

Does interview setting influence disclosure of violence? A study in elderly[†]

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Abstract

Background: violence is a very sensitive research topic and interview's setting might influence the participation rate and response accuracy. We aimed to evaluate such effect when assessing the prevalence of different types of violence in a sample of urban elderly by comparing those interviewed at home with those assessed at the research office.

Methods: study subjects were members of a cohort of urban dwellers previously assembled using random digit dialling. The initial 450 individuals aged 60–84 years old were invited to participate in the present study, after being randomly allocated into two groups: 150 for being scheduled to research office interview and 300 to home interview. Both groups allocated were similar regarding gender, age, education, marital status and behavioural characteristics such as smoking and drinking alcohol. Information was obtained by face-to-face standardised interviews.

Results: we obtained a participation rate of 67.0% in the group allocated to home interview and 70.7% in the other group ($P = 0.431$). No statistically significant differences were found when prevalence of violence during the previous year was compared according to the interview setting (physical 2.5 versus 1.0%, psychological 19.7 versus 19.0%, financial mistreatment 8.6 versus 9.5%, sexual 1.0 versus 1.0% and neglect 5.1 versus 3.8% in home and research office, respectively).

Conclusion: our results indicate that the interview setting has no influence both in participation rate and in the prevalence estimates of different types of violence in the elderly.

Keywords: elderly, methodology, violence

Introduction

Elder abuse is perceived as a growing epidemic and a major public health concern [1]. However, the individual and the community dimensions of elder abuse are difficult to fully understand and measure. Varying definitions of abuse, multiple instruments to tackle conditions, sampling bias and cultural aspects such as social desirability, all might affect validity in elder abuse research.

In the epidemiological research, numerous factors have been shown to influence participation rates and response quality [2]. The methods for contacting eligible participants, the modes of questionnaire administration and the interviewer characteristics are likely to influence the research

results [3–5]. Thus, when planning the collection of information on elder abuse, researchers face critical design decisions that include options on the sampling frame, the structure and the mode of questionnaire administration and also the setting where information collection takes place.

Usually researchers tend to conduct their investigations at subject's home with the argument that this setting puts the respondents at ease, in familiar surroundings, and may also increase compliance since subjects do not have to travel [6]. However, home interviewing involves greater costs, the possibility of interruptions by telephones or family members, and may put the interviewer at risk. These concerns are especially relevant when addressing violence but few methodological information is available reporting the effect of place of interview on participation and response rates [7], and none was obtained based on an experimental approach.

The European project ABUEL (<http://www.abuel.org>) was a multinational survey aiming to provide data on the

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extent and nature of abuse to older persons (60–85 years old) in seven European Union Member States (Germany, Greece, Italy, Lithuania, Portugal, Spain and Sweden). It was the first study that aimed to use the same methodology to evaluate violence providing a set of standard measurements that allow a comparison of the violence phenomenon in different countries [8].

In the context of the study planning, there was the opportunity to address the potential influence of the research setting in disclosing violence by elderly people. Therefore, we decided to design an experimental study to evaluate the effect of the interview setting (subject's home or the researcher's office) on participation rate and on the prevalence estimates for different types of violence, using a sample of Portuguese urban elderly.

Methods

The present research is based on the Portuguese sample assessed for the European Project ABUEL.

Portuguese subjects were recruited among the members of a cohort (EPIPorto) of urban dwellers previously assembled using random digit dialling. Households were the sampling frame, followed by simple random sampling to select one eligible person among permanent residents in each household [9]. By 2009, 845 subjects met the age criteria for the ABUEL study but the present investigation was limited to 450, based on the time sequence of inclusion into the cohort. They were randomly allocated into two groups: 150 individuals were scheduled for visiting the research office (Department of Clinical Epidemiology,

Predictive Medicine and Public Health, located in the University Hospital São João, a reference hospital for the north of Portugal) and 300 to home interview (Table 1).

A systematic review showed that in general population the expected prevalence of violence (all types) against elderly people ranged from 3.2 to 27.5% [10]. Taking into account the country's age structure, sample size was calculated in order to estimate a prevalence of 20%, at 95% confidence level with 80% power, using a ratio of two participants interviewed at home to one interviewed at the research office (274 individuals versus 137 individuals). Thus, our final sample comprised 300 individuals allocated at home and 150 individuals allocated at the research office.

A study protocol was defined comprising detailed information on interview procedures. A letter of introduction giving notice of the study was sent by mail to all selected individuals. Following the letter, individuals were contacted by telephone and those who were willing to take part were scheduled to an interview at home or in the research office, as previously allocated. Up to four attempts were made to contact the selected participants by telephone. When refusing to participate, no further contact attempts were made. The timing of calls was varied to maximise the chances of contact: subjects were called at different times of the day, with subsequent calls in the evening and then at the weekend. If no contact was established by telephone, participants were deemed as a non-contacted. Subjects that were randomly allocated to answer the questionnaire at home but only accepted to participate if interviewed at the office, or vice versa, were considered refusals for our study purpose.

Table 1. Baseline subjects' characteristics in the eligible sample and a comparison between participants and non-participants according to the randomly allocated place of interview

	Home				Research office				P-value ^b
	Total (n = 300), n (%)	Non-participants, n (%)	Participants, n (%)	P-value	Total (n = 150), n (%)	Non-participants, n (%)	Participants, n (%)	P-value	
Gender									
Female	195 (65.0)	73 (71.6)	122 (61.6)	0.113	95 (63.3)	33 (73.3)	62 (59.0)	0.139	0.755
Male	105 (35.0)	29 (28.4)	76 (38.4)		55 (36.7)	12 (26.7)	43 (41.0)		
Age (years)									
60–69	147 (49.0)	49 (48.0)	98 (49.5)	0.907	68 (45.3)	16 (35.6)	52 (49.5)	0.163	0.996
70–84	153 (51.0)	53 (52.0)	100 (50.5)		82 (54.7)	29 (64.4)	53 (50.5)		
Education (years)									
0–4	138 (46.0)	52 (51.0)	86 (43.4)	0.263	77 (51.3)	33 (73.3)	44 (41.9)	0.001	0.893
>4	162 (54.0)	50 (49.0)	112 (56.6)		73 (48.7)	12 (26.7)	61 (58.1)		
Marital status									
Married/cohabitant	189 (63.0)	61 (59.8)	128 (64.6)	0.486	101 (67.3)	31 (68.9)	70 (66.7)	0.939	0.822
Other ^a	111 (37.0)	41 (40.2)	70 (35.4)		49 (32.7)	14 (31.1)	35 (33.3)		
Ever smoker									
No	194 (66.0)	66 (68.8)	128 (64.6)	0.514	95 (65.5)	28 (70.0)	67 (63.8)	0.560	0.900
Yes	100 (34.0)	30 (31.2)	70 (35.4)		50 (34.5)	12 (30.0)	38 (36.2)		
Alcohol drinking									
No	37 (12.6)	14 (14.6)	23 (11.6)	0.460	19 (13.1)	4 (10.0)	15 (14.3)	0.591	0.585
Yes	257 (87.4)	82 (85.4)	175 (88.4)		126 (86.9)	36 (90.0)	90 (85.7)		

^aOther, single/widowed/separated/divorced.

^bChi-square test comparing participants from both groups.

On the appointment day, interviewers recalled participants the study objectives and clarified any doubts. Those who accepted to answer at home received the interviewer at their home at the scheduled day, and those who accepted to answer at the research office came to our office to participate in the study. Following that, the participants and the interviewer signed a consent form. The local ethics committee (Hospital São João) approved the study protocol.

Face-to-face data were collected by trained interviewers using a structured questionnaire designed as part of the European project. Interviews were conducted by six trained interviewers assigned to each participant on a consecutive basis. Each interview took about 1 h and 30 min, either at participants home or at the research office.

At the beginning of the interview, a rapid evaluation of cognitive function was performed using the Mini-Mental State Examination test (MMSE) [11], and subjects were excluded from the analysis when scoring <24 points [12].

Elder abuse was considered when there was self-reported evidence of physical, psychological, financial, sexual violence and neglect against individuals over 60 years.

Psychological violence was assessed by 11 items; physical violence was assessed by 17 items; financial violence by nine items and sexual violence by eight items. Neglect was measured by 13 items in which some daily activities were described and participants were asked if they needed help to perform them. For each type of violence, participants were asked to state the frequency, considering the following categories: never, 1 time; 2 times; 3–5 times; 6–10 times; 11–20 times; more than 20 times (The questionnaire

is available in http://www.abuel.org/docs/pub02_questionnaire.pfd).

In order to define a dichotomic variable of each type of violence, we have collapsed items of each one. To assess lifetime violence, we considered ‘yes’ if they answered violence in the last year and the years before and ‘no’ if they reported that it had never happened. To assess last year violence, we considered ‘yes’ if they reported violence in the past year and ‘no’ if they reported violence in the years before or if it had never happened. To create a variable that characterised any violence episode in the previous year or lifetime, we joined all variables of violence.

The Chi-square test was used to compare prevalence estimates of different types of violence between the two groups. To perform statistical analysis SPSS® version 17 was used.

Results

As shown in Table 1, baseline social-demographical and behavioural characteristics were similar according to initial random allocation to the home or research office interview groups (Table 1).

In Figure 1, the flow diagram describes the participation and the characteristics of each group. The participation rate was 67.0% in the group allocated to home interview and 70.7% in the group invited to answer the questionnaire at our research office ($P = 0.431$). Considering separately each allocation group, there were no differences regarding

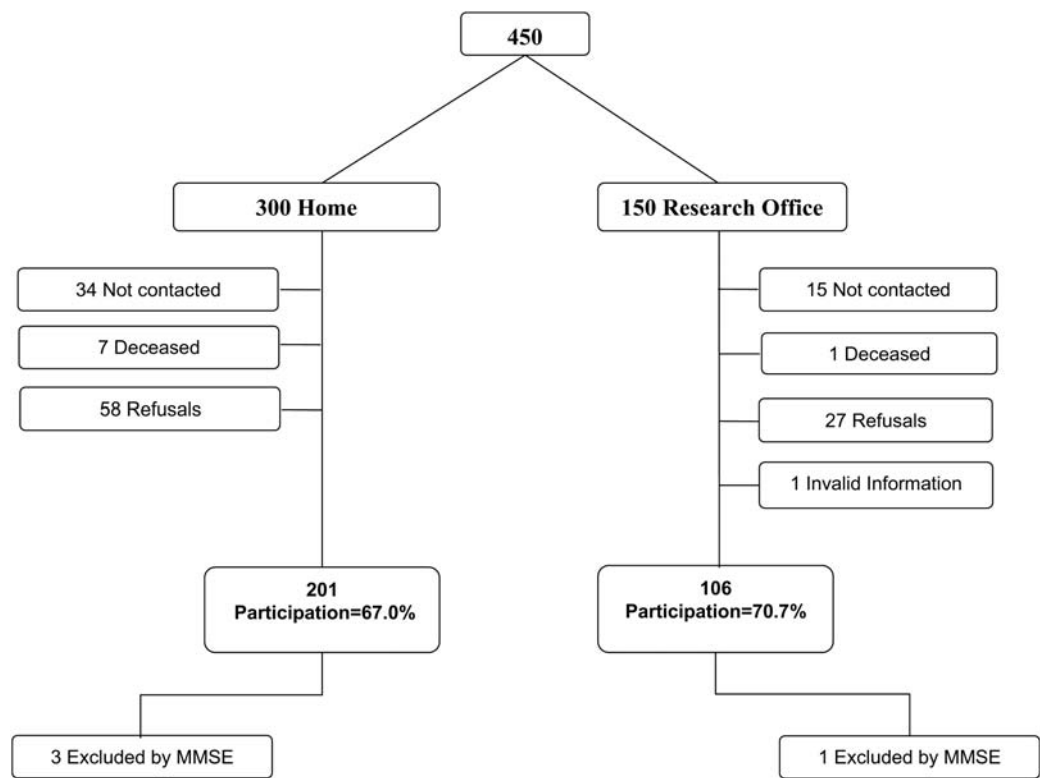


Figure 1. Flow of participants in the study.

gender, age, marital status, smoking and drinking behaviours but those that refused to attend our department for interview were significantly less educated. However, among those that decided to participate no statistically significant differences were found when such variables were compared according to place of interview (Table 1).

Considering all types of violence (except neglect) the lifetime prevalence was 70.7% among participants who were evaluated at home and 76.2% among those who were interviewed in the research office ($P=0.308$). No statistically significant differences in lifetime prevalence were found by interview setting whatever the type of specific violence assessed: psychological 45.5 versus 47.6%, physical 25.3 versus 30.5%, sexual 11.1 versus 9.5% and financial mistreatment 47.0 versus 49.5%, at home and at the research office, respectively (Table 2).

The home interview group presented a prevalence of violence occurring during the previous year of 28.8% and the office group a prevalence of 31.4% ($P=0.567$). Similarly, for each individual type of violence and concerning the previous year, no statistically significant differences were found according to the interview setting: psychological 19.7 versus 19.0%, physical 2.5 versus 1.0%, sexual 1.0 versus 1.0%, financial mistreatment 8.6 versus 9.5% and neglect 5.1 versus 3.8% in home and office, respectively (Table 2).

Discussion

Using an experimental approach our study showed that the place of interview has no influence both in participation rate and in the estimates of violence prevalence.

It is well recognised that the mode of questionnaire administration has important research implications influencing

the methodological outline, the validity of the results and the soundness of public policy that may follow questionnaire-based evidence. Researchers need to be aware of these potential effects on their data. They often face critical study planning decisions, which can irreversibly affect their findings and the quality of data gathered. This is of particular relevance in studies involving self-reported data and especially sensitive topics such as being victim or perpetrator of physical, psychological or sexual violence. Additionally to the decision on the method of assessment (through telephone, face-to-face, mail or computer assisted) and on the mode of inquiring (interview, self-completion), the research setting can have a differential impact on subjects willingness to participate, on disclosure ease and social desirability of answer [6].

Data collection involves an interaction between the questionnaire, the respondent and the interviewer and this interaction varies with interview settings [3]. However, such evaluation seldom took place. In a small study with brain tumour children, no significant differences were observed according to place of evaluation, but a wide range of agreement between home and clinic responses was found. As the authors suggested, clinics are frequently noisy, stressful environments which are associated with previous bad news and severe stress. Completion of questionnaires at home in familiar surroundings may provide a more accurate reflection of the individual's functioning [5].

Besides costs concerns, there are several factors pending on these decisions, all presenting advantages and disadvantages as described in several fields of research (epidemiology, sociology, psychology), and specifically to this thematic (violence), some relevant findings can be identified, pointing that different methods of assessment (telephone, face-to-face, computer assisted) affect differently the

Table 2. Prevalence (lifetime and previous year) of different types of violence, according to home and research office interviews

	Lifetime			Previous year		
	Home, <i>n</i> (%)	Research office, <i>n</i> (%)	<i>P</i> -value	Home, <i>n</i> (%)	Research office, <i>n</i> (%)	<i>P</i> -value
Violence (any type)						
No	58 (29.3)	25 (23.8)	0.308	142 (71.7)	72 (68.6)	0.567
Yes	140 (70.7)	80 (76.2)		56 (28.8)	33 (31.4)	
Psychological violence						
No	108 (54.5)	55 (52.4)	0.719	159 (80.3)	85 (81.0)	0.892
Yes	90 (45.5)	50 (47.6)		39 (19.7)	20 (19.0)	
Physical violence						
No	148 (74.7)	73 (69.5)	0.330	193 (97.5)	104 (99.0)	0.350
Yes	50 (25.3)	32 (30.5)		5 (2.5)	1 (1.0)	
Sexual violence						
No	176 (89.9)	95 (90.5)	0.669	196 (99.0)	04 (99.0)	0.961
Yes	22 (11.1)	10 (9.5)		2 (1.0)	1 (1.0)	
Financial mistreatment						
No	105 (53.0)	53 (50.5)	0.672	181 (91.4)	95 (90.5)	0.785
Yes	93 (47.0)	52 (49.5)		17 (8.6)	10 (9.5)	
Neglect ^a						
No	—	—		188 (94.9)	101 (96.2)	0.624
Yes				10 (5.1)	4 (3.8)	

^aNot measured at lifetime.

frequency of violence assessed [13, 14]. Very few studies have taken the context of assessment into account, as a potential influence on elder violence disclosure and even less have tested its impact through a well established, experimental methodology, with participants randomly allocated to diminish possible confounding. We believe our strategy adequately provides a reliable test of the sole-influence of the study setting (home versus research office), since the initial randomisation of participants ensures homogeneity of a number of characteristics that could impact the tested issue, providing us a much more controlled measure of setting influence over participants answers. Some research suggests that the environment or place of administration has a potential influence on measures of health status [4], although others did not find differences in response by settings [5]. Little is known about environmental factors, such as place of administration influence on individuals' responses. Most of the studies did not use experimental or randomisation methods to allocate participants by different settings [3].

Although it can be difficult to separate out the effects of the different influences, we believe the randomisation in our study allows us to explain only the effect of the setting in the results. And we conclude that the setting where the interview was performed has no influence in response.

We opted for a ratio of two participants at home to one at the research office to cope more closely with the European study protocol. In the original ABUEL study, participants were expected to be interviewed at home so we favoured this approach. In our study, we used the same structured questionnaire, the same mode of administration in both groups, and the interviewers received the same intense training, so that the same protocol was followed. A limitation of our research could be the relatively small sample size and the corresponding limited statistical power to detect differences when evaluating the less frequent types of violence. However, the estimates of violence were so similar in both exposure groups that such concern can be disregarded.

This test to the influence of interview setting was only performed by the Portuguese partner of the ABUEL project. Results regarding elder abuse in all involved countries can be found elsewhere [8].

The participation in our study might have been influenced by the fact that the participants knew and were known by the research team due to the recruitment procedure and therefore the overall proportion of participation may have been overestimated. However, we believe this is a prior characteristic that affects the whole sample, not influencing the hypothesis under testing that concerned the effect of the place of interview.

In conclusion, our results showed that the interview setting has no significant influence both in participation rate and in violence estimates. This suggests that information on such sensitive topic can be considered equally valid regardless of the place of interview, at least when describing the reality of a social context similar

to the ones found in southern European countries, like Portugal.

Key points

- The effect of place of interview on elder violence studies has never been experimentally tested.
- We randomly assigned participants for home (67.0% participation rate; 28.8% violence prevalence) and research office (70.0% participation rate; 31.4% violence prevalence) interview.
- Interviewing setting had neither influence on participation nor violence reported.

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Conflicts of interest

None declared.

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References

1. Summers RW, Hoffman AM, eds. Elder Abuse: A Public Health Perspective. Washington: American Public Health Association, 2006.
2. Streiner DL, Norman GR. Health Measurement Scales: A Practical Guide to Their Development and Use. Oxford: Oxford University Press Inc, 1995.
3. Bowling A. Mode of questionnaire administration can have serious effects on data quality. *J Public Health* 2005; 27: 281–91.
4. Miller DR, Clark JA, Rogers WH *et al.* The influence of place of administration on health-related quality-of-life assessments: findings from the Veterans Health Study. *J Ambul Care Manage* 2005; 28: 111–24.
5. Glaser AW, Davies K, Walker D *et al.* Influence of proxy respondents and mode of administration on health status assessment following central nervous system tumours in childhood. *Quality Life Res* 1997; 6: 43–53.
6. Streiner DL, Norman GR. Health Measurement Scales. A Practical Guide to Their Development and Use. 4th Edition. New York: Oxford University Press Inc., 2008.

7. Rosenbaum A, Rabenhorst MM, Reddy MK *et al.* A comparison of methods for collecting self-report data on sensitive topics. *Violence Vict* 2006; 21: 461–71.
8. Soares JF, Barros H, Torres-Gonzales F *et al.* Abuse and health among elderly in Europe. Kaunas: Lithuanian University of Health Sciences Press, 2010.
9. Ramos E, Lopes C, Barros H. Investigating the effect of non-participation using a population-based case-control study on myocardial infarction. *Ann Epidemiol* 2004; 14: 437–41.
10. Cooper C, Selwood A, Livingston G. The prevalence of elder abuse and neglect: a systematic review. *Age Ageing* 2008; 37: 151–60.
11. Folstein M, Folstein S, McHush R. Mini-mental state. A practical method for grading the cognitive state of patients for the clinician. *J Psychiatr Res* 1975; 12: 189–98.
12. Anthony JC, LeResche L, Niaz U *et al.* Limits of the 'Mini-Mental State' as a screening test for dementia and delirium among hospital patients. *Psychol Med* 1982; 12: 397–408.
13. MacMillan HL, Wathen CN, Jamieson E *et al.* Approaches to screening for intimate partner violence in health care settings. A randomized trial. *JAMA* 2006; 296: 530–36.
14. Rhodes KV, Lauderdale DS, He T *et al.* 'Between Me and the Computer': increased detection of intimate partner violence using a computer questionnaire. *Ann Emerg Med* 2002; 40: 476–84.

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Declining age-adjusted incidence of fall-induced injuries among elderly Finns

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Abstract

Background: elderly people's fall-induced injuries are a major public health challenge.

Methods: we determined the current trends in the number and age-adjusted incidence (per 100,000 persons) of fall-induced injuries among older adults in Finland by taking into account all persons 80 years of age or older who were admitted to Finnish hospitals for primary treatment of a first fall injury over the period 1970–2009.

Results: the number of fall-induced injuries in elderly Finns increased considerably during the study period: for women and men separately, these numbers were from 927 to 10,333 (an 11-fold rise), and from 212 to 3,258 (a 15-fold rise), respectively. In both genders, the age-adjusted incidence (per 100,000 persons) of fall-induced injuries increased till the late 1990s but decreased thereafter, the incidence being 2,729 (women) and 1,455 (men) in 1970, and 5,930 (women) and 4,240 (men) in 2009. Even with the current injury incidence the number of these injuries is expected to more than double by the year 2030.

Conclusion: the rise in the age-adjusted incidence of hospital-treated fall injuries of 80 year old and older Finns from the 1970s to the late 1990s has been followed by declining injury rates. Despite this we have to effectively continue implementation of fall prevention actions.

Keywords: fall-induced injuries, older adults, time trends, hospitalisation, ageing