

If you don't ask (about memory), they probably won't tell

If elders do self-report memory problems, their quality of life is probably suffering

Practice recommendations

- Ask elderly patients whether they're having any memory problems, since they are unlikely to volunteer this information on their own. Doing so may help to identify potentially frail patients (C).

Strength of recommendation (SOR)

- A Good-quality patient-oriented evidence
- B Inconsistent or limited-quality patient-oriented evidence
- C Consensus, usual practice, opinion, disease-oriented evidence, case series

Abstract

Objectives To investigate the prevalence and potential clinical implications of self-reported memory impairment among elderly patients in general practice.

Methods This was a cross-sectional study in 17 general practices serving 40,865 patients, of whom 2934 were 65 years of age or older. Outcome measures were self-reported memory impairment, health-related quality of life, and cognition.

Results In total, 177 (23.4%) out of 758 elderly patients consulting their physician reported impaired memory. Only 33 (18.6%) had consulted their physician for memory problems. The only independent predictor for impaired memory was a lower quality-of-life score: scores on the Euro-QoL-5D-VAS of 0 to 49 and 50–74 points both correlated with memory complaints (odds ratios=4.8 and 4.1, respectively).

Conclusions Memory impairment is a common complaint among elderly patients in general practice, but many patients will not present with these symptoms. It may be useful for general practitioners (GPs) to ask about memory problems in order to identify potentially frail patients. Prospective trials are warranted.

In studies of older patients, the prevalence of subjective memory complaints in community-based populations varies from 11% to 56%,^{1,2} depending on sample selection and on how the complaints are assessed.¹ Subjective memory complaints may be associated with psychiatric symptoms—in particular, depression^{3,4} and anxiety—as well as older age, lower education, and female gender.¹ In these studies, some association has been found between memory complaints and cognitive impairment on testing, even after adjustment for depressive symptoms.^{4,5}

Researchers have suggested that subjective memory complaints may be an early indicator for dementia,¹ and could therefore be considered as a marker for identification of dementia in general practice. However, these complaints may be the result of a wide range of conditions; longitudinal studies assessing the value of memory complaints in predicting dementia or cognitive decline have shown varying results.^{6–8}

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The prevalence of subjective memory complaints among elderly patients consulting their GP is not known, and the clinical implication of these complaints is not well established. We conducted this study in order to investigate the prevalence and potential clinical implications of subjective memory complaints among elderly patients in general practice.

■ Methods

Recruiting the subjects

Seventeen general medical practices with 24 GPs located in the central district of Copenhagen, Denmark, participated in this study. These practices served a total of 40,865 patients, 2934 of whom were 65 years of age or older.

We asked all patients 65 years of age or older who consulted their GP in October and November 2002 to participate in the study, regardless of the reason for the encounter. We excluded patients who were not able to read Danish or not able to sign an informed consent form. We also excluded those with severe acute or terminal illness or a diagnosis of dementia.

Assessment of the patients

Participant questionnaire. Before the visit with their GP, we asked all qualifying patients to complete a questionnaire with items about self-reported health and memory status, as well as demographic questions. The item regarding memory status was phrased: "How would you evaluate your memory?" The categories were "excellent," "good," "less good," "poor," and "miserable." Patients rating their memory as "less good," "poor," or "miserable" were classified as patients with subjective memory complaints, whereas patients rating their memory as "excellent" or "good" were defined as patients without subjective memory complaints.

Quality-of-life assessment. During their visit, the patients also completed the Danish Validated Version of EuroQoL-5D, which includes a visual analogue scale (VAS). EuroQoL-5D is a standardized in-

strument for use as a measure of health outcomes.⁹ Patients are asked to assess their health—in regards to mobility, self-care, everyday activities, pain, and anxiety—by checking 1 of 3 boxes. They are then asked to assess their general state of health on a VAS ranging from 0 to 100.

GP questionnaire. A questionnaire dealing with the GP's clinical impression of dementia was developed together with 2 of the GPs and tested in a pilot survey. This questionnaire was completed by the GP for each patient before they administered the Mini Mental State Examination (MMSE), with no information from the completed participant questionnaire. The GPs could complete the questionnaire before or during the office visit.

MMSE. The MMSE, recommended in GP guidelines as a cognitive screening test, was given to the patients after the GPs completed their own questionnaires.¹⁰ The test is a 30-point questionnaire that assesses cognition; it includes simple questions and problems in a number of areas: time and place of the test, repeating lists of words, math problems, language use and comprehension, and copying a drawing. An MMSE score <24 has been widely used as an indication of the presence of cognitive impairment in population-based studies.

Registry data and ethics

The Danish National Health Register provided the information regarding the physicians and their practices.¹¹ The municipality of Copenhagen provided information regarding the nursing home status of patients.

The Scientific Ethical Committee for Copenhagen and Frederiksberg Municipalities evaluated the project. The Danish Data Protection Agency and the Danish College of General Practitioners Study Committee approved the project.

How we analyzed the data

All statistical analyses were performed using SAS, version 9.1 (SAS Institute Inc, Cary, NC). To avoid a possible cluster

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The only predictor for subjective memory complaints was a lower quality-of-life score on the EuroQoL-5D-VAS

effect between the 17 practices, probabilities and corresponding 95% confidence intervals were estimated using a Generalized Estimating Equation (GEE) regression model. We used this method so that we could compare participants to nonparticipants, as well as to patients with subjective memory complaints and those without them. A backward elimination and a significance level of 5% to stay in model were used. Pearson's chi-square was used to evaluate Goodness of Fit for the reduced model.

In the hypothesis-generating analysis, the following variables were included: age, gender, living with partner, receiving home care, school education, MMSE score, and EuroQoL-5D-VAS score. The EuroQoL-5D results were categorized into 3 groups: severe impairment (0 to 49 points), mild to moderate impairment (50 to 74), and normal (75 to 100). The MMSE was adjusted for age and education.

■ Results

Only quality-of-life scores predicted memory complaints

A total of 1180 patients 65 years of age and older consulted their GPs in the study period. From this group, we excluded 133 patients. Of the eligible 1047 patients, 775 (74.0%) patients agreed to participate in the study. These patients had a mean age of 74.8 years (standard deviation [SD], 7.1), and an average relationship with their GP of 11 years. Those who refused to participate in the study were more likely to be female and were less likely to complain about memory problems, according to the GP surveys.

The average MMSE score for these 775 patients was 28.2 (SD, 2.0), and the average EuroQoL-5D-VAS score was 70.9 (SD, 18.9). A total of 758 patients responded to the patient questionnaire regarding memory. Of these 758 patients, 177 (23.4%) reported memory complaints (that is, indicated their memory was "less good," "poor," or "miserable"). Only 33 (18.6%) of these 177 patients

had previously consulted their GP regarding memory problems. The **TABLE** shows the characteristics of participants based on self-reported memory complaints.

In a hypothesis-generating analysis, we found that the only predictor for subjective memory complaints, as compared with those patients with good memory (stated as "excellent" or "good"), was an impairment of EuroQoL-5D-VAS: for a score of 0–49 points, the odds ratio (OR) for subjective memory complaints was 4.8; for a score of 50–74 points, the OR was 4.1. The patients' gender, education, MMSE score, whether they lived alone or with a partner, and whether they were receiving home care did not seem to be independent predictors.

■ Discussion

Other predictors of memory problems remain to be discovered

Depression,¹² other psychiatric conditions,^{3,4} as well as certain medications may be associated with self-reported memory problems in elderly patients. These associations may explain why we found a correlation between reports of a lower quality of life and subjective memory complaints. Advanced age, female gender, and a low level of education have also been associated with a higher prevalence of memory complaints in other studies, but our study did not confirm any of these findings.

Limitations of this study

This study had several limitations. It had some selection bias, which may decrease its generalizability. In addition, this study was not designed to clarify whether memory complaints could be an early indicator for onset of dementia, or whether these complaints are associated with mild cognitive impairment or existing dementia.

The collection of data was monitored on a weekly basis by site visits from a study nurse. However, we did not monitor the actual exams.

An MMSE score of <24 has been widely used as an indication of the presence of

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Of 177 patients who had memory complaints, only 33 had consulted their GP about it

TABLE

Quality-of-life score was the only predictor of self-reported memory problems

	SELF-RATED MEMORY (N=758)*	
	EXCELLENT OR GOOD (N=581)	LESS GOOD, POOR, OR MISERABLE (N=177)
Age, years (95% CI)	74.5 (73.9–75.1)	75.7 (74.6–76.8)
Female, n (%)	348/581 (59.9%)	116/177 (65.5%)
8 years or less schooling, n (%)	203/558 (36.4%)	60/168 (35.7%)
Living without partner, n (%)	340/580 (58.6%)	115/175 (65.7%)
Receiving home care, n (%)	106/579 (18.3%)	49/175 (28.0%)
Cognition		
Participant had previously complained about memory (per GP survey), n (%)	16/567 (2.8%)	33/175 (18.9%)
MMSE score (95% CI)	28.3 (28.2–28.5)	27.8 (27.3–28.0)
Quality of life: EuroQoL-5D-VAS score (95% CI)	73.8 (72.3–75.4)	61.4 (58.5–64.2)

*We did not obtain self-rated memory status from 17 participants. Of the 758 subjects who took the survey, not everyone answered every question.

cognitive impairment in population-based studies.¹² However, research has shown that MMSE scores are affected by age, education, and cultural background; this may explain why the MMSE by itself is not sufficient to diagnose dementia.¹²

Future studies should focus on clinically relevant outcomes

Further prospective studies in GP settings are needed to examine the potential implications of subjective memory complaints. We suggest that in future studies, clinically relevant outcomes—such as death, nursing home placement, medication usage, or health care usage—be used as possible correlating factors. ■

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Disclosure

The authors reported no potential conflict of interest relevant to this article.

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In future studies, clinically relevant outcomes—such as death, medication, or health care use—should be used as correlating factors for memory problems