

**Social support and intergenerational contact: studying elderly patients with cognitive alterations****Suporte social e contato intergeracional: estudando idosos com alterações cognitivas**

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**ABSTRACT**

The aim of this study was to investigate the relationship between social support to elderly patients with cognitive alterations in different contexts of social vulnerability and the presence of children living in the same household. A descriptive, cross-sectional study assessed 85 elderly individuals in different contexts of social vulnerability; all of them presented results below the cut-off point in the mini mental state examination. All ethical guidelines were respected. A sociodemographic and family characterization tool, the mini mental state examination, and the Medical Outcomes Study (MOS) were applied. The results showed good levels of social support received by elderly individuals and a statistically significant correlation between the extent of emotional support and the presence of children in the household ( $t=2.16$ ,  $p<0.01$ ). These results enable a better understanding on the relationships between elderly people and children by evidencing that intergenerational contact favors the perception of satisfactory social support by the elderly.

**Descriptors:** Aged; Child; Social Support; Family; Geriatric Nursing.

**RESUMO**

Este estudo teve por objetivo verificar a relação entre apoio social de idosos com alterações cognitivas que residem em diferentes contextos de vulnerabilidade social e a presença de crianças vivendo no mesmo domicílio. Trata-se de um estudo descritivo, transversal, que avaliou 85 idosos residentes em diferentes contextos de vulnerabilidade social, e que apresentaram resultado no Mini Exame do Estado Mental abaixo da nota de corte. Todos os cuidados éticos foram observados. Foram aplicados instrumento de caracterização sociodemográfica e familiar, Mini Exame do Estado Mental e o *Medical Outcomes Study* (MOS). Os resultados revelaram bons níveis de apoio social recebidos pelos idosos e correlação estatisticamente significativa entre a dimensão de apoio emocional e a presença de crianças no domicílio ( $t=2,16$ , sendo  $p<0,01$ ). Esses resultados possibilitam conhecer melhor a relação entre idosos e crianças ao revelar que o contato intergeracional favorece a percepção de apoio social satisfatório pelos idosos.

**Descritores:** Idoso; Criança; Apoio Social; Família; Enfermagem Geriátrica.

## INTRODUCTION

The number of people aged over 60 worldwide is growing faster than any other age group. Particularly in the last 60 years the number of elderly people in Brazil has increased significantly. In 1950, this age group represented 4.9% of the total population; in 2010 the number of elderly people was 19.6 million, corresponding to 10.2% of the population. Considering that over the next 40 years this group will grow at a rate of 3.2% per year the number of elderly people will reach 64 million in 2050, corresponding to 29.7% of the total population. This percentage is very similar to that found for Japan, currently the country with the highest number of elderly people in the world<sup>(1)</sup>.

Population ageing increases the interaction between people and intergenerational relationships, leading to a society composed of four generations, as many elderly individuals experience the opportunity to meet their grandchildren and great-grandchildren<sup>(2)</sup>. Also, the existence of family arrangements in which the elderly live together with younger generations is increasingly common.

According to data from the SABE Study (Health, Welfare and Ageing) conducted in São Paulo in 2006, 30.3% of the elderly lived with their children, 23.9% lived only with the spouse, 20.4% lived with children and grandchildren, 13.3% lived alone and 12.1% lived in other type of arrangements<sup>(3)</sup>. Of the 147 elderly individuals aged over 80 that were interviewed in Ribeirão Preto, in the state of São Paulo, 10.9% were living in trigenerational arrangements and 2% were living with grandchildren<sup>(4)</sup>.

Considering that ageing may increase the demand for elderly care and that family is the main source of assistance, the presence of children living with elderly people may affect the exchange of support in the household<sup>(5)</sup>. Such interpersonal exchanges involving affection, affirmation and care define the term "social support"<sup>(6)</sup>. In turn, the social networks are the set of relationships maintained by each individual; social

support is the motivation for the establishment of networks<sup>(7)</sup>.

In general, people who engage in social networks live longer and healthier than people who do not<sup>(8)</sup>. The effect of social networks on the health of elderly people has been demonstrated, particularly in quality of life, subjective well-being, functionality, mortality and cognitive impairment<sup>(8-9)</sup>. In relation to cognitive aspects, social support works as a protective factor against cognitive impairment. The engagement in social networks helps to maintain the independence of elderly people within their family and socio-cultural context, which is fundamental for cognitive functions and psychological well-being<sup>(10)</sup>.

There is an emotional complexity permeating the relationships among seniors, adult children and grandchildren and the quality of these relationships is associated with the physical and mental conditions of the elderly<sup>(11)</sup>. In this sense, the relationship between elderly people and children increases the possibilities of social support exchange in old age, which may improve the quality of life of elderly people.

Therefore, considering that children living with elderly people is quite usual and that social support may be a protective factor for cognitive impairment, the present study aimed at investigating the relationship between social support for elderly people with cognitive alterations and the presence of children living in the same household.

## METHODOLOGY

A descriptive, cross-sectional, quantitative study was conducted in a city located in the central region of the state of São Paulo.

The study subjects consisted of elderly people (people over 60 years old) (n=85) registered in Family Health Units (FHUs) located in different regions of social vulnerability according to the São Paulo Social

Vulnerability Index (IPVS, as per its acronym in Portuguese)<sup>1</sup>.

Inclusion criteria included: being over 60 years old, being registered in one of the FHUs of the city that are rated in the IPVS, presenting result below the cut-off score in the mini mental state examination, having no severe speech or understanding impairment, and agreeing to participate in the study.

A database consisting of 755 assessments of elderly individuals from the FHUs rated in the IPVS of the city was used for sample selection. Of these, the elderly with indication of cognitive alterations consisted of 195 individuals who presented results below the cut-off score in the mini mental state examination. Discarding losses by death and household migration, the present study reassessed 101 elderly individuals. After reapplication of the mini mental state examination, 16 individuals presenting result above the cut-off score were excluded. Thus, the final sample consisted of 85 elderly individuals.

Individual and in-home assessments were conducted between August and November 2009, respecting a prior appointment with the individuals. The data collection included:

- Family and sociodemographic characterization of the elderly;
- Implementation of the Medical Outcomes Study (MOS), a tool used to assess the social support offered to the elderly. Originally developed for the MOS, a study with 2,987 adults users of health services in Boston, Chicago and Los Angeles, translated into Portuguese and validated in study conducted with the population of Rio de Janeiro - Pro-Health Study<sup>(12)</sup>. The questionnaire consists of 19 items covering five functional dimensions of social support: material, affective, emotional, information and positive social interaction.

Social support is measured by the frequency in which the elderly have each dimension. According to the answers a final score is presented for each dimension, ranging from 20 to 100 points; the higher the attained score, the higher the level of social support.

- Reimplementation of the mini mental state examination, a tool used for cognitive deficit screening<sup>(13)</sup> that was used as an inclusion criterion of elderly individuals in the study. Cut-off scores were adapted according to the educational level of the individuals, namely: 18 points for illiterate, 21 points for 1-3 years of schooling, 24 points for 4-7 years of schooling, and 26 points for 8+ years of schooling<sup>(14)</sup>.

Data were analyzed using descriptive, correlational statistics. The Shapiro-Wilk normality test and the t-test were applied, with level of significance of 5% (p-value < 0.05).

The recommendations of Resolution 466/2012 approved by the National Health Council on research involving human beings were followed. The research project was approved by the Research Ethics Committee of the University (Case 119/2009). Data collection was authorized by the Municipal Health Department and initiated after the individuals read and sign a Free and Informed Consent form.

## RESULTS

Most seniors were female aged between 70-79 years, illiterate, and widowed. Regarding the place of residence, most of them lived in regions of middle, low or very low social vulnerability. The individual income of the elderly was mostly below the minimum wage.

Sociodemographic characteristics of the individuals may be observed in Table 1.

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<sup>1</sup> Index provided by Fundação Sistema Estadual de Análise de Dados (SEADE) in 2007.

**Table 1:** Sociodemographic characterization of the interviewees. São Carlos, São Paulo, Brazil, 2010.

	Characteristic	%
Gender	Female	75.3
	Male	24.7
Age	60 – 69 years	23.5
	70 – 79 years	43.5
	80 – 89 years	23.5
	90 years or older	9.5
	Illiterate	38.8
Educational level	1 – 3 years of schooling	28.2
	4 – 7 years of schooling	27.1
	8 years of schooling	3.5
	9 – 11 years of schooling	1.2
	12 years of schooling	0
	over 12 years of schooling	1.2
Marital status	Widowed	51.8
	Married/Civil union	35.3
	Single	7.1
IPVS	Separated/Divorced	5.8
	High and very high social vulnerability	45.9
	Middle, low and very low social vulnerability	54.1
Individual income	≤ 1 minimum wage	75.2
	> 1 minimum wage	24.7
Family income	≤ 1 minimum wage	16.5
	> 1 minimum wage	83.5

With regard to the cognitive assessment, all the 85 seniors that participated in this study presented results below the cut-off score according to the educational levels in the mini mental status examination. Of these, 35.3% presented results 4-6 points below the cut-off score.

In relation to their families, most of the residences were shared by only one more person (35.3%), followed by elderly living with two or three people (21.2% and 10.6%, respectively). Only 10.6% of the elderly lived alone.

In addition to the elderly, most (66.7%) of such residences were shared by the spouse. The results also showed that the companions of the elderly were their children (13.3%), siblings (6.7%), grandchildren (6.7%), mother (3.3%) and caregiver (3.3%).

The existence of multigenerational households was verified through the identification of elderly individuals that shared the household with children between 0 and 14 years of age, represented by 21.2% of the elderly.

In the different areas of social vulnerability there was a prevalence of residences with no children. However, the number of seniors sharing the household with children is higher in the regions of high social vulnerability (12.9%), that is, in contexts of poverty, when compared to regions of low vulnerability (8.2%).

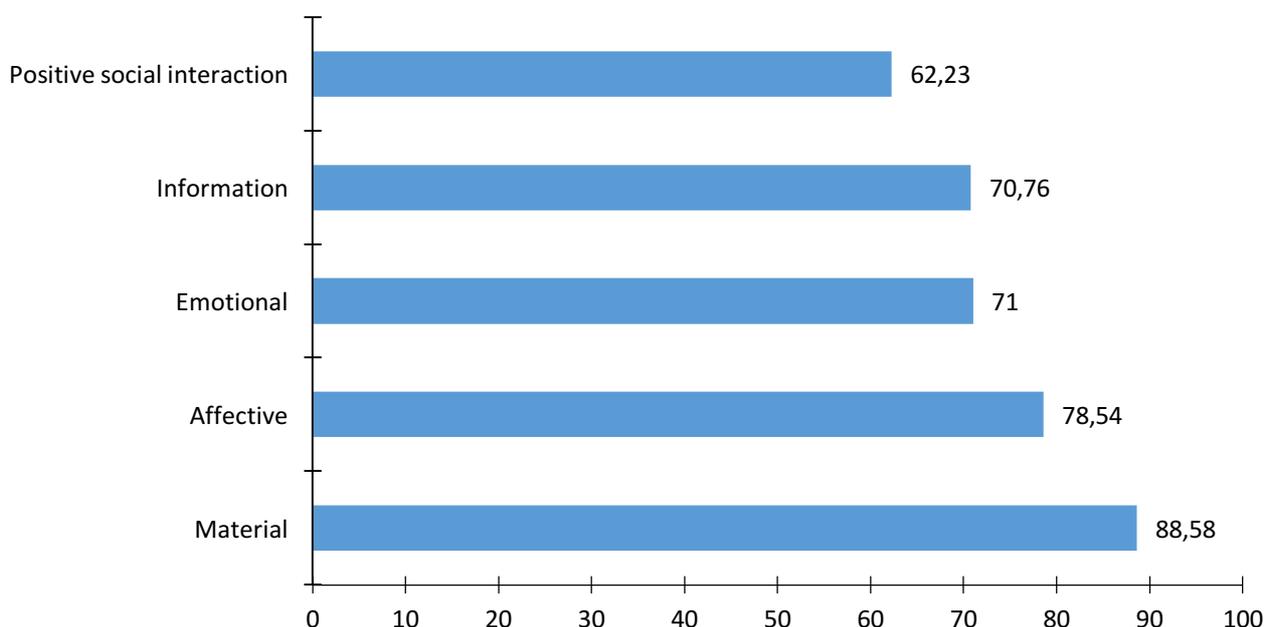
In contexts of high and very high social vulnerability, a prevalence of female children (75.0%) aged between 1 and 5 years (35.0%) was observed. Only one of the school-aged children was not attending school, and 25.0% presented some kind of health problem.

In contexts of middle, low and very low social vulnerability, a prevalence of female children (55.5%) aged between 11 and 14 years (44.4%) was observed. All the school-aged children were attending school, and 33.3% presented some kind of health problem.

Regarding the social support assessed by MOS, the mean score reached by the elderly in the five dimensions of social support was 74.2 points with standard deviation of 9.5 points. Individual analyses of each dimension showed a good level of social support in the material and

ffective support dimensions. In turn, the emotional, information and positive social interaction support dimensions demonstrated a lower level of support, as these were below the overall mean, as shown in Figure 1.

**Figure 1:** Mean scores reached by the elderly in each dimension of social support. São Carlos, São Paulo, Brazil, 2010.



Correlation analysis between the levels of social support and the presence of children living with the elderly revealed a statistically significant correlation between the dimension of emotional support and the

presence of children in the house. Table 2 shows the relationship between the five dimensions of social support and the presence of children aged between 0 and 14 years living in the same house as the elderly.

**Table 2:** Relationship between the dimensions of social support and the presence of children living in the same house as the elderly. São Carlos, São Paulo, Brazil, 2010.

	PRESENCE			ABSENCE			t-test	
	N	Mean	SD	N	Mean	SD	T	DF
<b>Material support</b>	18	92.22	16.55	67	87.61	19.23	1.01	30.52
<b>Affective support</b>	18	80.36	21.62	67	78.05	21.89	0.4	27.12
<b>Emotional support</b>	18	81.11	15.67	67	68.28	23.84	2.16*	83
<b>Information support</b>	18	73.05	18.71	67	70.14	21.49	0.56	30.2
<b>Positive social interaction support</b>	18	69.16	21.43	67	60.37	23.5	1.51	21.97

Note: \* p < 0.01. SD = Standard Deviation. DF = Degree of freedom

**DISCUSSION**

In this study the families of the elderly were not characterized as large families, since most of them lived with only one more person in their houses. Just over 10% of the elderly lived alone, showing that the elderly usually have one or more companions. The percentage of children living in the same house as the elderly was 21.2%, with a higher rate for houses located in areas of high and very high social vulnerability (poverty contexts). This

grouping of generations may be related to the needs of both the elderly and the children, as previously reported<sup>(11)</sup>.

Aiming at studying ageing in the perception of 10 elderly individuals that attended an elderly day care center, it was found that the presence of grandchildren and great-grandchildren represents a source of joy and pleasure for the elderly; some say to prefer the relationships with children and young people as these are

more satisfactory<sup>(15)</sup>. Another study that aimed to analyze the meaning of old age to 48 seniors from the rural area of the state of Ceará found that the elderly report losses and dependence, although they are satisfied for being with their children and grandchildren<sup>(16)</sup>.

Of the 207 seniors who participated in services related to the University of Santa Cruz do Sul, in the state of Santa Catarina, 85% reported that family relationships interfere in their mood/state of mind. When questioned about their relationships with grandchildren, 79% reported having very good relationships, 19% reported good relationships, and 2% reported regular relationships<sup>(17)</sup>.

In Taiwan, after assessing 4,582 elderly individuals that had at least one grandchildren (aged below 18 years old), it was found that 23.6% of them lived with and took care of the grandchildren. Caregiving grandparents were found to be healthier and more satisfied with the emotional support received from family and friends than elderly individuals that were not caregivers<sup>(18)</sup>. A longitudinal analysis of the same data showed that these associations may vary depending on the duration of care and the home arrangement of the grandparents, but they do not represent causing factors of better or worse results, as in all groups the caregivers presented more positive results in comparison to non-caregivers<sup>(19)</sup>.

In Chile, among the 2,000 elderly individuals that were interviewed in a study, 41% reported to live with one or more grandchildren and 50% reported to help to take care of such children for four or more hours per week. Grandparents that took care of grandchildren for four or more hours per week presented better levels of life satisfaction after two years; those who provided emotional support presented better scores in the item mental health in a generic quality of life questionnaire in the same period. For the grandparents, taking care of grandchildren for four or more hours per week reduced the risk of depression after two years<sup>(20)</sup>.

An investigation aiming at analyzing the relationship between having contact with grandchildren during their

childhood and the fact that these grandchildren become part of the relationships of the grandparents in their adulthood identified that a higher frequency of contact, spending the night together, and taking care of grandchildren during childhood were factors that contributed to the inclusion of grandchildren as important people in the network of relationships of their grandparents in adulthood<sup>(21)</sup>. Therefore, the benefits of social support from grandchildren to grandparents in childhood may benefit the relationship between them.

Living with children and grandchildren may benefit the relationship of the elderly with their families as well as the health of the elderly. On the other hand, living with children should not be seen as a guarantee of successful old age nor good relationships between family members, as it favors unbalanced support exchanges because there may be a tendency for the adults to provide more care to their children than to their parents<sup>(22)</sup>.

As in the present study, the results of the SABE Study indicate that material support was the most commonly received type of social support by the elderly. In the SABE, 92% of the elderly in Brazil report to receive support from their families, particularly services, goods and financial support. Regarding the support provided by the elderly, 88% report to do it and also mention services, goods, and financial support. Educational and financial conditions increase the chances to provide help and reduce the chances of receiving such support<sup>(23)</sup>.

The elderly in the present study presented a higher level of emotional support when they lived in the same house as a child; this may be explained by the affective exchanges related to grandparenthood. When the focus is on the elderly and family well-being, emotional proximity seems to be the most important component of intergenerational relationships<sup>(11)</sup>.

The relevance of studying social support through intergenerational contact lies in the fact that a satisfactory social support seems to promote better health conditions, and that the specific relationship between elderly individuals and children provides an

exchange of experiences between generations, as previously mentioned in other studies<sup>(15,24)</sup>. Also, the need for material, affective, and physical support may lead elderly individuals to live with their families, including their grandchildren<sup>(4)</sup>; the greater emotional support received by the elderly that lived with children in the present study lies in being able to deal with daily activities.

## CONCLUSION

Most of the 85 assessed patients consisted of women aged between 70 and 79 years, who were illiterate and widowed. All the elderly presented cognitive alterations; most of them presenting results ranging between 4 and 6 points below de cut-off score in the mini mental state exam. In most cases, the elderly lived with one more person at home, that is, a spouse. Multigenerational residences were verified by the presence of children in the house (21.2% of the cases). The elderly that lived with children presented a better level of emotional support than those who did not live with children. The results showed good levels of social support received by the elderly and a statistically significant correlation between

the dimension of emotional support and the presence of children at home ( $t=2.16$ ,  $p<0.01$ ).

Taking into account the fact that studies in this topic are scarce in the literature, the obtained results shall contribute to the care for the elderly as the contact between these different generations was found to be beneficial. Also, by understanding the relationship of the elderly with their families, particularly with children who live with them, a possibility to use the intergenerational relationship in favor of the planning and development of care lines for the elderly population is envisioned.

New studies should be encouraged with a more representative sample, using research designs that provide a comparison between elderly groups who live and do not live with children, as well as groups presenting or not cognitive alterations, in order to broaden the knowledge on the relationships between elderly individuals and children.

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## REFERENCES

1. Banco Mundial. Envelhecendo em um Brasil mais velho: Implicações do envelhecimento populacional para o crescimento econômico, a redução da pobreza, as finanças públicas e a prestação de serviços. Sumário Executivo de Relatório. Washington (USA): Banco Internacional para a Reconstrução e o Desenvolvimento, 2011. 64p.
2. Guerra ACLC, Caldas CP. Dificuldades e recompensas no processo de envelhecimento: a percepção do sujeito idoso. *Ciênc Saúde Coletiva*. 2010;15(6):2931-40.
3. Brito TRP. Rede social e envelhecimento: relação com funcionalidade e óbito [tese]. São Paulo: Escola de Enfermagem, Universidade de São Paulo; 2015.
4. Pedrazzi EC, Motta TTD, Vendruscolo TRP, Fabrício-Whebe SCC, Cruz IR, Rodrigues RAP. Arranjo domiciliar dos idosos mais velhos. *Rev Latinoam Enferm*. 2010;18(1):18-25.
5. Fingerhant KL, Pitzer LM, Chan W, Birditt K, Franks MM, Zarit S. Who gets what and why: help middle-aged adults provide to parents and grown children. *J Gerontol B Soc Sci*. 2011;66(1):87-98.

6. Kahn RL, Antonucci TC. Life-span development and behavior. Michigan (USA): Academic Press, 1980.
7. Seeman TE. Social ties and health: the benefits of social integration. *Ann Epidemiol*. 1996;6(5): 442-51.
8. Atkins J, Naismith SL, Luscombe GM, Hickie IB. Psychological distress and quality of life in older persons: relative contributions of fixed and modifiable risk factors. *BMC Psychiatry*. 2013;13(1):249.
9. D'orsi E, Xavier AJ, Ramos LR. Trabalho, suporte social e lazer protegem idosos da perda funcional: estudo Epidoso. *Rev. Saúde Pública*; 2011;45(4):85-92.
10. Machado JC, Ribeiro RCL, Leal PFG, Cotta RMM. Avaliação do declínio cognitivo e sua relação com as características socioeconômicas dos idosos em Viçosa-MG. *Rev Bras Epidemiol*. 2007;10(4):592-605.
11. Rabelo DF, Neri AL. A complexidade dos relacionamentos intergeracionais e a saúde mental dos idosos. *Pensando Famílias*. 2014;18(1):138-53.
12. Andrade CR. Associação entre apoio social e frequência relatada de auto-exame das mamas no Estudo Pró-Saúde

- [dissertação]. Rio de Janeiro: Escola Nacional de Saúde Pública/Fundação Oswaldo Cruz; 2001. 66p.
13. Folstein MF, Folstein SE, McHugh PR. "Mini-Mental State": a Practical Method for Grading the Cognitive State of Patients for the Clinician. *J Psychiatr Res.* 1975;12:189-98.
  14. Nitrini R, Caramelli P, Bottino CMC, Damasceno BP, Brucki SMD, Anginah R. Diagnóstico de doença de Alzheimer no Brasil: avaliação cognitiva e funcional. *Recomendações do Departamento Científico de Neurologia Cognitiva e do Envelhecimento da Academia Brasileira de Neurologia. Arq Neuropsiquiatr.* 2005;63(3A): 720-7.
  15. Silva EV, Martins F, Bachion MM, Nakatani AYK.. Percepção de idosos de um centro de convivência sobre envelhecimento. *Rev Min Enfermagem.* 2006;10(1):46-53.
  16. Freitas MC, 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.
  17. Areosa SVC, Benitez LB, Wichmann FMA. Relações familiares e o convívio social entre idosos. *Textos & Contextos (Porto Alegre).* 2012;11(1):184-192.
  18. Ku LE, Stearns SC, Van Houtven CH, Holmes GM. The health effects of caregiving by grandparents in Taiwan: an instrumental variable estimation. *Rev Econ Household.* 2012;10:521-40.
  19. Ku LE, Stearns SC, Van Houtven CH, Lee SD, Dilworth-Anderson P, Konrad TR. Impact of caring for grandchildren on the health of grandparents in Taiwan. *J Gerontol B Psychol Sci Soc Sci.* 2013;68(6):1009-21.
  20. Grundy EM, Albala C, Allen E, Dangour AD, Elbourne D, Uauy R. Grandparenting and psychosocial health among older Chileans: a longitudinal analysis. *Aging Ment Health.* 2012;16(6):1047-57.
  21. Geurts T, Tilburg TGV, Poortman AR. The grandparent–grandchild relationship in childhood and adulthood: a matter of continuation? *Personal Relationships.* 2012;19(2):267-278.
  22. Fingerman KL, Sechrist J, Birditt K. Changing views on intergenerational ties. *Gerontology.* 2013;59(1):64-70.
  23. Saad PM. Transferencias informales de apoyo de los adultos mayores en América Latina y el Caribe: estudio comparativo de encuestas SABE. *Notas Poblacion.* 2003;3(77):175-217.
  24. Leder S, Grinstead LN, Torres E. Grandparents Raising Grandchildren: Stressors, Social Support, and Health Outcomes. *J Fam Nurs.* 2007;13(3):333-52.

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