

SOCIAL CAPITAL AND THE USE OF HEALTH SERVICES: A CROSS-SECTIONAL STUDY AMONG BRAZILIAN OLDER ADULTS

Capital social e a utilização de serviços de saúde: estudo transversal entre idosos brasileiros

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ABSTRACT

OBJECTIVE: This study sought to investigate the association between social capital and the use of health services among Brazilian non-institutionalized older adults living in an urban metropolitan area. **METHODS:** The sample was comprised of 2,052 respondents aged 60 or older. Individual Social Capital was measured by The World Bank Integrated Questionnaire (IQ-MSQ) dichotomized in “low” and “high” social Capital. Use of health services, community engagement, familiar functionality, and social demographics were assessed. **RESULTS:** Individuals who belonged to the low social capital group were 73% more likely to have a medical appointment in the 6 months previous to the interview [OR = 1.76; 95%CI 1.19–2.52] compared to the high social capital group. In the opposite direction, individuals who belonged to the low social capital group were 29% less likely to have a dental appointment regularly [OR = 0.71; 95%CI 0.51–0.98], were 88% less likely to be engaged in community projects [OR = 0.12; 95%CI 0.09–0.15], and 42% less likely to have a good familiar functionality [OR = 0.58; 95%CI 0.37–0.88], compared to the older adults who had high levels of social capital. **CONCLUSION:** Individual low social capital affected the pattern that older adults used health services in the investigated population differently.

KEYWORDS: social capital; aging; social determinants of health.

RESUMO

OBJETIVO: Investigar a associação entre o capital social e a utilização de serviços de saúde entre idosos brasileiros não institucionalizados residentes em uma região metropolitana. **MÉTODOS:** A amostra foi composta de 2.052 respondentes com idade igual ou superior a 60 anos. O capital social individual foi medido por meio do Questionário Integrado do Banco Mundial, dicotomizado em “baixo” e “alto” capital social. O uso de serviços de saúde, engajamento comunitário, funcionamento familiar e demografia social foram avaliados. **RESULTADOS:** Indivíduos pertencentes ao grupo de baixo capital social apresentaram 73% mais necessidade de terem atendimento médico nos últimos seis meses anteriores à entrevista [OR = 1,76; IC95% 1,19–2,52], comparados ao grupo de alto capital social. Na direção oposta, indivíduos pertencentes ao grupo de baixo capital social apresentaram-se 29% menos propensos à necessidade de atendimento odontológico regular [OR = 0,71; IC95% 0,51–0,98], 88% mostraram ter menos chances de engajar-se em atividades comunitárias [OR = 0,12; IC95% 0,09–0,15], e 42% menos probabilidade de terem um bom funcionamento familiar [OR = 0,58; IC95% 0,37–0,88], comparado a idosos que apresentaram maiores níveis de capital social. **CONCLUSÃO:** Baixos níveis de capital social individual afetam diferentemente o padrão de utilização dos serviços de saúde na população investigada.

PALAVRAS-CHAVE: capital social; envelhecimento; determinantes sociais de saúde.

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INTRODUCTION

The aging process of the general population has changed the focus of public health, shifting from the morbidity-mortality profile and increasing the demand for chronic care. It has been 20 years since the first research on the importance of social capital as a necessary conscious investment for the improvement of public health policies targeting health disparities has drawn the attention of the Public Health agenda. In this sense, health disparities still challenge Public Health advocates, mainly in developing contexts like Latin America. Brazil was the first one in Latin America to recognize health as a human right under constitutional principles, providing access to universal and equitable coverage in 1988. Paradoxically, almost 30 years later, the country still faces some long-standing problems in the National Health Care System which have worsened due to the ongoing economic crisis negative impact on the quality, use, and access to health care.¹

The Brazilian Institute of Geography and Statistics (IBGE) estimates that, by 2030, the demographic societal structure will be consisted of approximately 41,541,763 older adult individuals.¹ Among the Brazilian older adults population, health inequalities (including access to healthcare facilities) are still a sad, undesirable reality affecting mostly vulnerable, low-income individuals and older adults in developing contexts. Taking oral health as an example, the last Brazilian National Health Survey, conducted in 2013, provided evidence that 41.5% (95%CI 38.9–43.2) of people aged 60 years old or older had lost all teeth and 68.6% (95%CI 67.0–70.2) used some type of dental prosthesis.^{2,3}

However, it is not known how the use and access to health services can be influenced by social capital. Therefore, this study sought to investigate the association between social capital and the use of health services among Brazilian non-institutionalized older adults living in an urban metropolitan area.

METHODS

Design and participants

This cross-sectional study is part of the “Aging, Gender and Quality of Life (AGEQOL) cohort” conducted in Sete Lagoas, Minas Gerais, Brazil, with a representative sample of 2,052 community-dwelling participants (1,226 women and 862 men), aged 60 years old or older. Briefly, sample size calculation was performed to compare genders by considering the prevalence of functional impairment in instrumental activities for males (86.6%) and females (72.9%). The estimated error was up to 5%, with a power of 80%

at 95% confidence intervals (95%CI) when considering a design effect of two. An estimated additional 20% of the sample size was added to compensate for refusals. The samples from each group (men and women) were stratified by age in relation to the population and were corrected based on the probability of dying. Of the total potential participants living in the selected dwellings, 25 (1.2%) were excluded because they could not answer the questionnaire or because of cognitive impairment/dementia or speaking difficulty. One hundred and twenty-five subjects (5.8%) refused to participate in the study, and 100 (4.8%) could not be located or had died. The final sample consisted of 2,052 individuals, of which 59.7% were female. The sampling process was conducted in two stages. The census tracts were first selected, and the households within each sector were then selected. In each household, all residents aged 60 years old or older were interviewed, regardless of marital status or kinship. Sampling and recruitment procedures were published elsewhere.⁴

All instruments were validated for Portuguese in Brazil, and the test/retest method was used to assess reliability and concordance. Coefficients greater than 0.80 were obtained ($p < 0.001$) and included a weighted Kappa (95%) value of 0.81 (0.71 to 0.91) and an adjusted Kappa value of 0.86. Data collection was conducted in the homes of the older adults between January and July 2012 and involved household interviews and examinations conducted by three examiners and three annotators. All those aged 60 years old or older in the selected households were informed of the study and were asked to sign an informed consent. The interviews lasted 40 to 60 minutes. At the end of the interviews, each subject in the city received guidance regarding health care and activities.⁴ This study was approved by the Committee of Ethics in Research of the Federal University of Minas Gerais (COEP-UFMG / CAAE-0413.0.203.000-1).

Exposure/social capital

The World Bank Integrated Questionnaire was used for the measurement of Social Capital (IQ-MSQ).⁵ This questionnaire originally has 27 questions grouped into 6 dimensions, as follows:

- “Groups and Networks” considers the nature, extent and diversity of the participation of a member of a household in various types of social organizations and informal networks;
- “Trust and Solidarity” dimension seeks to collect data on trust in neighbors, key service providers, and strangers, as well as to determine how these perceptions have changed over time;

- “Collective Action and Cooperation” investigates if people have worked on collective projects for the community;
- “Information and Communication” measures how people obtain relevant information about public issues. In addition, this category of questions explores the ways and means by which poor households receive information regarding market conditions and public services, and the extent of their access to communications infrastructure;
- “Social Cohesion and Inclusion” dimension identifies the nature and extension of individuals’ connections;
- “Empowerment and Political Action” explore household members’ sense of happiness, personal efficacy, and capacity to influence both local events and a broader political outcome. In this study, social capital data were collect according the full IQ-MSQ version and then categorized into “low” and “high”.⁶

Covariates

- Socioeconomic and demographic characteristics: age (< 75; ≥ 75 years old), gender (male; female), marital status (married; divorced; widowed; single), monthly per capita income categorized by the median value (≤ U\$ 282.72; U\$ 282.73–U\$ 372.72; > U\$ 372.72 – Brazilian Currency R\$ 1.00 Real = U\$ 2.20 American Dollars at the time of data collection), and educational background/years of education (none; 1–4; 5–7; ≥ 8 years);
- Family functionality was assessed and measured by the Portuguese version of APGAR, which analyzes Adaptation, Partnership, Growth, Affection and Resolve. For this study, the variable “family functionality” represented the final score of Familiar APGAR (high familiar dysfunction; moderate familiar dysfunction; good familiar dysfunction);
- Use of health services: Medical treatment “Are you under any medical treatment?” (yes; no); Frequency of medical treatment “Do you go to a medical office frequently?” (yes; no); Health services “Which one of the health services do you use more often?” (public; insurance; private); Dental appointment “Do you go to the dentist regularly?” (yes; no); Type of dental service “Which type of dental service do you use more often? (public; private; others); Dental appointment “Did you have a dental appointment in the past six months?” (yes; no); Major dental complaint “What was your main complaint at the last dental appointment?” (pain; prevention; clinical treatment; did not have an appointment).

Most independent variables were dichotomized to enhance the interpretability of the logistic regression coefficients.

Statistical analysis

Logistic regression analysis examined the relationships between social capital and the use of health services. Odds ratios (OR) and 95% confidence intervals (95%CI) for low social capital were calculated, and p-values less than 0.05 (two-tailed test) were considered statistically significant. In addition, homogeneity and multicollinearity tests showed that all assumptions of the model were satisfied.

RESULTS

Of the participants, 69.5% (n = 1,427) were aged 75 years old or older, whose majority (62.5%; n = 1,282) had a low formal educational background (less than 4 years of education), 52.8% (n = 1,084) were married, and 66.1% (n = 1,357) belonged to the low socioeconomic group (Table 1).

The prevalence of low social capital was 68.6%. Among the total participants that reported having at least one health problem (disease, injury) (82.2%; n = 1,687), 66% (n = 1,174) belonged to the low social capital group.

Table 2 shows the regression analysis for Models 1 and 2. Model 1 shows low social capital controlled by all independent variables except for demographics, community engagement and familiar functionality. Low Social Capital (SC) increased the chances of having a medical appointment within 6 months prior to the interview [OR = 1.75; 95%CI 1.25–2.45] and decreased the chances of participants having a private insurance plan [OR = 0.74; 95%CI 0.58–0.94], leading to the use of the National Health Care System [OR = 0.64; 95%CI 0.48–0.93] and also decreased chances of going to the dentist regularly [OR = 0.62; 95%CI 0.46–0.83].

Model 2 tested social capital according to all variables in Model 1, adding community engagement and familiar functionality. Results showed that two variables related to the use of health services remained associated to low social capital. Individuals who belonged to the low social capital group were 73% more likely to have a medical appointment in the 6 months previous to the interview [OR = 1.76; 95%CI 1.19–2.52] compared to the high social capital group. In the opposite direction, participants who belonged to the low social capital group were 29% less likely to have a dental appointment regularly [OR = 0.71; 95%IC 0.51–0.98], 88% less likely to be engaged in community projects [OR = 0.12; 95%IC 0.09–0.15], and 42% less likely to have a good familiar functionality [OR = 0.58; 95%IC 0.37–0.88] compared to the older adults who belonged to the high social capital group (Table 2).

DISCUSSION

Main findings of this study

Studies that have addressed social capital and the use of health services among older adults are scarce. Our results showed that individual Social Capital remained associated with two health services use indicators (medical and dental appointments) into opposite directions. Older adults with Low SC were 73% more likely to have a medical appointment in the 6 months before the interview and 29% less likely to have a dental appointment regularly. High chances of seeing a doctor could simply mean that this population had access to medical services. On the other hand, high chances of seeing a doctor could be a proxy of poor health status among low-income older adults due to the fact that this population was seeking treatment. Unfortunately, we did not ask participants about the reason and/or the main complaint of the medical appointments to understand if some of them were due to urgent or emergency care, routine, or due to a specific treatment. In our study, older adults who belonged to the low social capital group were 88% less likely to be engaged in community projects.

What is already known on this topic

From the perspective of poor health conditions associated to low levels of social capital, functional disability has shown a positive association to low levels of social capital, measured by household cohesion, among 2,271 Brazilian older adults aged 60 years old or older. Findings indicated that older adults who had a worse perception of their neighborhood had higher chances of having basic or complex disabilities.⁷

Evidence highlights the association between social capital and health care experience among low-income individuals. Low social support predicted barriers to health care, whereas psychosocial interconnectedness was associated with satisfaction with care. Community participation showed no association to the health care measures, and contrary to our results, none of the social capital measures predicted use of care services or perceived quality of communication by providers among low-income individuals.⁴ Community engagement and social cohesion are determinants in building and maintaining stocks of social capital within communities. Health conscious individuals participate in their communities, possibly because of positive health benefits of such participation (social interaction, targeting a common goal, social support, among other benefits).⁸

Exact studies that have addressed the use of health services, specifically among the age group of the participants of our study (60 years old or older), are scarce or focused on

specific components of social capital, such as social connections (impact of loneliness and use of healthcare among older adults in Japan)⁹ or trust between residents and the norms of reciprocity in the community (possible measure to prevent refraining from medical care).¹⁰

What this study adds

Our study is committed to the continued exploration of social capital as a relevant social determinant of health and health related outcomes, such as the use of health services among older adults. Low individual social capital affected the pattern that older adults used health service in the investigated population differently.

Limitations of this study

We have hypothesized that social capital may determine and/or antecede health and health related outcomes but we cannot be precise due to the cross-sectional aspect of our study. The cross-sectional design does not allow us to analyze results under causality. Aside from this, the main findings of our study may be due to reverse causation based on the nature of the cross-sectional study design.

According to our findings, older adults with low social capital were 42% less likely to have good familiar functionality compared to the older adults who had high social capital levels. Social support emerged from familiar relationships contributes to social capital maintenance, especially bonding social capital (social ties among people that are alike, sharing similar social identity). Our study did not investigate social capital according to its different classifications, but was limited to its overall approach.

Besides this fact, methodology and indicators of both social capital (e.g., “trust in doctor”, “trust in caregiver”, “isolation”) and the use of health services are dissimilar and diverse among the studies that focused on aging, social capital, and some aspect of use of health services, making a direct comparison difficult. Social capital can be measured by a single question, a combination of questions or by an index such as the World Bank IQ-MSA used in this study. Literature still has no consensual tool to assess social capital, probably due to the complexity of its concept. Since 2009, we have used and tested IQ-MSA under psychometric tests (inclusion of a final score to the index: low, medium, high social capital) and consider it a good instrument for the measurement of individual social capital due to its broadness that brings six crucial dimensions to cover social capital issues.⁹ The fact of using a validated tool for the measurement of social capital does not guarantee that all multidimensional aspects of social capital phenomena are covered. Aside from this, we measured

social capital only at an individual level, not addressing the contextual level of social capital. Ideally, indicators of community and neighborhood social capital should be analyzed together in multilevel approaches since contextual characteristics may attenuate or eliminate the individual social capital effects on health outcomes.¹¹

Improving social capital in our society demands not only time but also conscious investments; in terms of investments, this includes understanding both financial and operational aspects. The effects of social capital on health should guide public policy makers, bringing upon strategies to foster trust, social interactions, and community participation among

society members to reach better health related outcomes, including patient care, access, and use of health services.¹²

CONCLUSIONS

We concluded that low social capital affected the pattern that older adults used health service in the investigated population differently. Low individual social capital was inversely associated with medical appointment; in another direction, low social capital was positively associated with the lack of regular dental appointments, low community engagement, and low odds of good familiar functionality.

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