can be seen in the following responses:

Degradation of the human body, no more time for laughter, you are alone. Solitude brings all kinds of suffering, to the extent that happiness does not exist (D07)

There are not many things to enjoy, there is isolation, people are not close anymore and that must bring sadness (D33)

Grouping the responses where the emphasis was given to the care, dedication, warmth, love, family, and respect allowed the construction of the fourth category, *a time of valorization of affection and respect* (appeared in 5.1% of the responses). The following are some examples that portray the aforementioned.

A stage where what you really want is affection and warmth, family close by (D04)

It is a time of life, where you want more affection, devotion, tenderness, it is when respect needs to be given (D15)

*An inevitable Stage that brings deterioration, prejudice, limitations and requirements for care* (appeared in 47.8% of responses) was the category that grouped the responses where aging was related to a stressful, conflictual stage, fueled by prejudice, that causes dependence, physical and mental disability, limitation in the coming and going and in the autonomy, and the requirement for care. Examples of these discourses are:

A phase of life that has arrived and cannot be avoided, a conflicting time to be old and to deal with old age, because nobody wants to be, or appear to be old. But in the end it is not about one's will, we will grow old and there is no other way, even if there is a lot of prejudice (D36).

To me, aging is very similar to physical limitations and the inability to decide and resolve things. Attention and care are essential (D49).

The sixth category, *a consequence of life and the presence of diseases* (appeared in 10.2% of the responses), grouped the responses related to aging as a consequence of life which everyone passes through and is associated with the installation and the accumulation of disease.

A time where the body and mind suffer the consequence of the years, of the time spent and lived, a kind of consequence of life, whether we want it or not, where the disease comes (D20).

It is part of the natural cycle of life, a consequence, diseases are established (D27).

Finally, *an overall physiological process* (appeared in 5.1% of the responses) was the category that encompassed the responses that comprehend aging not as a

step, a phase, a time or a part of life, but as a process that has individual associations, receives influences from the living and health conditions, from the life style and is related to the course of life and where the disease may be present or not. The following responses illustrate this group:

The natural progress of life, which starts early and keeps going, decreases in the functions and biological functioning are real, however, that depends on how you lived and live, on the ways in which people relate to each other, it depends on the dreams and on the pursuit of them, where and how you live, work also has an influence. Many think that is the time of diseases, I disagree, because they can affect people regardless of age (D02).

I prefer to say it is a trajectory of the path of life, with specific characteristics, where the abilities and not disabilities can and should be valued and enjoyed by the elderly themselves and by those who are with them (D58).

By questioning the participants about the perception they had about the elderly, it can be seen that some failed to give their opinion (12%), leaving blank the response to the question, the others (88%) described their perception with the view that they had of the elderly (images and/or feelings for them) and/or perception focused on the evaluation of how the elderly perceive themselves (images and/or feelings that the elderly have). Here are two responses that exemplify this difference:

I love the elderly, I think they're beautiful, I believe that in their wisdom, being old is living and living is something wonderful, this is because being old is not the end (D05).

It is the individual who feels harassed and abandoned by society, asks for help and requires care (D62).

These perceptions, excluding the blank answers were divided into four distinct groups: *positive*, *negative*, *mixed*, and *neutral*; together totaling 102 responses.

The *positive* group was comprised of discourses that revealed some form of valorization of the condition of being elderly (35 responses = 34.3%); the following statements provide examples of this:

An extraordinary being who deserves total respect and affection, the best treatment. When I see them, it's like I want to relieve all their suffering and see them happy (D04).

Experienced people with whom we have much to learn, they need respect and dedication. I see the elderly as a challenge when it comes to medicine (D74).

The *negative* group was composed of the perceptions contrary to those previously described (23 responses = 22.5%), as revealed in the following discourses:

They are needy people, often unmotivated, who think they are useless (D35).

I'm afraid of this phase, because working in the area, I can see how we treat the elderly, we do not seek to know who this person was and we already judge them saying they are boring, or that we cannot stand these old people anymore (D86).

The *mixed* group was composed of responses with both characteristics (27 responses = 26.5%). Examples of this are:

They may be active subjects, willing to perform various activities, cheerful and happy with their lives, however, the elderly are always despondent, sad, melancholy, unwilling (D16).

I think it is a beautiful phase of life, because they battled their whole lives, however, I see them as sad people, abandoned by even their family (D99).

Finally, the *neutral* group was the one in which the responses did not make the presence or absence of the valorization clear (17 responses = 16.7%):

Normal, like everyone else, younger or older, although many see them as different (D77).

We need the public policies to be more effective, I think aging is difficult, given the tremendous prejudice that exists (D102).

## DISCUSSION

Human aging is not provoked by a single cause or mechanism, the theories on aging reveal how a multiplicity of aspects is inherent to this process. However, it is common for people to reduce their understanding of aging to the biological aspects, because these aspects, in the majority of cases, are more visible and more easily measured. In fact, the participants presented a perception directed toward the results considered negative by the Western social standard, of which Brazil is a part. This is consistent with the authors<sup>(10)</sup> that describe the way in which the younger and healthier perceive aging and the elderly. This attitude has an influence on how they behave towards them. *Ageism* occurs, a process that involves stereotyping and systematic discrimination against people just because they are elderly, cumulating in them being seen as senile, rigid in their thinking, antiquated in their morality and in their skills<sup>(10)</sup>.

Throughout the view of aging, there are distinct perceptions among people, with some perceiving old age as an empty, worthless time in which there is futility and meaninglessness. For others old age may be a period of enjoyment, growth, personal accomplishment, an opportunity to do what they did not do when young because their time was totally occupied by raising their children and the pursuit of stability, among other things. This study reconfirms the data from a previous study<sup>(11)</sup>.

When questioned about the representation the respondents had of the elderly, pessimism was less obvious. The data reveal that 22.5% maintained a negative view, because these statements did not valorize the condition of being old, however, 26.5% expressed negative and positive points too.

The results are consistent with the sensitization workshop performed<sup>(12)</sup> with nursing students, in which ideas about the elderly were expressed using words such as: *“wrinkled, frail, helpless, ugly, useless, retired, deaf, disease, finished, discrimination, grumpy, boring, wise, obsessive and experience”* among other expressions. These ideas can be found in the statement

(...) for many people, when talking about old age, the image that comes to mind is of a worn shoe, holed and that, therefore, it no is longer good for anything<sup>(13)</sup>.

This statement corroborates the social theories of aging<sup>(14)</sup> and can be explained by the fact that being old means, in the majority of cases, being excluded from various social places. One of these highly valued places is the productive world of work. Thus, the understanding of the identity of the elderly is related to the presence of qualities such as: activity, strength, memory, beauty, power and productivity. In this way, aging is seen as a state of decay, in which the elderly are placed in a position of inferiority<sup>(15)</sup>.

The results of the category an overall physiological process confirm the findings of the authors<sup>(16)</sup> who advocate the view that human aging cannot be considered a stage of life, but an ongoing and widespread process, present in the lives of people. Aging can be comprehended as a process in which a reduction of functional reserves should not compromise the mechanisms necessary for the development of quotidian activities. When there is a clear functional limitation, it must be understood as an effect of a pathophysiological process, to be treated and cared for, and not necessarily to be understood as a natural process of aging<sup>(17)</sup>.

When the participants made an association of human aging with the experience of the course of life and cited its weaknesses and limitations, they are correct and confirm the expectations expressed by PAHO<sup>(18)</sup> to reduce morbidity and mortality in the elderly, so that they become individuals who can grow old in a healthy scenario. Ten actions have been taken in an attempt to promote healthy aging<sup>(17)</sup>; which are: comprehensive evaluation of the elderly person; to encourage regular physical activity; to encourage changes in deleterious habits, appropriate nutrition, to delay to the maximum the onset of a disease; judicious use of pharmaceuticals; to compensate for limitations; to prevent accidents and traumas; maintenance of social roles and expansion of the social support network. The more professionals know this, the more they can learn to grow old and to teach the young people and adults of today how to grow older too.

What needs to be emphasized and was highlighted in the statements of the participants, is that aging is not a simple step, but a complex process that has peculiarities that can cause a series of biological, psychological, cultural and social changes in the elderly and the society in which they live, confirming the approved theories on ag-

ing<sup>(19)</sup>. It was perceived how the healthcare professionals need to limit the most common errors committed in the care to the elderly. Responses such as

the elderly are vulnerable beings, who always need to do many examination and they complain a lot, I cannot always believe it. Would this not be emotional deprivation? (D24)

should be carefully identified and training programs to deal with this population should be developed. This example refers to the attention requested in the document of the Ministry of Health<sup>(20)</sup> which states that many healthcare professionals consider the alterations that occur with the elderly as being due to natural aging, sometimes preventing the early detection and treatment of certain diseases. They treat natural aging as a disease and simply submit the elderly to unnecessary examinations and treatment originating from signs and symptoms that could be associated with senescence.

## CONCLUSION

According to the proposed aim it was found that the comprehension that the undergraduates and graduates in the healthcare area have regarding aging can assume different meanings. Some of the individuals surveyed believe that aging is an event inherent in the evolution of life and brings experiences, while some felt that it constitutes something of human nature where experiences are accumulated, being a mystery. For others it is a phase where the loss of happiness and increase in isolation is a reality, while for some it is a time in which the valorization of affection and respect are necessary. There were other respondents who saw it as an inevitable stage that brings deterioration, prejudice, limitations and requirements for care, some saw it as a consequence of life and the presence diseases, while others comprehended it as an overall physiological process.

Regarding the comprehension of being elderly, different meanings were identified in the responses, which could be classified as positive, negative, mixed and neutral views. The positive view was associated with the favorable conditions and/or situations in which the elderly person was highlighted and positively valued as an individual. The negative view was given by the recollection that the elderly are needy people and difficult to be with, while the mixed view, as the name itself implies, grouped the discourses with positive and negative content. Finally the neutral view recalled the need for more effective public policies and highlighted the existing prejudice. In fact it is known that aging manifests itself as a decline in the functions of various organs, which varies not only from one organ to another but also from one elderly person to another of the same age. This does not signify a reduction of the elderly to the moment of “decadence”, on the contrary, it must be understood as an opportunity to provide healthcare more appropriately and in accordance with the natural limits that aging imposes.

The view held of someone or something, in the case of the elderly and of aging, impacts in the way in which healthcare professionals relate in this binomial (professional-elderly person), however, there is a need to observe and reflect on what we think about the elderly and how we act with them in the quotidian. It is necessary to stress that it is the duty of every healthcare professional to accompany the changes required by the new Brazilian populational context. For this reason, it is essential to become aware that both the implementation of actions that valorize human care and communication with oneself and

with others constitutes an intelligent and effective healthcare strategy. It is worth mentioning that adequate and quality care is care that encompasses the techniques, the knowledge, and to be like and with the other.

This study advances the knowledge of nursing and gerontology since it exposes the perception and comprehension of the healthcare professional and graduate students regarding the elderly and the aging process. It is directed toward actions that enable and clarify this limited and biased view.

## REFERENCES

1. Instituto Brasileiro de Geografia e Estatística (IBGE). Tendências Demográficas: Uma Análise da População com Base nos Resultados dos Censos Demográficos de 1940 e 2000, 2007 [citado 2010 dez 15]. Disponível em: [http://www.ibge.com.br/home/presidencia/noticias/noticia\\_visualiza.php?id\\_noticia=892&id\\_pagina=1](http://www.ibge.com.br/home/presidencia/noticias/noticia_visualiza.php?id_noticia=892&id_pagina=1).
2. Jacob Filho W. Fatores determinantes do envelhecimento saudável. Bol Inst Saúde. 2009; (47):27-32.
3. Brasil. Decreto n. 1.948, de 3 de julho de 1996. Regulamenta a Lei 8.842, sancionada em 4 de janeiro de 1994, a qual dispõe sobre a Política Nacional do Idoso, cria o Conselho Nacional do Idoso e dá outras providências. Diário Oficial da União, Brasília, 4 jul. 1996. Seção 1, p. 122-77.
4. Veras RP. Terceira idade: gestão contemporânea em saúde. Rio de Janeiro: Relume Dumará/UERJ; 2002.
5. Camarano AA, Kanso S, Mello JL, Pasinato MT. Famílias: espaço de compartilhamento de recursos e vulnerabilidades. In: Caramano AA, organizador. Os novos brasileiros: muito além dos 60? Rio de Janeiro: IPEA; 2004. p.137-67.
6. Freitas MS, Queiroz TA, Sousa JAV. O significado da velhice e da experiência de envelhecer para os idosos. Rev Esc Enferm USP. 2010;44(2):407-12.
7. Organización Panamericana de la Salud (OPAS). Enfermería gerontológica: conceptos para la práctica. Washington; 1993. (Série PALTEX n. 31).
8. Prochet TC. Capacitação em comunicação não-verbal: um caminho para ações de cuidado efetivo/afetivo ao idoso [tese doutorado]. São Paulo: Escola de Enfermagem, Universidade de São Paulo; 2010.
9. Bardin L. Análise de conteúdo. Lisboa: Edições; 1979.
10. Agich GJ. Dependência e autonomia na velhice: um modelo ético para o cuidado de longo prazo. São Paulo: Loyola; 2008.
11. Pires ZRS, Silva MJ. Autonomia e capacidade decisória dos idosos de baixa renda: uma problemática a ser considerada na saúde do idoso. Rev Eletr Enferm [Internet]. 2001 [citado 2009 jun. 12];3(2). Disponível em: [http://www.fen.ufg.br/revista/revista3\\_2/autonomia.html](http://www.fen.ufg.br/revista/revista3_2/autonomia.html).
12. Brum AKR, Souza SR. Oficina de sensibilização para o envelhecimento: uma ação de enfermagem Textos Envelhecimento. 2002;4(8):29-38.
13. Zimerman GI. Velhice aspectos biopsicossociais. Porto Alegre: Artes Médicas Sul; 2000.
14. Bengtson VL, Burgess EO, Parrot TM. Theory, explanation, and a third generation of theoretical development in social gerontology. J Gerontol B Psychol Sci Soc Sci. 1997;52(2):S72-88.
15. Mercadante E. Aspectos antropológicos do envelhecimento. In: Papaléo Netto M. Gerontologia. São Paulo: Atheneu; 1996. p.73-6.
16. Santos SMA. O cuidador familiar de idosos com demências: um estudo qualitativo em famílias de origem nipo-brasileira e brasileira [tese doutorado]. Campinas: Faculdade de Educação, Universidade Estadual de Campinas; 2003.
17. Jacob Filho W. Fatores determinantes do envelhecimento saudável. Bol Inst Saúde. 2009; Impr(47):27-32.
18. Organização Mundial da Saúde (OMS). Envelhecimento ativo: uma política de saúde. Brasília: OPAS; 2005.
19. Jeckel-Neto EA, Cunha GL. Teorias biológicas do envelhecimento. In: Freitas EV, Py L, Neri AL, Cançado FAX, Gorzoni ML, Rocha SM, organizadores. Tratado de geriatria e gerontologia. Rio de Janeiro: Guanabara Koogan; 2002. p. 13-9.
20. Brasil. Ministério da Saúde; Secretaria de Atenção à Saúde; Departamento de Atenção Básica. Envelhecimento e saúde da pessoa idosa. Brasília; 2006. (Cadernos de Atenção Básica, n. 19).