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Psychological abuse among older persons in Europe: a cross-sectional study

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Abstract

Purpose – *Elder abuse is an issue of great concern world-wide, not least in Europe. Older people are increasingly vulnerable to physical, psychological, financial maltreatment and sexual coercion. However, due to complexities of measurement, psychological abuse may be underestimated. The purpose of this study is to investigate the prevalence of psychological abuse toward older persons within a 12 month period.*

Design/methodology/approach – *The study design was cross-sectional and data were collected during January-July 2009 in the survey ''Elder abuse: a multinational prevalence survey, ABUEL''. The participants were 4,467 randomly selected persons aged 60-84 years (2,559 women, 57.3 per cent) from seven EU countries (Germany, Greece, Italy, Lithuania, Portugal, Spain, Sweden). The sample size was adapted to each city according to their population of women and men aged 60-84 years (albeit representative and proportional to sex-age). The participants answered a structured questionnaire either through a face-to-face interview or a mix of interview/self-response. The data were analysed using descriptive statistics and regression methods.*

Findings – *The prevalence of overall psychological abuse was 29.7 per cent in Sweden, followed by 27.1 per cent in Germany; 24.6 per cent in Lithuania and 21.9 per cent in Portugal. The lowest prevalence was reported in Greece, Spain and Italy with 13.2 per cent, 11.5 per cent and 10.4 per cent, respectively. Similar tendencies were observed concerning minor/severe abuse. The Northern countries (Germany, Lithuania, Sweden) compared to Southern countries (Greece, Italy, Portugal, Spain) reported a higher mean prevalence (across countries) of minor/severe abuse (26.3 per cent/11.5 per cent and 12.9 per cent/5.9 per cent, respectively). Most perpetrators (71.2 per cent) were spouses/partners and other relatives (e.g. children). The regression analysis indicated that being from Greece, Italy, Portugal and Spain was associated with less risk of psychological abuse. Low social support, living in rented housing, alcohol use, frequent health care use, and high scores in anxiety and somatic complaints were associated with increased risk of psychological abuse.*

Social implications – *Psychological abuse was more prevalent in Northern than Southern countries and factors such as low social support and high anxiety levels played an important role. Further studies are warranted to investigate the prevalence of psychological abuse and risk factors among older persons in other EU countries. Particular attention should be paid to severe abuse. Such research may help policy makers and health planers/providers in tailoring interventions to tackle the ever growing problem of elder abuse.*

Originality/value – *The paper reports data from the ABUEL Survey, which collected population based data on elderly abuse.*

Keywords *Psychological abuse, Older persons, Europe, Prevalence, Risk factors, Elderly people, Social problems, Public policy*

Paper type *Research paper*

Introduction

Elder abuse is an issue of great concern world-wide. Older persons are increasingly vulnerable to neglect and physical, psychological[1], financial and sexual abuse (WHO, 2002, 2011).

A recent survey of 49 studies regarding elder abuse across samples, ages, abuse types and methods observed a mean prevalence rate of 13 per cent, with rates of any abuse up to 55 per cent. In general population samples abuse ranged between 3.2 and 27.5 per cent and over 6 per cent reported being abused during the last month (Cooper *et al*., 2008). More recently, in general population/community samples across ages, abuse types and methods, prevalence rates varied between 0.05 and 36 per cent (Acierno *et al*., 2010; Biggs *et al*., 2009; Dong *et al*., 2007; Lauman *et al*., 2008; Lowenstein *et al*., 2009; Marmolejo, 2008; Naughton, 2012). Regarding psychological abuse, which may be the most common form of abuse (Cooper *et al*., 2008), countries report different prevalence rates. For instance, in Canada the prevalence of chronic verbal aggression ranged between 1.4 and 6 per cent (Podnieks *et al*., 1990; Vida *et al*., 2002). The corresponding figures among older persons who lived in a residence were 36-40 per cent in both Canada and USA (Beaulieu, 1992; Pillemer and Finkelhor, 1988; Pillemer and More, 1989). In the USA, in a general population sample the rate of emotional abuse was 4.6 per cent (Acierno *et al*., 2010) and in a community sample 9 per cent (Lauman *et al*., 2008). In China, Dong *et al.* (2007) reported an emotional abuse rate of 11.4 per cent in an urban community sample. In Israel, Lowenstein *et al.* (2009) observed a verbal abuse rate of 14.2 per cent in a general population sample. In Europe, the prevalence of psychological abuse has been reported to be 1-8 per cent in Denmark, Finland and Sweden (Hyddle, 1993) and 0.3 per cent in Spain (Marmolejo, 2008), and verbal abuse to be 3.2 per cent in The Netherlands (Comijis, 1998), 1.2 per cent in Ireland (Naughton, 2012) and 0.4 per cent in the UK (Biggs *et al*., 2009).

Elder abuse has been associated with various negative effects such as depression, distress and low social support, and can in some cases be life-threatening (Acierno *et al*., 2010; Comijs *et al*., 1999; Dong, 2005; Dong and Simon, 2008; Dong *et al*., 2010; Lachs *et al*., 1997, 1998; Podkieks, 1992; Wang, 2006; Wang *et al*., 2006).

Although the occurrence of psychological abuse has been addressed in various studies, it may have received limited attention. The scarcity of data regarding psychological abuse is evident in relation to general population samples and across cultures. To the best of our knowledge only one study has addressed the issue (Biggs *et al*., 2009), but an episode of psychological abuse was only considered if ten or more incidents had occurred. Overall, there is great variation between studies regarding, for instance, who reported abuse, how the respondents were selected, prevalence period, the validity/reliability of the abuse measures and the operational definition of abuse, raising questions about the confidence of the findings. Confirming this situation, Cooper *et al.* (2008) in their review reported, for example, that a relatively large number of studies have problems regarding the validity/reliability of the measures used to assess abuse, some studies do not state the prevalence period and descriptions of the perpetrators may be insufficient.

World-wide, particularly in Europe, few studies have attempted to investigate psychological abuse *per se* across different cultures using, for instance, identical criteria for the instruments used, data collection methods, the selection of the population and the operational definition of psychological abuse, although the number of older persons is set to increase and culture may play a role in abuse using. In fact, as indicated above, we know only one study that has addressed this issue (Biggs *et al*., 2009), but questions can be raised regarding, for example, what this study considers to be an act of abuse. Additionally, it has been also argued that because psychological abuse lacks concrete criteria, its identification require a more thorough examination than physical abuse (Wang, 2006; Wang *et al*., 2007).

In the present study, we adhere to the notion that psychological abuse comprises ''use of threats, humiliation, bullying, swearing and other verbal conduct, and (or) any other form of mental cruelty that results in mental or physical distress (Naughton, 2011), but we used primarily the operational definition of Straus (Straus *et al*., 1996). Among its advantages, we were able to assess the occurrence of psychological abuse and severity/chronicity in a reliable way, a problem rose by others (Cooper *et al*., 2008).

Therefore, using data which are first of their kind in the European region (across different cultures), the present study aims at describing the prevalence of psychological abuse towards elderly people 60-84 years of age in seven EU countries within a 12 months period,

but provides data also on the severity of abuse, the perpetrators and demographic characteristics of the respondents. Such data may be for instance useful for policy makers and social/health care planers/providers across different countries in Europe in their efforts to develop appropriated interventions for elder abuse and related factors.

Material and methods

The study sample consisted of randomly selected women and men from the general population (albeit representative for age and sex) living in cities of seven European countries (Germany, Stuttgart; Greece, Athens; Italy, Ancona; Lithuania, Kaunas; Portugal, Porto; Spain, Granada; Sweden, Stockholm). The inclusion criteria were:

- age 60-84 years;
- not suffering from dementia, other cognitive or sensory impairments (e.g. blindness);
- legal status (national citizens or documented migrants);
- living within the community ((own/rented houses) or housing for elderly); and
- able to read/write or to express themselves in the native languages (see Lindert *et al.* (2011) for further details).

The majority of the participants were married/cohabitants (65 per cent) and had work pension (65.9 per cent). For more details on the participants see Table I.

The survey (Elder abuse: a multinational prevalence survey, ABUEL) was conducted during six consecutive months in January-July 2009[2]. Respondents were either face-to-face interviewed (on average 1 h) or self-responded to a structured questionnaire. In some countries a combination of both was used[3]. The survey started with the development of a research protocol, including sampling, interview and information strategies. The scales used in the questionnaire were translated into the relevant languages, back-translated and culturally adapted. Before the data collection, interviewers in each country ($n = 5$-20) were carefully trained about various issues (ethical behaviour). Participants were thoroughly informed about the study and what was expected of them (in writing/verbally), and informed consent was requested. Great emphasis was put on confidentiality, anonymity and the participant's rights. The ethical application was similar, but customized for each country. Ethical permission was sought and received prior to data collection in each country[4], except for Greece where ethical permission was not necessary. Further details are reported in the ABUEL method paper by Lindert *et al.* (2011).

The sample size was calculated based on municipal census in each participating city and expected abuse prevalence ranges. Departing from an abuse prevalence of 13 per cent, with a precision of 2.6 per cent, derived from a recent review (Cooper *et al.*, 2008), a sample size of 633 persons in each city was required. The sample size was adapted to each city according to its population of women and men aged 60-84 years (representative and proportional to sex-age). In view of the infinite population assumption, a maximum of 656 persons was allowed for each city. The total number of participants were 4,467 elderly (2,559 women, 57.3 per cent), which is slightly higher than the total required sample size. The mean response rate across countries was 45.2 per cent.

Details regarding refusal data, etc. are provided in the ABUEL method paper by Lindert *et al.* (2012). More concretely this paper provides analyses, figures and tables on the target population by country, sex and age; the persons eligible, cooperation, completion and response rates by country; the population fraction (PF) and population fraction ratio (PFR)[5] by country, sex and age in relation to the reference population; and the refusal data by country, sex and age. Additionally, the analyses of the samples with the reference population in the community census database (age/sex) and refusal data (excluding Greece), showed that in Portugal more women than men responded to the survey and that in Italy women were more likely to refuse than men, respectively. The youngest groups in all cities were more likely to refuse participation. There were no other differences (see also the ABUEL method paper by Lindert *et al.* (2012)).

Table I Characteristics of respondents by country

Variables[a]	Germany (*n* = 648) n	%	Greece (*n* = 643) n	%	Italy (*n* = 628) n	%	Lithuania (*n* = 630) n	%	Portugal (*n* = 656) n	%	Spain (*n* = 636) n	%	Sweden (*n* = 626) n	%
Age (years)														
60-64	137	21.1	179	27.8	141	22.5	146	23.2	161	24.5	148	23.2	212	33.9
65-69	184	28.4	165	25.7	142	22.6	148	23.5	160	24.4	140	22.0	149	23.8
70-74	152	23.5	147	22.9	129	20.5	146	23.2	138	21.0	143	22.5	106	16.9
75-79	104	16.0	94	14.6	119	18.9	121	19.2	115	17.5	113	17.8	83	13.3
80-84	71	11.0	58	9.0	97	15.4	69	11.0	82	12.5	92	14.5	76	12.1
Sex														
Female	343	52.9	356	55.4	358	57.0	405	64.3	400	61.0	364	57.2	333	53.2
Male	305	47.1	287	44.6	270	43.0	225	35.7	256	39.0	272	42.8	293	46.8
Marital status														
Single	65	10.0	33	5.1	24	3.8	28	4.4	37	5.6	40	6.3	43	6.9
Married/cohabitant	418	64.5	363	56.5	508	80.9	357	56.7	420	64.0	425	66.8	412	65.8
Divorced/separated	59	9.1	43	6.7	13	2.1	53	8.4	51	7.8	26	4.1	98	15.7
Widowed	105	16.2	204	31.3	83	13.2	192	30.5	148	22.6	145	22.8	73	11.7
Living situation														
Alone	207	32.7	169	26.3	82	13.1	152	24.3	142	21.6	114	18.0	212	33.8
Spouse/partner	380	59.9	244	37.9	351	55.8	269	42.7	289	44.1	280	44.0	395	63.1
Spouse/partner/other[b]	33	5.1	117	18.2	157	25.0	93	14.8	143	21.8	147	23.2	16	2.6
Other[c]	14	2.2	113	17.6	38	6.1	146	23.2	82	12.5	94	14.8	3	0.5
Housing														
Own	402	62.0	489	76.0	559	89.0	622	98.7	389	59.3	536	84.3	453	72.4
Rental	233	36.0	149	23.2	52	8.3	7	1.1	265	40.4	55	8.6	169	27.0
Other[d]	11	1.7	5	0.8	33	5.3	5	0.8	40	6.1	45	7.1	4	0.6
Migrant background														
Yes	79	12.3	17	2.7	13	2.1	26	4.1	17	2.6	1	0.2	85	13.6
No	561	87.7	621	97.3	615	97.9	604	95.9	639	97.4	633	99.8	538	86.4
Education														
Cannot read/write	1	0.2	17	2.6	0	0	1	0.2	17	2.6	100	15.7	0	0
Low education[e]	20	3.1	305	47.4	244	38.9	180	28.6	297	45.3	364	57.2	207	33.1
Middle education[f]	405	62.9	261	40.6	316	50.3	283	44.9	237	36.1	73	11.5	207	33.1
High education[g]	218	33.8	60	9.3	68	10.8	166	26.3	105	16.0	99	15.6	212	33.8
Profession														
Blue-collar	91	14.4	235	36.5	160	25.5	248	39.4	216	32.9	236	37.1	91	15.6
Low white collar	249	35.2	120	18.7	221	35.2	136	21.6	186	28.4	79	12.4	223	35.6
High/middle white-collar	250	39.6	60	9.3	124	19.7	211	33.5	212	32.3	102	16.0	258	44.2
Armed forces/police	1	0.2	15	2.4	12	1.9	0	0	1	0.2	12	1.9	4	0.7
At home	41	6.5	213	33.1	111	17.7	35	5.5	41	6.2	207	32.6	8	1.4
Financial support														
Working	68	10.6	93	14.5	27	4.3	58	9.2	55	8.5	55	8.6	186	29.8
Work pension	500	77.4	323	50.2	466	74.2	535	84.9	405	61.8	290	45.6	420	67.2
Social/sick/other pension benefits[h]	16	2.5	17	2.6	15	2.4	35	5.6	84	12.8	64	10.0	12	1.9
Spouse/partner income	34	5.4	187	29.1	118	18.8	0	0	70	10.6	212	33.3	6	0.8
Other[i]	26	4.1	23	3.6	2	0.3	2	0.3	40	6.3	15	2.5	2	0.3
Still work														
Yes	110	17.1	81	12.6	58	9.2	100	15.9	116	17.7	71	161	215	34.3
No	532	82.9	562	87.4	570	90.8	530	84.1	540	82.3	373	84.0	411	65.7
Financial strain														
Yes	307	47.5	602	93.6	367	58.6	461	73.2	461	70.3	434	68.2	225	36.0
No	339	52.5	41	6.4	259	41.4	169	26.8	195	29.7	202	31.8	400	64.0
Smoking														
Yes	67	10.4	153	23.8	79	12.6	71	11.3	40	6.1	63	9.9	63	10.1
No	579	89.6	490	76.2	549	87.4	559	88.7	616	93.9	573	90.1	561	89.9
Drinking														
Yes	534	82.5	266	41.4	437	69.6	316	50.2	527	80.3	222	34.9	564	90.4
No	113	17.5	337	58.6	191	30.4	314	49.8	129	19.7	414	65.1	60	9.6

Notes: [a]Percentages may not amount to 100 per cent due to missing values; [b]e.g. daughter; [c]e.g. daughter; [d]housing for older persons; [e]primary school/similar; [f]secondary school/similar; [g]university/similar; [h]e.g. sick pension; [i]e.g. own capital

Variable description and measurement

Elder abuse was measured with 52 items based on the conflict tactic scales 2 (Straus *et al.*, 1996) and the UK study of abuse/neglect of older people (Biggs *et al.*, 2009). The participants were asked if they had been exposed to minor or severe psychological abuse (e.g. insults, 11 items), minor or severe physical abuse (e.g. beatings, 17 items), minor or severe sexual abuse (e.g. intercourse against one's will, eight items), minor or severe financial abuse (e.g. forcibly taken money, nine items) and in minor or severe injuries (e.g. bruises, seven items), and how often the abuse occurred (chronicity). The abuse acts may have occurred once, twice, three to five, six to ten, 11-20 or >20 times during the past year, did not occur the past year, but before or never occurred. In addition, neglect (e.g. not helped in routine housework) was assessed with 13 items where the participants were asked whether they needed help/received it, needed help/did not receive it or did not need help. Data were also gathered concerning the perpetrator's main characteristics (e.g. age) and where the abuse occurred. Finally, the participants were asked about their reactions to the abuse and whether they were affected by it. In this study, the focus was on overall psychological abuse, but data are presented on minor/severe abuse and perpetrator type. Cronbach's α for psychological abuse across countries was 0.82, females 0.82 and males 0.82.

Depressive and anxiety symptoms were measured with hospital anxiety and depression scale (Zigmond *et al.*, 1983) consisting of 14 items (graded 0-3). Seven items concern depression (e.g. I feel as if I am slowed down) and seven concern anxiety (e.g. I get sudden feelings of panic). A score of 0-7 corresponds to no cases of clinical depression/anxiety status, eight to ten to possibly cases and 11-21 to probable cases. In this study, the focus was on the total scores for depression and anxiety. Cronbach's α for anxiety across countries was 0.81, females 0.81 and males 0.79 The figures for depression were 0.80, females 0.80 and males 0.78.

Somatic complaints were measured with the short version of the Giessen Complaint List (Bähler, 1995) consisting of 24 items (graded 0-4) about various somatic symptoms (e.g. physical weakness). The total score amounts to 96 and the items can be divided into four sub-scales (exhaustion, gastrointestinal, musculoskeletal, heart distress). High scores correspond to high levels of somatic complaints. In this study, the focus was on the total scores. Cronbach's α for somatic complaints across countries was 0.92, females 0.92 and males 0.90.

Health care use was measured in terms of the number of contacts with different types of health care staff (e.g. physician) and health care services (e.g. primary care). The items were derived from the Stockholm County Council health survey (Folkhälsoraport, 2007).

Social support was measured with the Multidimensional Scale of Perceived Social Support (Zimet *et al.*, 1990, 1988) consisting of 12 items (graded 1-7). The total score amounts to 84 and questions can be divided into three sub-scales, i.e. support from family, significant others and friends. High scores correspond to high social support (total/sub-scales). In this study, the focus was on the total scores. Cronbach's α for social support across countries was 0.92, females 0.92 and males 0.92.

Additionally, we measured alcohol and cigarette use, and body mass index (BMI). Alcohol was measured with a modified version of alcohol use disorders identification test (Power *et al.*, 2005) consisting of five items (e.g. do you drink alcohol). A similar strategy was used for the assessment of cigarette use. In this study, the focus was on use of alcohol/cigarettes in a ''yes/no'' format. Finally, BMI, based on self-reported based on self-reported height and weight, was computed for each elderly with the formula kg/m^2.

Finally, demographics and socio-economics variables such as age, marital status and profession were measured. ''Financial strain'' (preoccupation with how to make ends meet) was measured with one question in a ''no/sometimes/often/always'' format. A participant was defined as having ''financial strain'' if she/he chooses any response other than ''no''. Four questions (e.g. place of birth) addressed the issue of whether the participants were indigenous inhabitants or migrants. The demographic and socio-economic variables were customized for each country, but similar in content.

Statistical analyses

Descriptive analyses were carried out using frequency distribution and summary measures when needed. Bivariate analyses of the data were performed by means of χ^2-tests, Kruskal-Wallis test and Bonferroni corrections. Shapiro-Wilk tests were performed to assess normality when dependent variables were numeric. In addition, Spearman correlations were performed. Bivariate analyses are only shown for the relationship between overall psychological abuse (including minor/severe), country, demographics, socio-economics, use of alcohol and cigarettes. Additionally, we present data of the perpetrators and demographic characteristics of the respondents.

Finally, a multivariate logistic regression analysis was computed to examine the relations between the dependent variable (overall psychological abuse) and numerical/categorical covariates among all participants. The inclusion of the covariates was based on previous literature and included country, demographics/socio-economics (e.g. age), household size, use of alcohol, cigarette and health care, BMI, social support, somatic complaints, depression and anxiety. The associations between the various covariates and overall psychological abuse were expressed as odds ratios and CI95 per cent. Analyses were carried out using SPSS statistical package 15.1 (SPSS, Inc., 2008).

Results

Prevalence of psychosocial abuse by country and demographics/socio-economics

As shown in Table II, Sweden and Germany had the highest prevalence of overall psychological abuse, and Spain and Italy the lowest. Additionally, respondents aged 60-64 and 70-74 years and males reported more overall psychological abuse than respondents in other ages and females. Finally, overall psychological abuse was also more prevalent among divorced/separated participants, and among those who lived in rental housing, could not read/write, had less than primary school, primary school or similar, had their financial support by means of work pensions and were living alone or only with partner/spouse.

As also shown in Table II, similar tendencies were found with regard to minor psychological abuse. The prevalence of minor psychological abuse was 29.1 per cent in Sweden and 25 per cent in Germany and the lowest in Spain 10.8 per cent and Italy 9.9 per cent. On other hand, the prevalence of severe psychological abuse was highest in Lithuania (12.7 per cent) and Sweden (12 per cent) and the lowest in Greece (3.8 per cent) and Italy (3.6 per cent).

Psychological abuse by type of perpetrators

As shown in Table III, most psychological abuse was perpetrated by spouses/partners (37.1 per cent) followed by friends/acquaintances/neighbours (27.7 per cent). Other relatives (e.g. brothers) had the lowest levels (16 per cent).

Multivariate analysis

As shown in Table IV, participants from Greece, Italy, Portugal and Spain compared to those from Germany were less exposed to overall psychological abuse. This was also true for participants aged 75-79 years compared to those aged 60-64 years. In addition, participants who reported high social support and no financial strain experienced lower odds of overall psychological abuse.

In contrast, participants who lived in rented accommodation and drank alcohol compared to counterparts were at increased odds of overall psychological abuse, i.e. 1.28 (95 per cent 1.02-1.60) and 1.31 (95 per cent CI 1.06-1.63), respectively, Finally, participants who frequently used health care services and reported high levels of anxiety and somatic symptoms also had elevated odds of psychological abuse, i.e. 1.69 (95 per cent CI 1.15-2.49), 1.08 (95 per cent CI 1.05-1.11) and 1.02 (1.01-1.03), respectively.

Table II Prevalence of psychological abuse (minor, severe, overall) by country, demographic/socio-economic and life-style variables

Variables	*n*	*Minor (%)*	*Severe (%)*	*Overall (%)*	*P*-values[g]
Country					*p< 0.001*
Germany	648	25.5	9.7	27.1	
Greece	643	12.1	3.8	13.2	
Italy	628	9.9	3.6	10.4	
Lithuania	630	24.2	12.7	24.6	
Portugal	656	19.1	10.7	21.9	
Spain	636	10.8	5.4	11.5	
Sweden	626	29.1	12.0	29.7	
Age (group years)					*p < 0.001*
60-64	1,124	21.2	9.3	22.1	
65-69	1,085	19.0	8.1	19.6	
70-74	960	20.2	9.5	21.8	
75-79	749	13.7	6.7	14.6	
80-84	545	14.0	5.2	15.2	
Sex					*p = 0.455*
Female	2559	18.4	8.4	19.4	
Male	1908	19.4	8	20.3	
Marital status					*p = 0.002*
Single	270	20.5	8.3	21.1	
Married/cohabiting	2,899	18.8	8.2	19.7	
Divorced/separated	343	23.8	13.6	25.2	
Widow/er	950	14.3	5.8	15.7	
Migrant background					*p = 0.071*
Yes	4,207	18.1	8.0	19.1	
No	238	23.3	10.2	24.5	
Living situation					*p = 0.023*
Alone	1,078	18.8	8.4	20.2	
Spouse/partner	2,204	19.4	8.6	20.4	
Spouse/partner/other[a]	706	17.3	7.4	17.8	
Other[b]	457	13.7	6.7	15.0	
Housing					*p=0.001*
Own	3,389	17.2	7.8	18.2	
Rental	929	23.7	9.4	25.0	
Other[c]	143	12.2	6.6	12.6	
Education					*p< 0.001*
Cannot read/write	136	14.2	6.8	22.3	
Without any degree	187	14.0	8.0	18.2	
Less than primary school	338	12.5	7.3	20.4	
Primary school/similar	1,092	16.2	6.0	20.8	
Secondary school/similar	1,781	19.1	9.1	13.9	
University/similar	852	22.6	9.0	10.5	
Other[d]	73	30.0	12.3	30.0	
Profession					*p< 0.001*
Managers/professionals/assistant professionals	1,213	21.2	9.8	22.3	
Clerical support/sale workers	1,214	17.1	7.5	18.2	
Skilled agricultural/forestry/fishery workers	707	19.6	7.9	20.4	
Assemblers/elementary occupations	570	19.8	9.3	20.8	
Housewife/husband	656	12.6	5.6	13.9	
Armed forces/police	45	10.5	1.9	10.5	
Financial support					*p < 0.001*
Work	2,935	18.5	8.2	19.4	
Work pensions	542	23.5	10.9	25.0	
Social/sick-leave/other pension benefits[e]	243	22.1	9.3	23.6	
Partner/spouse income	627	12.4	5.0	13.3	
Other[f]	110	15.4	5.9	17.7	
Still working (paid work)					*p=0.013*
No	3,515	17.9	7.9	19.0	
Yes	750	22.8	10.2	23.8	

(*continued*)

Table II

Variables	*n*	*Minor (%)*	*Severe (%)*	*Overall (%)*	*P*-values[g]
Financial strain					*p= 0.016*
No	1,601	20.6	8.0	21.4	
Yes	2,857	17.1	8.1	18.3	
Smoking					*p = 0.302*
No	3,923	18.4	8.4	19.5	
Yes	536	17.5	6.1	18.4	
Drinking					*p < 0.001*
No	1,598	14.9	7.5	15.9	
Yes	2,862	20.3	8.4	21.3	

Notes: [a]E.g. daughter; [b]e.g. daughter; [c]e.g. housing for older persons; [d]e.g. art school; [e]e.g. sick pension; [f]e.g. own capital; [g]χ^2-test

Table III Numbers and percentages of perpetrators of psychological abuse across countries[a]

Perpetrators[d]	*n* (%)
Spouse/partner	312 (37.1)
Children/grandchildren	152 (18.1)
Other relatives[b]	134 (16.0)
Friends/acquaintances/neighbours	233 (27.7)
Others[c]	176 (21.0)

Notes: [a]E.g. undermined or belittled what you do; [b]e.g. brother; [c]e.g. care staff; [d]spouses/partners were more like to be the perpetrators compared with the other groups (all at $p<0.01$); Children/grandchildren were less likely to be the perpetrators than friends/acquaintances/neighbours and other (all at $p < 0.01$); other relatives were less likely to be the perpetrators than friends/acquaintances/neighbours and others (all at $p < 0.01$); and others were less likely to be the perpetrators than friends/acquaintances/neighbours ($p < 0.01$)

Discussion

Prevalence of abuse and perpetrators

The overall prevalence of psychological abuse was higher in Germany. Lithuania and Sweden compared to that of the other included countries. Similar findings were found regarding minor and severe abuse. Most of the abuse was perpetrated by spouses/partners followed by friends/acquaintances/neighbours.

The prevalence of overall psychological abuse in our study tended to be higher than prevalence rates reported in recent general population/community studies from countries outside Europe, e.g. USA (Acierno *et al.*, 2010; Dong *et al.*, 2007; Laumann *et al.*, 2008; Lowenstein *et al.*, 2009) and from the European region (Biggs *et al.*, 2009; Marmolejo, 2008; Naughton, 2011). Discrepancies between our results and those of these studies may be essentially methodological. For instance, in the studies of Acierno *et al.* (2010) and Laumann (2008) psychological abuse was assessed with three items (e.g. made you feel humiliated) and one single item (insults you or puts you down), whereas we assessed it with 11 items. Thus, these two studies may have underestimated the rates of psychological abuse as important facets of it may have not been assessed. A much higher prevalence of psychological abuse (43 per cent) was reported in a study from Brazil with a community urban sample (Appato-Junior, 2010), but it concerned intimate partner abuse among elder persons which is difficult to compare with our findings.

The abuse rates observed by Dong *et al.* (2007) and Lowenstein *et al.* (2009), which used validated scales (vulnerability to abuse screening scale and CTS2, respectively) differed

Table IV Multivariate logistic regression analysis (odds ratio/95 per cent CI) of the associations between country, demographics/socio-economics, alcohol/cigarette use, household size, BMI, health care use, somatic complaints, social support, depression, anxiety and overall psychological abuse

Variables	*Psychological abuse odds ratio (95% CI)*
Country[a]	
Greece	0.46 (0.31-0.68) ***
Italy	0.35 (0.24-0.51) ***
Lithuania	0.8 (0.57-1.13)
Portugal	0.52 (0.37-0.72) ***
Spain	0.38 (0.24-0.6) ***
Sweden	1.18 (0.87-1.59)
Germany[b]	1
Age groups[a]	
65-69 years	0.83 (0.64-1.07)
70-74 years	0.94 (0.72-1.24)
75-79 years	0.52 (0.38-0.71) ***
80-84 years	0.63 (0.45-0.89) *
60-64[b]	1
Sex[a]	
Male	1.11 (0.91-1.36)
Female[b]	1
Marital status[a]	
Married/cohabiting	1.09 (0.58-2.05)
Divorced/separated	1.03 (0.66-1.6)
Widow/er	0.86 (0.57-1.31)
Single[b]	1
Migrant background[a]	
Yes	1.04 (0.73-1.47)
No[b]	1
Living situation[a]	
Spouse/partner	1.37 (0.76-2.48)
Spouse/partner/other[c]	1.52 (0.75-3.07)
Other[c]	1.15 (0.74-1.78)
Alone[b]	1
Housing[a]	
Rent	1.28 (1.02-1.6) *
Other[d]	0.84 (0.47-1.51)
Own[b]	1
Education level[a]	
Without any degree	1.54 (0.63-3.76)
Less than primary school	1.15 (0.5-2.64)
Primary school/similar	1.36 (0.61-3)
Secondary school/similar	1.72 (0.77-3.85)
University/similar	1.93 (0.83-4.45)
Other[e]	2.17 (0.81-5.87)
Cannot read/write[b]	1
Profession[a]	
Clerical support/sale workers	0.97 (0.74-1.27)
Skilled agricultural/forestry/fishery workers	1.36 (0.99-1.86)
Assemblers/elementary occupations	1.35 (0.95-1.9)
Housewife/husband	1.18 (0.75-1.84)
Armed forces	0.9 (0.33-2.43)
Managers/professionals/associated professionals[b]	1
Financial support[a]	
Work	1.21 (0.8-1.82)
Social/sick-leave/other pension benefits[g]	0.93 (0.63-1.37)
Partner/spouse income	0.93 (0.63-1.38)
Other[g]	0.91 (0.51-1.62)
Work pension[b]	1
Still working (paid work)[a]	

(*continued*)

Table IV

Variables	*Psychological abuse odds ratio (95% CI)*
Yes	0.85 (0.6-1.21)
No[b]	1
Financial strain[a]	
Yes	0.72 (0.59-0.88) **
No[b]	1
Smoking[a]	
Yes	0.86 (0.65-1.13)
No[b]	1
Drinking[a]	
Yes	1.31 (1.06-1.63) *
No[b]	1
Household size[h,i]	0.96 (0.83-1.11)
BMI[h,j]	0.99 (0.97-1.01)
Health care services use[h,k]	1.69 (1.15-2.49) **
Somatic complaints[c,l]	1.02 (1.01-1.03) ***
Social support[h,m]	0.98 (0.98-0.99) ***
Depression[h,n]	1.01 (0.98-1.04)
Anxiety[h,i]	1.08 (1.05-1.11) ***

Notes: * $p<0.05$; ** $p < 0.01$; *** $p < 0.0001$; [a]categorical variables; [b]comparison category; [c]e.g. daughter; [d]housing for elderly people; [e]e.g. art school; [f]e.g. sick pension; [g]e.g. own capital; [h]continuous variables; [i]number of people in the household; [j]BMI; [k]number of health care visits; [l]GBB-24; [m]MSPSS; [n]HADS

mainly from those of the Northern countries in our study, indicating cultural differences in abuse occurrence. For example, a study regarding crime in 18 EU countries (the ten most common crimes), revealed that crime was more common in Germany than in Greece, Italy, Portugal and Spain (van Djiik *et al.*, 2005). The German society may thus put its elder population at a higher risk for abuse, and this could explain the discrepancies in relation to these two studies.

For Naughton (2011) and Biggs *et al.* (2009) an act of psychological abuse (e.g. excluded you or repeatedly ignored you) was considered only if it occurred ten or more times and six items assessed this abuse type. Our criterion was ''one incident corresponds to an act'' and abuse was captured with 11 items. Further, these studies operationalized abuse differently depending on the type, the respondents were drawn from national samples in contrast to the ABUEL which only surveyed city populations, the age range was different (66 years and over versus 60-84 years in ABUEL) and ABUEL used a combination of interviews and self-questionnaires and these studies were carried out using face-to-face interviews. Thus, a comparison between our studies is hazardous. It is also difficult to interpret the results from these studies because they define for example psychological abuse in a particular way and in view of these studies operational definition of abuse, the prevalence of psychological abuse may have been underestimated.

The study of Marmolejo (2008) measures psychological abuse with a single item where different abuse acts are not discriminated (compile in one yes/no item the following acts: do any of the people you live with ever ignore you, neglect your effective needs, prevent you from having contact with family and friends, or shout at you, insult you, intimidate or threaten you, etc). The rates of psychological abuse in this study amounted to 0.3 per cent, whereas our figures range from 10.4 to 29.7 per cent and 11.5 per cent for Spain. The discrepancy is enormous, which can hardly be explained by for instance some difference the age range and that our study was conducted in urban centres. Most likely, differences in rates are due to the particular operationalization of abuse by Marmolejo (2008), indicating underestimation. Differences in what is perceived as psychological abuse and willingness to disclose abuse acts may also be part of the explanation concerning discrepancies between our findings and those of the above mentioned studies (see discussion on factors related to abuse). However, we did not address these issues.

A tentative conclusion is that differences in prevalence rates between our study and those reported in above mentioned studies may be largely the result of methodological discrepancies, and that methodological inadequacies in several of these studies could have led to an underestimation of psychological abuse. This calls for further research aimed at bringing about a uniform operationalization of psychological abuse. In fact, despite decades of research regarding elder abuse there is no consensus about what is elder abuse and how it is measured (Biggs *et al.*, 2009; Cooper *et al.*, 2008). We used the operational definition of Straus *et al.* (1996) and Straus (2007), which has been validated in other areas (e.g. intimate partner violence) and also used in elder abuse (Cooper *et al.*, 2008).

Contrary to most of these studies, we assessed and presented data on the severity of psychological abuse (minor, severe). Most of the abuse was minor, but the percentages of severe abuse within countries, demographics/socio-economics and life-style variables varied between 1.9 and 13.6 per cent. This is a source of great concern in view of the acts included (e.g. prevented you from seeing others that you care about) and the effects that they may engender. The study of Lowenstein *et al.* (2009) used a rather similar operationalization of abuse as in our study, but do not present data on its severity. Thus, in future, measurement of elder abuse should include severity levels.

Our findings together with those of other studies irrespectively of the type of sample indicate that psychological abuse toward elders may be common (Acierno *et al.*, 2010; Dong *et al.*, 2007; Laumann *et al.*, 2008; Lowenstein *et al.*, 2009; Pillemer and Finkelhor, 1988; Pillemer and More, 1989; see also Cooper *et al.* (2008)), but prevalence rates may have been underestimated in several cases (Biggs *et al.*, 2009; Marmolejo, 2008; Naughton *et al.*, 2010) due to particularities in assessing abuse. Additionally, in our study we found high rates of severe psychological abuse which raises great concerns. Although the prevalence of psychological abuse differed between the countries included in our study, the levels were high in all countries. Based on our rates of psychological abuse across countries (19.4 per cent), the estimated number of persons in the population (60-84 years) experiencing such abuse during the 12 months period was 244.085 persons (134.013 women, 55 per cent) and 29 million if one considers this population in European Region (WHO, 2011). This calls for immediate prevention and treatment actions, but also more research. We adhere therefore to statements that this type of abuse needs to be further investigated as it can be grave and more damaging for older persons than other forms of abuse (Acierno *et al.*, 2010; Swagerty *et al.*, 1999).

Our findings concerning perpetrators showed that most abuse was inflicted by spouse/partner (37.1 per cent) followed by friends/acquaintances/neighbours (27.7 per cent), others (21 per cent) and children/grand-children (18.1 per cent). Other studies elsewhere have found that elder abuse is often perpetrated by a family member (adult child, spouse or other relatives) (Biggs *et al.*, 2009; Cooper *et al.*, 2008; Lowenstein *et al.*, 2009). For instance, Biggs *et al.* (2009) found that 51 per cent of mistreatment in the past year was carried out by a partner or spouse, 49 per cent by a family member, 13 per cent by a care worker and 5 per cent by a close friend. These perpetration patterns seem to be aligned with those who live and care for the elderly. A discordant note is the high percentage of abuse from friends/acquaintances/neighbours. We did not ask the respondents about what they thought were the reasons for being abuse by spouses/partners, etc. However, studies indicate for example that perpetration may be due to care-giving stress (Perez-Rojo *et al.*, 2008, 2009), and substance use (Naughton *et al.*, 2010; Lachs and Pillemer, 1995; Pillemer, 2005), mental health problems (Lowenstein *et al.*, 2009; Pillemer, 2005; Williamson and Shaffer, 2001) and financial dependence (González *et al.*, 2005; Greenberg *et al.*, 1990; Wolf and Pillemer, 1989) among perpetrators.

Country, demographics/socio-economics and psychological abuse

In the regression analysis, results indicated that being from Greece, Italy, Portugal and Spain was associated with less ''risk'' of overall psychological abuse. An explanation could be that participants living in these Southern European countries were less willing to disclose their experiences of abuse as compared to Germany. In addition, perceptions of what is

psychological abuse may have cultural overtones, thus differing in the countries surveyed by the ABUEL project. In a study where older persons were asked about the meaning of abuse, it was found that consequences of the abusive behaviour affected participant's perceptions of the severity of the abuse more than the frequency of abuse (Nandal *et al.*, 1997). However, others have suggested that context and frequency of abusive behaviours are factors for interpreting behaviour as abusive or not (Childs *et al.*, 2000). Additionally, one can argue that potential differences in empowerment among elderly might to some extent have become a risk of potential abuse, but a reverse scenario can also be considered. For instance, in a survey which investigated the burden of crime in 18 EU countries (the ten most common crimes), it was found that Germany had on average a higher prevalence of crime than Greece, Italy, Portugal and Spain (van Djiik *et al.*, 2005). Thus, older persons living in Germany might be at greater risk of being abused than their counterparts.

Our study also found that participants aged 75-79 and 80-84 years were at lower risk for overall psychological abuse. An explanation could be that the older people are the more immune they became to abuse. Otherwise, the relation between age and abuse is inconsistent, with studies indicating that the oldest of older adults are at higher risk for abuse (Biggs *et al.*, 2009; Lauman *et al.*, 2008), whereas others report the contrary (Acierno *et al.*, 2010; Lowenstein *et al.*, 2009).

Participants who did not experience financial strain were at lower risk of overall psychological abuse. We have not found studies addressing the relation between financial strain and elder abuse. One could hypothesize that no financial strain reflects a lack of economic problems or economic empowerment, or at least subjective experiences of it. A result would be that conflicts, arguments, etc. due to economics would have a less probability to occur. Findings suggest that financial problems/reduced financial means are associated with increased risk for abuse (Dong *et al.*, 2008; Naughton *et al.*, 2010; Oh *et al.*, 2006; Wolf and Donglin, 1999).

Living in a rented housing was associated with a higher risk of overall psychological abuse. The participants living in a rented housing may have been exposed to living arrangements with other people that led to lack of privacy and thus could predispose them to potential abuse. Living in rented housing may also be an indicator of difficult socio-economic conditions, which could ''facilitate'' exposure to abuse. Although little is known about the impact of living arrangements on elder abuse, studies suggest that poor socio-economic conditions and economic deprivation are related to various forms of abuse (Comijis, 1998; Naughton *et al.*, 2010; WHO, 2002; Wolf and Donglin, 1999).

Life-style, health factors and psychological abuse

Regarding alcohol use, we know only of two studies that addressed the relation between the elders own use of alcohol and their exposure to abuse. These studies found that the elder's misuse of alcohol was strongly linked to exposure to severe physical abuse (Friedman *et al.*, 2011) and abuse/neglect/exploitation (Choi and Mayer, 2000). In the latter case the misuse of alcohol may have happened to cope with the abuse. Additional data indicate that older persons with impaired judgement and memory due to misuse of alcohol may be more vulnerable to abuse/neglect (Bradshaw and Spencer, 1999; Korsberg *et al.*, 1999), and they also may be encouraged to drink to make them more compliant or to exploit them financially (Choi and Mayer, 2000).

Using health care frequently was also associated with overall psychological abuse. It is possible that elderly who often sought health care were more vulnerable to abuse compared to their counterparts. A reverse scenario could also explain the risk. That is, the psychological abuse may have led to various health problems, which in turn precipitated various visits to health care facilities. Other studies have in fact found a similar pattern (Dong *et al.*, 2005; Minayo, 2003; Songer *et al.*, 2000).

Participants who scored high in anxiety and somatic symptoms were at increased risk for overall psychological abuse. Anxiety disorders are common among older persons (Wolitzky-Taylor *et al.*, 2010), but the relationship between psychological abuse and anxiety

has not been extensively researched. A few studies have nevertheless reported results similar to ours (Barsky *et al.*, 2001; Comijis *et al.*, 1998; Gunzelman *et al.*, 2006). However, data indicate for instance that there is a close relationship between somatisation and depressive disorder in the elderly and that ''masked depression'' underlines somatisation (Bogner *et al.*, 2009; Sheeham *et al.*, 1999), and somatic symptoms may be the prominent presentation of anxiety and depressive symptoms (Sayar *et al.*, 2003; Simon *et al.*, 1999).

Somatic complaints are common among elderly (Wijeratne *et al.*, 2011), especially those with multiple health problems, including anxiety and depression (Barskey *et al.*, 2001; Gunzelman *et al.*, 2006). However, we have found only one study showing an association between somatic symptoms and psychological abuse, and it concerned older women (Fischer and Regan, 2006).

An explanation for the relation between anxiety, somatic symptoms and abuse could be that the symptoms were too much of a burden for those around the elders. This may have trigger discontent, anger, stress and tiredness expressed in form of abuse. Studies show for example that abuse may be linked to the victims' mental problems and dependence on others due to physical or intellectual disability (Bonnie and Wallace, 2003; Görgen *et al.*, 2009; Iborra, 2008; Lachs *et al.*, 1994; Naughton *et al.*, 2010). It is also possible that the older persons were provocative and aggressive toward those around them, and this led to victimisation (Comijis *et al.*, 1998; Görgen *et al.*, 2009; Perez-Rojo *et al.*, 2008). However, we did not address this issue.

Social support and psychological abuse

Also in the multivariate analysis, it was found that receiving high social support (e.g. being cared for) was associated with less risk of overall psychological abuse. This is in line with findings from elsewhere reporting a protective effect of social support on elder abuse (Acierno *et al.*, 2010; Dong and Simon, 2008; Naughton *et al.*, 2010). Lack of social support is linked to increased morbidity and mortality among elderly people (Penninx *et al.*, 1997; Temkin-Greener *et al.*, 2004; Wilkins, 2003) and availability of social support exerts positive effects on health and well-being (Hayes *et al.*, 2001; Muramatsu *et al.*, 2010; Okabayashi *et al.*, 2004; Thanakwang and Soonthrorndhada, 2011). However, still little is known about the mechanisms behind the relation between abuse and social support thus it has been suggested that social support might influence elderly mistreatment and abuse through different ways:

- high level of perceived social support can act as a buffer against stressful situations; and
- social support might intervene between experience of stress among elderly as well as a potential response to that stressful situation.

In addition, the association between social support and elderly abuse might be mediated by the presence or absence of social control (Dong *et al.*, 2008). It was argued that older adults with greater social support might have more social control, which in turn may reduce the risk of experiencing abuse/maltreatment, with the opposite being true (Dong *et al.*, 2008). However, the mechanisms underlying the relationship between social support and elder abuse need future clarification, especially on which factors modify or mediate this potential relationship (Berkman, 1984; Dong *et al.*, 2008; Tomaka *et al.*, 2006; Zhang *et al.*, 2007).

Limitations

This study has limitations. First, the data for the ABUEL project was collected in urban areas in seven countries, thus making generalizations to rural areas as well to the general population (60-84 years) of other countries in Europe somewhat difficult. Second, the study design was cross-sectional thus largely preventing to establish the nature and the direction of causality in the observed associations. Third, the data were obtained through self-report, thus the findings rely solely on the elders self-assessment. However, although the mentioned caveats, the study has its strengths. The sample is large and provides data from a variety of cultures. In fact, this is the first study reporting psychological

abuse and related factors in different cultural contexts. We used validated instruments, which were carefully pretested and culturally adapted. Finally, the overall results are in large in line with previous research.

Conclusions

The prevalence rates of overall psychological abuse were high across countries, and in particular Sweden, Germany and Lithuania. The lowest rates were seen in Spain and Italy. Although minor abuse was more common than severe, the latter is a source of great concern. Abuse was inflicted mostly by persons who had a relation with the respondents. In the regression analysis, results indicated that living in a rented house, drinking alcohol, using frequently health care, and reporting anxiety and somatic complaints were associated with higher risk of psychological abuse. On the other hand, being from Greece, Italy, Portugal and Spain as well as high social support were associated with a lower risk of psychological abuse.

Our data may have for instance public health implications as psychological abuse was almost equally distributed among women and men, and people living in Southern countries were at lower risk for it. Thus, the prevention of psychological abuse must consider such factors. Notwithstanding, further studies are needed to investigate the prevalence and risk factors of psychological abuse in the general population of the European region. This step is needed if policy makers are to design the much needed intervention programs to curb the ever growing abuse and mistreatment of elderly people in Europe.

Implications for practice

- Findings shed further light on elderly people's exposure to psychological abuse across cultures and countries.
- Findings may be useful for changing advocacy and legal policies regarding elder abuse, but also to change public perceptions of the phenomenon.
- Findings may be useful for the development of prevention and treatment interventions that consider elderly people's situation in various areas such as mental health, social support and economic strains.
- Findings may serve as a trigger for further research across cultures and countries, particularly with a longitudinal design, considering for example the relationship between mental, social support, economic strains, family structure and various types of elder abuse.

Notes

1. Sometimes mentioned as verbal or emotional abuse.
2. The data set was first available for processing in January 2011 after input, creation of indexes, etc.
3. Participants could choose between face-to-face interview or self-response where the questionnaire was sent to their homes. The self-response percentages were 38 per cent for Germany, 0.5 per cent for Greece, 0 per cent for Italy and Spain, 24.8 per cent for Lithuania, 2.3 per cent for Portugal and 63.9 per cent for Sweden.
4. *Germany*, Ethikkommission des Landes Baden-Wuerttenberg; *Italy*, Bioethics Advisory Committee of National Institute of Health and Science on Aging, INRCA; *Lithuania*, The Lithuanian State Data Protection Inspectorate and the Kaunas Regional Bioethics Committee; *Portugal*, Comité de Ética do Hospital de João; *Spain*, Comité de Etica en Investigación de la Universidad de Granada; *Sweden*, Regional Ethical Committee at Karolinska Institutet.
5. PF/PFR are used to describe and analyze heterogeneity between countries.

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