Social isolation in older adults who are frequent users of primary care services

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Abstract

Objective To describe older adults who are frequent users of primary care services and to explore associations between the number of primary care visits per year and multiple dimensions that define *social isolation*.

Design Mailed, cross-sectional survey.

Setting An urban academic primary care practice in Kingston, Ont.

Participants Forty patients aged 70 years and older who attended 12 or more appointments in the previous year with residents, physicians, nurses, nurse practitioners, or registered practical nurses.

Main outcome measures Social isolation (size of close social network, loneliness, satisfaction with social participation, frequency of social participation), past and future need for health services related to social issues, and health and functional variables.

Results The participants reported relatively low levels of loneliness, with a mean (SD) score of 4.1 (1.3) out of 9. Overall, 18.9% of participants reported having a small close social network, 45.9% of participants wanted to do more social activities, and 57.5% of participants were isolated according to at least 1 indicator. Some participants (23.1%) had received primary care services related to social issues, and most participants (54.5%) wanted these services in the future, including receiving information about other health services or community resources, or having discussions about loneliness, relationships, or social activities. Number of primary care visits was not associated with any of the 4 indicators of social isolation.

Conclusion Social isolation in older, frequent users of primary care services might be more common than previously thought, particularly the aspect of dissatisfaction with social participation. Expanded primary care services and referrals to other services might help to address this population's desires for services related to social issues. Future research could examine the social needs of older primary care attenders and the feasibility of providing related interventions in primary care settings.

EDITOR'S KEY POINTS

- This study assessed multiple dimensions of social isolation among older adults who frequently used primary care services. The results suggest that one aspect of social isolation (dissatisfaction with social participation) might be more common in this population than previously thought.
- Among these frequent service users, number of primary care visits does not appear to be associated with any of the 4 indicators of social isolation.
- Approximately half of the participants reported that they wanted primary care health professionals to provide information related to other health services or community resources or to discuss social issues. Research in this area could further examine patient needs related to social isolation and feasible interventions that could be provided.

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L'isolement social chez les personnes âgées qui fréquentent souvent les services de soins de première ligne

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Résumé

Objectif Déterminer le type de personnes âgées qui visitent fréquemment les services de soins de première ligne et vérifier s'il existe une association entre le nombre de ces visites et les nombreux aspects de l'isolement social.

Type d'étude Enquête transversale par voie postale.

Contexte Une clinique universitaire de soins primaires à Kingston, Ontario.

Participants Quarante patients de 70 ans et plus qui, au cours de l'année précédente, ont consulté à au moins 12 reprises des résidents, médecins, infirmières, infirmières praticiennes ou infirmières praticiennes diplômées.

Principaux paramètres à l'étude Isolement social (taille du réseau social rapproché, solitude, satisfaction à l'égard du rôle social, fréquence de la participation sociale), besoins passés et futurs pour des services de santé liés aux problèmes sociaux, et variables liées à la santé et au fonctionnement.

Résultats Les participants ont rapporté un faible niveau de solitude, leur score moyen (± ET) étant de 4,1 ± 1,3 sur 9. Dans l'ensemble, 18,9% des participants mentionnaient avoir un réseau social rapproché limité, 45,9% d'entre eux souhaitaient participer à plus d'activités sociales et 57,5% souffraient d'isolement d'après au moins un indicateur. Certains des participants (23,1%) avaient reçu des soins de première ligne en lien avec des problèmes sociaux et la plupart (54,5%) voulaient profiter de tels services dans le futur, par exemple, pour être mieux informés sur les autres services de santé ou sur les ressources communautaires existantes et pour avoir l'occasion de discuter de la solitude, des relations ou des activités sociales.

Conclusion L'isolement social chez les personnes âgées qui consultent souvent les services de soins primaires pourrait être plus fréquent qu'on ne le croit, en particulier parce qu'elles ne sont pas satisfaites de leur participation sociale. De meilleurs services de soins primaires et des consultations auprès d'autres services pourraient permettre de mieux répondre aux demandes de ces personnes qui réclament des services liés à des questions d'ordre social. Des études additionnelles pourraient préciser les besoins sociaux de cette population et examiner la possibilité de leur offrir des interventions appropriées dans le contexte des soins primaires.

POINTS DE REPÈRE DU RÉDACTEUR

- Cette étude a évalué les différents aspects de l'isolement social chez des personnes âgées qui utilisent fréquemment les services de soins primaires. Les résultats donnent à croire qu'un des aspects de l'isolement social (l'insatisfaction par rapport à la participation sociale) pourrait être plus fréquent dans cette population qu'on ne le croyait.
- Le nombre de visites pour des soins primaires que font les fréquents utilisateurs ne serait en rapport avec aucun des 4 indicateurs de l'isolement social.
- Environ la moitié des participants souhaitaient que des professionnels de la santé les renseignent sur d'autres services de santé ou sur les ressources communautaires et discutent avec eux de questions sociales. Différentes études dans ce domaine pourraient préciser la nature des besoins des patients qui souffrent d'isolement social et élaborer diverses interventions susceptibles de leur être offertes.

Cet article a fait l'objet d'une révision par des pairs.
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Every family practice has a subset of patients who attend frequently and have a variety of complex health problems. These are often older adults with poor health,[1] chronic disease,[2-6] or mental illness.[2,7,8] Their symptoms are more disruptive, their health is more unstable, and they typically have poorer access to services and resources.[9] They are more likely to be women, uneducated, or widowed.[5,10-14]

Many of the characteristics of frequent service users are shared by socially isolated adults, including poor physical and mental health,[15,16] disability, greater age, female sex, and widowhood.[17] They often experience transportation and housing issues, poverty,[18] and family dysfunction.[19] *Social isolation* is defined as "a state in which the individual lacks a sense of belonging socially, lacks engagement with others, has a minimal number of social contacts and they are deficient in fulfilling and quality relationships."[20] This definition includes 5 domains: number of social contacts, quality of network, sense of belonging, quality of relationships, and degree of social engagement. Social isolation affects approximately 18% to 35% of older adults.[17,21,22]

The presence of social isolation in frequent primary care attenders is unclear. For example, loneliness,[23] size of close social network,[21,24] and living alone plus having a small social network[17] were unrelated to frequent attendance. In contrast, family dysfunction,[19] fewer social contacts,[25] lack of social support,[25,26] and living alone[26] have been found to predict service use.

To date, different definitions and measures of social isolation have resulted in considerable differences in study findings; as such, a coherent picture is not emerging from the research. In addition, no study has examined multiple dimensions of social isolation in older adults who frequently use primary care services. This study seeks to clarify the relationship between primary care use and social isolation by addressing the following research objectives:

- describe older adults who are frequent users of primary care services; and
- explore associations between the number of primary care visits per year and multiple dimensions of social isolation.

METHODS

The study was a cross-sectional survey of patients registered at an urban academic primary care practice in Kingston, Ont. The sample included patients aged 70 years and older who attended 12 or more appointments in the previous year with residents, physicians, nurses, nurse practitioners, or registered practical nurses. Visits for regular laboratory investigations (eg, anticoagulation monitoring) were not included in the count. Attending physicians screened the patient list and excluded patients if they had cognitive problems that would limit their ability to provide informed consent (9 patients) or if they were receiving palliative care (6 patients). Eighty-nine eligible patients were identified.

Data collection

Questionnaire packages (including postage-paid return envelopes) were mailed to the 89 eligible patients. Nonresponders were sent a second questionnaire package 3 weeks later. Questionnaires addressed service use, social isolation, and health, function, and demographic variables related to social isolation.[27]

Social isolation was assessed according to a multidimensional definition of *social isolation* that includes number of social contacts, quality of social network, sense of belonging, quality of relationships, and degree of social engagement.

Number of social contacts and quality of social network were assessed using the abbreviated version of the Lubben Social Network Scale (LSNS-6),[28] a measure of the size of a person's close social network. The LSNS-6 asks about the number of family members and friends that a person has contact with, can talk to about private matters, or can call on for help. A score of less than 12 out of 30 suggests that a person is socially isolated. The scale has good internal consistency ($\alpha = .84$) and discriminant validity.[28]

Sense of belonging and quality of relationships were measured with a 3-item loneliness scale addressing how often a person feels left out, feels isolated, and lacks companionship.[29] The score is the sum of the 3 items and ranges from 3 to 9. The scale has good internal consistency ($\alpha = .72$) and convergent validity in older adults.[29] While no specific score that indicates loneliness has been reported in the literature, a score of 6 or more would indicate that a person answered "sometimes" to all 3 questions, or "often" to 1 or more questions, and might be a good indication of loneliness.

Two aspects of social engagement were measured: satisfaction with social participation and frequency of social participation. Satisfaction with social participation was measured with the following question from the second Longitudinal Study of Aging[30]: "Regarding your present social activities, do you feel that you are doing about enough, too much, or would you like to be doing more?" Frequency of social participation was measured for 10 social activities; the total score represents the number of activities per month.[31] The scale demonstrates high internal consistency among older adults.[31]

Primary care use (number of primary care visits in the previous year with residents, physicians, nurses, nurse practitioners, or registered practical nurses) was retrieved from the electronic medical record. Past need for care related to social issues, type of help received,

and future need for health care related to social issues were assessed using questions based on the Canadian Community Health Survey[32] and the Canadian Survey of Experiences with Primary Health Care.[33]

Demographic and health-related variables, including age, sex, income, education, marital status, living situation, depression, self-reported health status, chronic conditions, vision or hearing problems, and incontinence, were measured using questions from the Canadian Community Health Survey.[32] Depression was also measured using the Geriatric Depression Scale—Short Form.[34] Scores of 0 to 4 suggest no depression, 5 to 9 suggest mild depression, and 10 to 15 suggest moderate to severe depression.[35] This scale correlates highly with the original Geriatric Depression Scale (Pearson correlation coefficient = 0.84),[34] which has good test-retest reliability (Pearson correlation coefficient = 0.85) and correlates strongly (Pearson correlation coefficient = 0.82) with the Research Diagnostic Criteria.[36] Mobility was measured using 5 questions from the Participation Measure for Post-Acute Care[37]; the answers were summed to create a score indicating degree of limitation. This scale demonstrates good test-retest reliability (intraclass correlation coefficient = 0.85), good internal consistency ($\alpha = .85$) and good ability to distinguish between severity and diagnostic groups.[37]

The questionnaire was pilot-tested with 10 older adults; no changes were necessary. Ethics approval for this study was obtained from the Queen's University Health Sciences and Affiliated Teaching Hospitals Research Ethics Board.

Data analysis

Descriptive statistics were used to address the first objective. Regression analysis was used to address the second objective. To identify potential confounders in the relationship between primary care use and social isolation variables, correlations between number of primary care visits and demographic, health, and function variables were calculated using Pearson correlation coefficients, Spearman rank coefficients, or *t* statistics. Variables with $P < .20$ were selected as covariates for the regression analyses.

RESULTS

Eighty-nine patients were eligible to participate in the study and were sent questionnaires. Forty participants returned completed questionnaires, representing a 44.9% response rate. There were no significant differences in age, sex, or number of visits between responders and nonresponders. Overall, 45.0% of the study participants were men. Study participants had a mean age of 81.3 years, and a median household income of $50 000 to $59 000. Overall, 71.8% of the participants had education beyond high school (**Table 1**).[37-41]

Social isolation

Less than one-fifth of the sample of frequent attenders in primary care were socially isolated according to size of close social network, which represented number of social contacts and quality of social network from the definition of *social isolation*. Overall, 18.9% scored less

Table 1. Characteristics: *A) Participants; B) Canadians aged > 65 y.*

A) CHARACTERISTICS OF PARTICIPANTS*	VALUE
Mean (SD) age, y	81.3 (5.9)
Sex, n (%)	
• Men	18 (45.0)
• Women	22 (55.0)
Highest education level, n (%)	
• Elementary or high school	11 (28.2)
• Trade school, college, or university	18 (46.2)
• Master's or doctoral degree	10 (25.6)
Marital status, n (%)	
• Married or with a partner	19 (47.5)
• Widowed, divorced, or never married	21 (52.5)
Living alone, n (%)	16 (44.4)
Mean (SD) health score	2.55 (0.75)
• Poor or fair, n (%)	20 (50.0)
• Good, n (%)	16 (40.0)
• Very good or excellent, n (%)	4 (10.0)
Mean (SD) GDS-SF score	2.6 (2.8)
Mean (SD) mobility score	19.8 (5.7)
Mean (SD; range) no. of chronic conditions out of 14	4.5 (2.2; 1-11)
Most prevalent chronic conditions, n (%)	
• High blood pressure	24 (60.0)
• Cataracts or glaucoma	23 (57.5)
• Chronic pain	21 (52.5)
• Arthritis	21 (52.5)
• Depression	14 (35.0)
• Incontinence	9 (22.5)
Mean (SD) no. of primary care visits in 1 y	17.4 (7.9)
B) CHARACTERISTICS OF CANADIANS AGED > 65 Y†‡	**PERCENTAGE**
Sex	
• Men	45.7
• Women	54.3[38]
Highest education level	
• Elementary or high school	58.3
• Trade school, college, or university	37.8
• Master's or doctoral degree	3.9[39]
Marital status	
• Married or with a partner	61.3
• Widowed, divorced, or never married	38.7[38]
Living alone	26.7[37]
Health score	
• Poor or fair	22.2
• Good	33.6
• Very good or excellent	44.2[40]
Most prevalent chronic conditions	
• High blood pressure	47.6[40]
• Arthritis	40.3[40]

GDS-SF—Geriatric Depression Scale—Short Form.
*Median annual income was $50 000 to $59 000.
†Median annual income was $20 429.[41]
‡Data for the following characteristics of those Canadians aged > 65 y were not available: mean (SD) age; mean (SD) health score; mean (SD) GDS-SF score; mean (SD) mobility score; mean (SD; range) no. of chronic conditions out of 14; percentage of those with cataracts or glaucoma, chronic pain, depression, and incontinence; and mean (SD) no. of primary care visits in 1 y.

than 12 on the LSNS-6 and the mean (SD) score was 15.4 (5.0). Participants reported relatively low levels of loneliness, which represented sense of belonging and quality of relationships from the definition of *social isolation*, with a mean (SD) score of 4.1 (1.3) out of 9. Eight participants scored 6 or higher. Almost half (45.9%) reported they would like to do more social activities, and the mean (SD) monthly frequency of social activities was 34.3 (17.2) (**Tables 2** and **3**).[21,28,29,31,42] Of the 17 people who reported they would like to do more social activities, 7 scored moderately high (≥6) on the loneliness scale. Looking across the first 3 indicators of social isolation, 23 participants (57.5%) reported 1 or more indicators of social isolation, ie, an LSNS-6 score of less than 12, a loneliness score of 6 or higher, or wanting to do more social activities.

Table 2. Indicators of social isolation—current study

INDICATOR	VALUE	95% CI
Social network (N = 37)		
• Score < 12, n (%)	7 (18.9)	6.3 to 31.5
• Mean (SD) overall score	15.4 (5.0)	13.8 to 17.0
Mean (SD; range) loneliness (N = 39)	4.1 (1.3; 3 to 7)	3.7 to 4.5
Satisfaction with level of social participation (N = 37), n (%)		
• Would like to do more	17 (45.9)	29.8 to 62.0
• Too much	0 (0)	NA
• About enough	20 (54.1)	38.0 to 70.2
Mean (SD) monthly frequency of social participation (N = 32)	34.3 (17.2)	28.3 to 40.3
≥ 1 social isolation indicators* (N = 40), n (%)	23 (57.5)	42.2 to 72.8

NA—not applicable.
*Indicators include social network score of < 12, loneliness score of ≥ 6, and reporting that they would like to do more social activities.

Table 3. Indicators of social isolation—results from previous studies of older adults

INDICATOR	VALUE
Social network	
• Score < 12, %	20.5[21]
• Mean (SD) score	16.1 to 17.9 (5.3 to 5.5)[28]
Mean (SD) loneliness	3.9 (1.3)[29]
Satisfaction with level of social participation,[42] %	
• Would like to do more	20.8
• Too much	2.3
• About enough	68.8
Mean (SD) monthly frequency of social participation	24.4 (13.7)[31]

Health services related to social issues

One-quarter of participants (25.6%) reported that during the past 12 months they needed information about or assistance with social activities, community resources, connecting with others, or relationships, and 90% of these participants sought help from their primary care providers for these issues. The most common types of help participants received were getting information about other health services and community resources, and having discussions about social activities, loneliness, or relationships. Slightly more than half of participants (54.5%) stated they would like this type of care in the future, particularly receiving information about other health services or community

Table 4. Primary care services related to social issues

SURVEY QUESTIONS	VALUES
Required information about or assistance with social activities, community resources, connecting with others, or relationships in past 12 months, n/N (%); 95% CI	10/39 (25.6); 12.1 to 39.1
Sought help from a health professional regarding social issues, n/N (%); 95% CI	9/39 (23.1); 10.0 to 36.2
Type of help received, n	
• Discussed social activities	1
• Discussed feelings of loneliness	2
• Discussed relationships	2
• Received information about social activities in the community	0
• Received information about other health services	7
• Received information about community resources	3
• Encouraged to engage in social or community activities	1
• Did not receive help	1
Future help desired from primary care related to social activities, community resources, connecting with others, or relationships, n/N (%); 95% CI	18/33 (54.5); 39.1 to 69.9
Type of help desired, n	
• Discuss social activities	1
• Discuss feelings of loneliness	3
• Discuss relationships	5
• Provide information about social activities in the community	3
• Provide information about other health services	14
• Provide information about other community resources	7
• Encouragement to engage in social or community activities	2

resources, or having discussions about relationships or loneliness (**Table 4**).

Associations between variables

In bivariate analyses identifying covariates to include in the regression analyses, better health was identified as potentially related to fewer primary care visits (P=.16; **Table 5**). In regression analyses controlling for health (**Table 6**), none of the social isolation variables predicted primary care use.

DISCUSSION

In this study we examined the characteristics of older, frequent users of primary care services. Presence of social isolation varied depending on the indicator that was used. The proportion of participants with small close social networks (18.9%) and loneliness (mean [SD] score 4.1 [1.3]) both seemed relatively low, whereas the proportion of participants who wanted to do more social activities was higher (45.9%). An even higher proportion of participants were isolated according to at least 1 indicator (57.5%). These findings suggest that there are distinct dimensions to the experience of social isolation, similar to those of Cornwell and Waite[43] who found social disconnectedness was different from perceived isolation. Some previous studies of older adults have reported similar levels of social isolation to those in the current study, including low proportions with small social networks (20.5%)[21] and low loneliness scores (mean [SD] score 3.9 [1.3]).[29] In contrast, Hong and colleagues[42] reported a much smaller proportion (20.8%) of older adults who would like to do more social activities than in the current study. This lower proportion is surprising, given that the participants in Hong and colleagues' study reported lower income (median of $17 000 to $17 999 [US]) than participants in the current study, which could have posed a barrier to many social activities. The participants in Hong and colleagues' study reported better self-rated health (mean score 3.3) than participants in the current study did, which might have led to greater ability to be active and thus explained the lower proportion of participants who wanted to do more social activities.

The high proportion of participants who would like to do more social activities but who did not express loneliness might suggest that the participants felt stigma[44]

Table 5. Bivariate relationships between the no. of primary care visits and the isolation, demographic, and health variables

VARIABLE	SPEARMAN ρ RANK CORRELATION	PEARSON CORRELATION	*t* TEST MEAN DIFFERENCE*	P VALUE	N
Social isolation					
• Participation frequency	NA	0.21	NA	.25	32
• Loneliness	NA	-0.08	NA	.65	39
• Satisfaction with social participation	NA	NA	1.0	.70	37
• Social network size	NA	-0.01	NA	.97	37
Demographic					
• Age	NA	0.01	NA	.93	40
• Sex	NA	NA	-1.1	.66	40
• Income	NA	NA	2.2	.44	35
• Education	NA	NA	2.0	.48	39
• Marital status	NA	NA	-1.0	.71	40
• No. of people in household	NA	NA	1.2	.66	36
Health					
• Health status	-0.23	NA	NA	.16†	40
• Mobility	NA	-0.13	NA	.46	36
• No. of chronic conditions out of 14	NA	0.06	NA	.70	40
• Geriatric Depression Scale—Short Form score	NA	-0.02	NA	.93	20

NA—not applicable.

*Mean difference reflects mean no. of visits for 1 group of participants minus the mean no. of visits for another group of participants, ie, "wants more social activities" minus "has enough social activities"; "men" minus "women"; "income of ≥ $40 000 per y" minus "income of < $40 000 per y"; "has postsecondary education" minus "has up to high school education"; "has spouse or partner" minus "does not have spouse or partner"; and "lives alone" minus "lives with others."

†Significant at P<.20.

Table 6. Relationships between social isolation variables and no. of visits: *Linear regression adjusted for health status, dichotomized as 0 = poor or fair and 1 = good, very good, or excellent.*

MODEL	VARIABLE	B	SE	β	*P* VALUE
1	Social network size	-0.03	0.26	-.02	.97
2	Loneliness	-0.92	0.97	-.16	.35
3	Satisfaction with social participation	-0.75	2.81	-.05	.79
4	Frequency of social participation	0.11	0.08	.22	.20

B—unstandardized coefficient, β—standardized coefficient, SE—standard error.

related to phrases such as "feeling isolated" or "feeling left out" in the loneliness scale, and thus under-reported this aspect of social isolation. The perception that the priority within primary care is on physical and psychological issues rather than on social functioning,[45] along with the reluctance of older adults to seek help for loneliness issues,[46] highlight the need to proactively address this aspect of social isolation in clinical practice.

Some (23.1%) participants had received help from primary care services related to social issues, such as receiving information about other health services and community resources, as well as having discussions about loneliness, relationships, or social activities. However, most participants (54.5%) reported wanting health, community, and social services, suggesting that barriers might exist that prevent patients from receiving the services they desire. Frequent attenders might experience difficulty accessing information and navigating resources, issues that socially isolated older adults also experience.[47] There might be an opportunity for new primary care roles, such as community navigators,[48] to assist frequent attenders in accessing resources.

The study results indicate that no relationships exist between various indicators of social isolation and number of primary care visits in this group of older adults who attended the practice 12 or more times per year, echoing several previous studies.[17,21,23,24] Noting that frequency of attendance might not be a useful way to identify social isolation in older adults, brief discussion or screening about social contacts, social activities, and loneliness might provide more relevant information. More in-depth research is needed to explore the needs of older patients related to social isolation, the capacity of primary care to address this issue, and the barriers related to this type of care. Qualitative research or large surveys could address these areas. Intervention studies focused on accessing community and health services, social participation, and the need to discuss relationships and loneliness could provide useful information about how to meet the needs of older patients, regardless of attendance frequency.

Limitations

The study is limited by its small sample; more detailed analyses could not be completed. The sample included patients with 12 or more primary care visits in the previous year, and this limited variability might have led to underestimation of the strength of bivariate and multivariate relationships. In addition, the sample reported higher income and education compared with Canadians aged 65 years or older (**Table 1**).[37-41] However, these characteristics are comparable in other studies of older, frequent attenders; in one study, 44.1% of participants had an annual income of $50 000 or more and 47.0% had greater than secondary education.[21]

Conclusion

This study assessed the extent of social isolation, according to multiple dimensions that define *social isolation* among older adults who frequently used primary care services. The results suggest that the 4 indicators measure different aspects of social isolation, and that one aspect of social isolation in this population might be more common than previously thought: dissatisfaction with social participation. Among these frequent service users, number of primary care visits does not appear to be associated with any of the 4 indicators of social isolation: close social network size, loneliness, satisfaction with social participation, and frequency of social participation. Social isolation continues to be an issue for substantial proportions of older adults. Approximately half of older, frequent attenders would like primary care services to provide information about other health services and community resources, or to discuss social issues. Research in this area could further examine patient needs related to social isolation and feasible interventions that could be provided.

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Contributors

Dr Hand contributed to study conception, design, and interpretation of data; completed data analysis; and drafted the manuscript. **Dr McColl** contributed to study conception and design, and interpretation of data. **Dr Birtwhistle** contributed to study conception and design. **Ms Kotecha** contributed to study design and coordinated acquisition of data. **Ms Batchelor** and **Dr Hall Barber** contributed to study conception. All authors contributed to revising the manuscript and provided final approval.

Competing interests
None declared

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