Abstract

Detection of elder abuse risk is a critical issue because a lot of cases remain hidden. Screening tools can be used to detect elder abuse. However, few tools have been developed for use with caregivers. The purpose was to develop a translation and adaptation of a Spanish version of the Caregiver Abuse Screen (CASE) and to assess its validity and reliability. The CASE was then used with 211 primary caregivers. Validity and reliability were evaluated, as well as the factorial structure of the instrument. This version showed good psychometric properties. It was found to have strong internal consistency and split-half reliability as well as allowing for a good replication of the original factorial structure. Additionally, several variables related to elder abuse were linked to the CASE such as depression, burden, frequency and reactions to problem behaviours. The version developed showed sufficient validity and, reliability and could be considered as a suitable instrument to assess risks of elder abuse in a Spanish-speaking context.

Keywords: Elder abuse risk; Caregiver; Depression; Burden; Frequency and reactions to problem behaviour; Social support.

**Introduction**

Elder abuse is not a new phenomenon although it has only recently been recognized as a social and health problem on a global scale. Many definitions of elder abuse have been proposed. One of the most widely accepted was developed by the UK charity Action on Elder Abuse and adopted by the World Health Organization (WHO). It was published in the WHO and International Network for the Prevention of Elder Abuse (INPEA) Toronto Declaration. It defines elder abuse as *a single or repeated act, or lack of appropriate action, occurring within any relationship where there is an expectation of trust, which causes harm or distress to an older person. It can be of various forms: physical, psychological/ emotional, sexual, or financial/material abuse, and/or intentional or unintentional neglect* (WHO, 2002). The consequences of elder abuse can be especially serious, such as health and psychological problems, reduced quality of life and even mortality (see for example, Perel-Levin, 2008), and early detection could help to avoid many of these adverse consequences. Therefore, the accurate detection of elder abuse is important but this has proved difficult for several reasons. Firstly, there are some barriers relating to the elder, the person responsible for the elder abuse or others, such as denial of the situation or ageism that make detection difficult (see for example, Kahan & Paris, 2003). Secondly, many professionals have not received training about elder abuse and are uncertain how to recognize it (Perel-Levin, 2008). Furthermore, although several screening and assessment tools have been developed to detect elder abuse, none of them are optimal (Cohen et al., 2007) because they are considered as inaccurate, non-specific or insensitive and/or not reliable enough (Perel-Levin, 2008). Finally, there are a number of similarities between symptoms of chronic disease and signs of abuse, which can complicate identification (Carney, Kahan, & Paris, 2003).

One way to detect the risk of, or actual elder abuse is by using screening or assessment tools. Several instruments to identify and assess the presence of elder abuse have been developed and are currently available to collect data in a standardized format (Fulmer et al., 2012), but generally there is a lack of suitable, brief, easily administered and widely accepted tools (Perel-Levin, 2008). Many screening tools have been criticized as being too broad and failing to identify elder abuse. Moreover, there is a debate among professionals around the issue of routine screening (or not) for elder abuse and other types of family violence (Wathen & McMillan, 2003).

These tools have different characteristics and so it is not possible to compare their results due to a number of reasons. These are as follows: a) Some tools assess quantitative characteristics, such as the Healthy Attitudes to Living (HALF: Ferguson, 1983), others assess qualitative characteristics, such as the Harborview Medical Centre Elder Abuse Diagnostic and Intervention Protocol (Quinn & Tomita, 1997), and yet others assess quantitative and qualitative characteristics, such as the Screening Tools and Referral Protocol (STRP; Bass et al., 2000). b) The tools can be applied in different settings (community, clinical, and so forth) but many are specific to particular settings. c) Some of them detect risk factors and others detect either actual or suspicions of elder abuse such as the Elder Abuse Suspicion Index (EASI: Yaffé et al., 2008; Pérez-Rojo et al., 2010). d) Different tools have been developed to assess elders who are cognitively intact, the person responsible for the elder abuse or both of them. With respect to tools used with elders, several tools have been developed such as the Hwalek-Sengstock Elder Abuse Screening Test (H-S/EAST: Hawlek & Sengstock, 1987), the Modified Conflict Tactics Scale (Beach, Shulz, Williamson, Miller, Weiner, & Lance, 2005), the Elder Assessment Instrument (EAI: Fulmer et al., 1984), the EASI tool (Yaffé et al., 2008; Pérez-Rojo et al., 2010) and so on. In addition, there is often little information about their psychometric properties.

In Spain several of these tools have been used, but only a few of them have been adapted and validated. Convergent validity is particularly relevant when adapting measures to a different language or culture (Schweizer, 2012), and there remains a clear lack of such development in the case of elder abuse measures in Spanish. Pérez-Rojo et al (2010) carried out the linguistic and cultural adaptation and validation of the EASI tool, with three hundred and forty elders recruited through Primary Care Centers and Social Services Centers. The sensitivity and specificity was higher than in the original study and the scale reliability was moderated. On the other hand, only one tool, the Detection Scales for the Risk of Domestic Abuse andSelf-neglect Behaviour (EDMA: Touza, Prado, & Segura, 2011) has been fully developed in Spain. This tool is designed for social service professionals to assist them to detect risk of elder abuse situations and self-neglect behaviour. It consists of two scales: the Elder Scale and the Alleged Abuser Scale. In the study for this tool, which assessed the status of 278 elders and 229 of their relatives or close friends, forty-six social service professionals participated. The research team found a factor structure consistent with the theoretical framework. It also obtained very high rates of internal consistency and an adequate stability in the scores over time (Touza, Prado, & Segura, 2011).

However, screening tools that are currently available are generally inappropriate for use with elders with dementia, because the cognitive impairment can mean that individuals do not report elder abuse. In this case, it may be necessary to obtain information from their caregivers. Caring for an elder who has dementia is hard work and can have adverse effects on the caregiver’s own physical and mental health and such negative consequences can lead to situations of elder abuse (Natan, Lowenstein, & Eisikovits, 2010; Selwood et al., 2009). Several tools for use with caregivers, such as the Caregiver Abuse Screen (CASE; Reis and Nahmiash, 1995), the Cost of Care Index (Kosberg, 1988), the Indicators of Elder Abuse (IOA; Reis and Nahmiash, 1998), or the Expanded Indicators of Abuse Screen (E-IOA; Cohen et al., 2006) have been developed since the issue was recognized as a problem in need of attention.

Accurate screening tools are a necessity for the early detection of and intervention in elder abuse and this is especially the case for elders with dementia who are likely to be more vulnerable to situations of elder abuse. In Spain, although the CASE tool has been used in some studies with informal caregivers, no relevant information about its psychometric properties exists. In addition, researchers have identified a wide range of variables associated with increased risk of elder abuse. Firstly, there are factors related to caregivers such as: gender, with women being identified as perpetrators of elder abuse more frequently in Spanish contexts (Sancho et al., 2011); age, whereby older caregivers are at greater risk of becoming abusive (Sancho et al., 2011); mental problems like depression and anxiety (Sancho et al., 2011; Pérez-Rojo et al., 2008; Quinn & Tomita, 1997), burden (Pérez-Rojo et al., 2008), and so on. Secondly, there are factors related to the elder like age, where older people are at greater risk (Sancho et al., 2011; Garre-Olmo et al., 2009). Further risk factors are behaviour problems (Natan, Lowenstein, & Eisikovits, 2010; Pérez-Rojo et al., 2008), cognitive impairment (Natan, Lowenstein, & Eisikovits, 2010) or gender, although contradictory results exist; that is, some researchers point out that to be a woman is a risk factor (Sancho et al., 2011) for experiencing abuse and others point out that to be a man is a risk factor (Pillemer & Finkelhor, 1988), however severity of abuse points more to risks for women. Finally, there are factors associated with the context of the situation, such as isolation (Kosberg, 1988; Schiamberg & Gans, 2000), and living situations (Sancho et al., 2011; Lowenstein et al., 2009; Oh et al., 2006), which appear to be strongly relevant.

The goal of this study was to analyze the validity and reliability of the Spanish version of the CASE to assess risk of elder abuse by informal caregivers. The CASE has not yet been validated for use in Spain and so it might be compared with the previous original study. On the other hand, the CASE tool is associated with very important variables relating to the elder, the person responsible for the elder abuse and the context of the situation, therefore it could be a very comprehensive and useful instrument to assess and identify elder abuse in Spanish-speaking settings.

**Method**

*Population*

Participants were informal caregivers who take care of elders with dementia in both Madrid and the Basque Country, Spain. In order to participate in the study, caregivers were required to meet the inclusion criteria: to be aged 18 years or over, to be the main informal caregiver of an elder with dementia and to have been caregiving for a minimum period of three months. The final sample achieved was 211 caregivers. The characteristics of the sample are shown in Table 1.

*Measure*s

Different variables, that are usually considered to be relevant for the analysis of elder abuse, were assessed (means, standard deviations and range for the assessed variables are shown in Table 1).

*Sociodemographic variables:* information about caregiver age, gender and kinship, time spent caring (in months), age of elder and living arrangement (whether caregiver lived with the elder or apart from the elder) were obtained.

*Risk of elder abuse*: this was assessed with the Caregiver Abuse Screen (CASE; Reis & Nahmiash, 1995). This is a brief written measure completed by caregivers, which assesses the risk of committing elder abuse. It was designed specifically for use in community settings to assess physical, psychosocial abuse and neglect by primary or other unpaid caregivers, without enquiring directly about specific abusive behaviours. The CASE tool consists of eight items with dichotomous response categories, “yes” or “no” (with a range from 0 to 8). It was originally developed as part of an intervention and research project, PROJECT CARE. The original study established that the Cronbach´s alpha coefficient was 0.75 and two principal components were found with exploratory factorial analysis: neglect (items 5 and 7) and physical and psychosocial abuse (items 1, 2, 3, 4, 6, and 8). A recent published study evaluated the factorial validity of a Brazilian Portuguese version of the CASE and its results did not support the postulated two-factor solution. This study suggested a one-dimensional solution and in addition, a high internal consistency (α = 0.85) was found (Reichenheim, Paixao, & Moraes, 2009).

The original CASE tool was translated to Spanish following the recommendations for adaptation tests (Hambleton & Patsula, 1999). In the first place, the forward translation of the CASE, from English to Spanish, was carried out by two independent experts in elder abuse with a very good knowledge of both languages. The two translations were compared and the most acceptable option was agreed. Following that, a back-translation, from Spanish into English by a previously uninvolved and independent bilingual translator, confirmed the consistency of the translated version as compared with the original tool. The total score of CASE was used in this study. The Spanish version of the CASE tool is available upon request from the corresponding author.

*Social support:* The Psychosocial Support Questionnaire (Reig et al., 1991) was used to assess social support. This consists of six items and response scores range from 0 (never) to 3 (very often). It assesses caregivers’ perceptions of the frequency of support they receive. In the current study this scale shows a moderate internal consistency (α = 0.79).

*Depression*: This was assessed with the Center for Epidemiological Studies Depression Scale (CES-D: Radloff, 1977). The scale consists of 20 items rated on a 4-point Likert scale ranging from “rarely or none of the time (less than 1 day)” (1) to “most or all the time (5-7 days)” (4) (with range 0-60). Each item assesses the frequency with which a person has felt depressive symptoms during the previous week. This scale shows a good reliability in adult populations, in general, as well as with elders and caregivers (Radloff, 1977). Moreover, in the current study this scale shows a moderate internal consistency (α = 0.71). The Spanish version has also demonstrated adequate psychometric properties in a sample of elderly caregivers (Losada et al., 2012).

*Burden*. This element was measured by using the Zarit Burden Interview (ZBI: Zarit et al., 1980). This measure consists of 22 items using a 5-point Likert scale with responses from “never” (0) to “almost always” (4), with total scores ranging from 0 to 88. The tool investigates the impact of the patient’s disability on the carer’s quality of life, physical and emotional health, social and family relationships and financial difficulties. The ZBI is the most widely referenced scale in studies of caregiver burden and in this/our study this scale shows a high internal consistency (α = 0.88).

*Frequency and reaction to behavioural problems*. This was assessed by the Revised Memory and Behavior Problem Checklist (RMBPC: Teri et al., 1992). This scale consists of 24 items and each behaviour is rated on two scales: rate of occurrence, scored on a 5-point Likert scale ranging from “not at all” (0) to “extremely often” (4); and caregiver reaction to each behaviour, scored by the degree to which the behaviours “bothered or upset” the caregiver, ranging from “not at all” (0) to “extremely” (4). In our study these scales show a high internal consistency (α = 0.84 and α = 0.81 respectively). The Spanish version of the RMBPC presents adequate psychometric properties (Salvia et al., 2011).

*Procedure*

The caregivers who participated in this study were contacted by telephone and were invited to participate in the study after receiving information about the nature and the goals of the research. Following this, face to face interviews were carried out with those caregivers who agreed to take part. The interviews were performed at a day centre, or at the elder's home if they had difficulties in going to a centre. A psychologist trained in research concerning caregivers conducted individual interviews and these consisted of application of a standardized assessment protocol with participants. In all cases, confidentiality and anonymity of caregivers were assured and caregivers completed informed consent procedures, which included the main information about the study.

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**Data analysis**

Descriptive and analytical statistics were computed/calculated using the software SPSS version 18.0. Initially, descriptive statistics were calculated for the characteristics of the sample: frequency and percentages for categorical data and mean, standard deviation and range for continuous variables. Following this, Cronbach's α coefficient and split-half correlations were conducted to examine the reliability of the CASE. Then, an exploratory factor analysis was performed using principal components analysis as the estimation method, together with varimax rotation, to analyze the factor structure of the Spanish version of the CASE. The Kaiser-Meyer-Olkin Test (KMO) and the Bartlett Test of Sphericity were used to evaluate the adequacy of the sample: the KMO-test ranges from 0 to 1 and is acceptable if it is higher than 0.5; if the Bartlett’s test has a very low significance (p < 0.05) the factorial model is considered adequate. Finally, inferential statistical tests (Pearson correlations and Student’s *t*- tests, with estimation of Cohen’s *d* effect sizes) were carried out to assess the construct validity between different variables related to abuse and the CASE. Correlation estimates between subscales of the CASE with other relevant variables were compared with Fisher’s *z* transformations. Higher and moderate frequency of and reactions to problem behaviour, depression and burden, as well as poorer social support was expected for persons who obtained higher scores in the CASE or subscales.

**Results**

The characteristics of the total sample of caregivers are shown in Table 1. More women than men took part in the study, most people were married, lived with the older person and were mainly either their spouses or children. They obtained high scores in depression, and burden of caregiving. There were a relevant percentage of missing data in the social support measure (46.9%), and some data were also missing for the time caring (8.5%) and the age of the elder (0.9%). There were not missing data for the rest of variables. These missing data were listwise deleted, as only univariate analyses were performed. The percentage of persons responding “yes” to each item of the CASE are presented in Table 2.

*Factor analysis*

The high value (0.88) in the Kaiser-Meyer-Olkin (KMO) test supported the sampling adequacy for factor analysis. Likewise, the significant Bartlett’s test of sphericity (chi-square (28)= 591.89; *p*< 0.001) suggests that these data are adequate for factorial analysis. The degree of over-determination of the model (8 variables and 2 factors) and the moderate-to-high commonalities of the variables, indicate that the sample size is adequate for this analysis, according to the usual recommendations of having at least 5-10 individuals per item (MacCallum, Widaman, Zhang, & Hong (1999).

From the exploratory factor analysis, two factors comprising all items were extracted with eigenvalues higher than 1.0 (eigenvalues were: 3.93 for the first component and 1.07 for the second component). Additionally, a scree plot (eigenvalue against eigenvalue rank) produced a very pronounced ‘elbow’ after the two first factors. These two factors accounted for 62.54% of total variance (factor 1 accounted for 43% after orthogonal rotation, while factor 2 accounted for 19.54%). Rotated factor loadings of the CASE and commonalities are shown in Table 2.

The first factor contains six items referring to physical and psychosocial abuse (e.g. “Do you sometimes have trouble making (---) control his/her temper or aggression”). This factor, in which all items are positively scored, was labeled *Interpersonal abuse*. The second factor includes two items which reflect neglect (e.g. “Do you sometimes feel you can´t do what is really necessary or what should be done for (---)” and was therefore labeled *Neglect*.

The total score on the Caregiver Abuse Screen (CASE) consists of the sum of the scores of both two subscales. The higher the score obtained, the higher the risk of elder abuse occurring. Finally, 100% of commonalities were above .50 (ranging from .55 to .73).

*Reliability*

The Cronbach´s α coefficients for the full scale and the interpersonal abuse factor and neglect factor indicated good internal consistency (0.84, 0.86, and 0.60, respectively) and the split-half correlation coefficients were 0.80, 0.85, and 0.59, respectively. These results show good reliability indices for both the full scale and its factors.

*Validity*

The construct validity of the scale was indirectly assessed by examining correlation estimates between the CASE total score and subscales with the variables that were previously associated with elder abuse (see Table 3). As can be seen, statistically significant positive correlations were found between the CASE and frequency of and reactions to problem behaviour, depression, and burden. Higher scores in Interpersonal Abuse and Neglect were also associated with a higher frequency of and reactions to problem behaviour, depression and burden. Correlation estimates were significantly higher for the Interpersonal Abuse subscale compared with Neglect in relation with reactions to problems (*z*=2.43; *p*=0.015), depression (z=2.34; *p*=0.019), and burden (*z*=3.56; *p*<0.001). There were no statistically significant associations between the final CASE score and the CASE factors and social support.

Associations with demographic variables

There was a statistically significant difference in the risk of elder abuse according to living situations, with a higher score in the CASE for individuals living together (mean=2.83; SD=2.58) than those living separately (mean=1.67; SD=2.31); *t* (208) = 2.94, *p* = 0.004; *d* =0.30, 95% CI: 0.01,0.61). Moreover, there was a significant negative relationship between the risk of elder abuse occurring and caregiver age (r = -0.180 *p* = 0.009); that is, the risk of elder abuse happening was higher for younger caregivers. There was no significant association between the risk of elder abuse and caregiver gender, although there was a tendency that suggests that women caregivers (mean=2.78; SD=2.50) could have higher risks of committing elder abuse than men (mean=2.08; SD=2.61): *t* (208) = 1.93 *p* = 0.055; *d* =0.28, 95% CI: -0.01, 0.56). There were also no significant associations between the risk of elder abuse occurring and kinship.

**Discussion**

The main aim of this study was the translation, adaptation and examination of the psychometric properties of the Spanish version of Caregiver Abuse Screen (CASE) for assessing risk(s) of elder abuse by informal caregivers of elders with dementia. It is the first time that validation has been conducted and verified in Spain and this enabled us to compare it with the previous original study.

The results of this study provide preliminary evidence of the reliability and validity of the Spanish version of CASE. Exploratory factor analysis of the Spanish version of the CASE tool showed a two-factor structure that accounted for 62.5% of the variance. These factors were labeled *Interpersonal abuse* and *Neglect*. This suggests that neglect is distinct from other categories of abuse and is susceptible to separate investigation. In this regard, the factor-loadings confirmed the () factor structure reported in the original version of the tool (Reis & Nahmiash, 1995) and individual items were included in the same factors as they appeared in the original version. The commonalities indicated that items shared a reasonable amount of variance with all the other items. Therefore, the construct validity of the translated CASE tool is supported by our findings.

Psychometric measures such as internal consistency (Cronbach´s alpha = 0.84) and split-half correlation (0.80) were satisfactory and in fact better than in the original study. Usually, values for Chronbach’s alpha of 0.7 and above are considered acceptable in adaptation and validation phases (Nunnally, 1981). Internal consistency was lower for the Neglect factor, as expected, given that it is only composed of two items; however, this scale showed adequate performance on the validity tests reported here.

The construct validity of the Spanish CASE was also supported by the correlations found between the CASE (total score and factors) and caregiver age, living situation, depression, frequency of and reactions to problem behaviours, and burden, which have been previously associated with abuse. Likewise, there was a trend towards association between caregiver gender and risk of elder abuse. These findings are in concordance with reports from previous studies (Sancho et al., 2011; Pérez-Rojo et al., 2008; Reis & Namiash, 1995; Schiamberg & Gans, 2000). However, several other risk factors that have been reported as related to elder abuse by family caregivers in previous research were not supported by the present study. Specifically, no relationship was found between the risk of elder abuse and social support (Reis & Nahmiash, 1995) or older age of caregivers (Garre-Olmo et al., 2009). The lack of correlation between social support and risk of elder abuse is difficult to explain and it has been frequent and systematically reported in the literature. First, there were missing data in the social support measure (46.9%), which implies a lack of statistical power compared with the rest of correlation estimates making more difficult to finda statistically significant relationship between these variables. They were, anyway, lower than the correlations of the rest of variables with elder abuse, and lower than expected, although missingness could have been related with the association between both variables (which could not be tested). A recent study, however, has found that only perceived social support, but not instrumental social support was associated with increased odds of elder abuse (Dong & Simon, 2010). The questionnaire used here (Psychosocial Support Questionnaire; Reig et al., 1991) is a brief scale thought to assess social, emotional, and instrumental frequency of social support. Speculatively, the instrumental component was more salient in the responses of people in the present study.

On the other hand, CES-D scores suggested that a relevant proportion of individuals had mild to high levels of depressive symptomatology, as the mean (17.6) was above the usually accepted cut-off score of 16 (Li & Hicks, 2010; Radloff, 1977; Radloff & Locke, 2008). Likewise, the mean score for burden was high, over the cut-off score of 24-26 suggested for identifying mental health problems in family caregivers (Schreiner, Morimoto, Arai, & Zarit, 2006).

The excessively high correlations found between the total score for CASE with burden (0.71) and reactions to problem behaviour (0.63) deserve specific analysis. More moderate correlations should in principle be expected if CASE is measuring a different construct. However, they share a maximum of 50.4% of variance. On the other hand, psychological problems or psychiatric illness of the caregiver have been found to be strongly associated with the probability of abuse (OR=3.12; Johannesen & Lo Giudice, 2013) and distressing and intense behavioural and psychological symptoms of dementia are directly related with the presence of depression in caregivers (e.g., Fauth & Gibbons, 2013). That is, although distressing situations resulting from high burden and its psychological consequences are expected to be relevant predictors of the probability of elder abuse, CASE appears to assess a conceptually different phenomenon and it is proposed as a helpful tool for the assessment of elder abuse in Spanish samples.

This study had several limitations, which need to be acknowledged. In the first place, this is a preliminary exploratory study of the Spanish version of the CASE’s psychometric properties. This study should be repeated with a larger sample to discover whether these results are maintained or not. In any case, however, given the usual problems to obtain access to samples of family caregivers of people with dementia, our sample could be considered as an average of similar studies. Second, although internal consistency of the scale (and its factors) has been found to be reasonable, no test-retest assessment of risk of elder abuse was made, and data on the stability over time of the CASE scores is not available. Third, there was inadequate sampling of items measuring neglect as this scale only contains two items. It may be beneficial to develop further items for a factor that taps more clearly into the neglect dimension because neglect appears to be a very prevalent category of elder abuse although there is a lack of scientific research for detection of and intervention in situations of neglect (Fulmer, 2008).

A further limitation is that the CASE tool does not assess financial abuse and this is a common problem among elders; it could be very interesting to add items that assess this type of abuse. However, the scale does include the most commonly found forms of elder abuse: neglect and psychological abuse. Moreover, it may be interesting to explore the usefulness of the CASE tool to assess the risk of elder abuse in caregivers of people suffering other disabilities and long-term conditions or of abuse in younger populations affected by such conditions. Furthermore, this is a convenience sample and then the results are not readily applicable to the overall population. The study should therefore be replicated with a larger sample to determine whether these results are maintained or not. In addition, another limitation may be acknowledged regarding a potential bias in the sample, related to the difficulty for accessing and contacting caregivers with a high risk of being abusers. Caregivers were invited to participate in the study, giving them information about the nature and goals of the research (to study elder abuse). It is therefore plausible to assume that some caregivers at a high risk of committing elder abuse could have refused to participate in the study (likely due to their fear of being discovered), and that, as a consequence, the current sample might be mainly composed of caregivers at a lower risk of committing abuse. This possibility clearly further limits the generalizability of the results.

The main contributions of the present study may be summarized as follows: it provides evidence of the importance of the assessment of the risk of elder abuse in order to avoid the actual occurrence of elder abuse situations, and specifically based on the results obtained, this study has shown that this Spanish version of the CASE is a valid and reliable screening instrument for detecting elder abuse risk by informal caregivers in Spain, although is important to take into account the relevant limitations. Screening is important because elder abuse, like other forms of domestic violence, is often a hidden problem. The lack of empirically tested instruments constitutes a critical impediment to research and the development of knowledge and understanding in this area. Furthermore, it hinders the ability to detect, treat, report and intervene in elder abuse situations when they occur. This tool can be used in interventions to prevent elder abuse (both pre-intervention and post-intervention) to check the reduction or elimination of the risk of elder abuse, which, in turn, could lead to the development of better treatment of (behaviours towards) elders. Test results should be used only as an initial first step. More information about the situation should be obtained and used to decide whether more intensive investigation or a report of suspected abuse or neglect is necessary. The tool should not be used to predict specific type(s) of abuse and neglect, nor to make the final decision about the substantiation of abuse or neglect in any particular case. Like screening tests used in medical settings, a positive indication suggests the need for further examination and exploration, rather than a proof of the actual presence of the condition.

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Table 1. Sample characteristics

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variables |  | N | % | Mean ± SD | Range |
| *Caregiver characteristics* |
| Gender | Men/Male | 76 | 36.0 | -- | -- |
| Women/Female | 135 | 64.0 | -- | -- |
| Age (years) | 211 | -- | 68.18 ± 11.77 | 26-90 |
| Marital Status | Married | 170 | 81 | -- | -- |
| Single | 16 | 7.6 | -- | -- |
| Divorced | 6 | 2.9 | -- | -- |
| Widower | 18 | 8.6 | -- | -- |
| Living arrangement | 211 | -- | -- | -- |
|  | With elder | 156 | 73.9 | -- | -- |
| Apart from elder | 55 | 26.1 | -- | -- |
| Caregiver relationship | 208 | -- | -- | -- |
|  | Spouse | 106 | 51 | -- | -- |
| Children | 54 | 26 | -- | -- |
| Other (brother, sister, parent in law) | 48 | 23 | -- | -- |
| Time caring (months) | 193 | -- | 49.51 ± 34.32 | 3-146 |
| Risk of elder abuse (CASE) | 211 | -- | 2.53 ± 2.56 | 0-8 |
| Depression | 211 | -- | 17.62 ± 7.93 | 4-38 |
| Burden | 211 | -- | 28.10 ± 15.43 | 0-63 |
| Frequency of behavioural problems | 211 | -- | 33,04 ± 16,95 | 0-74 |
| Reactions to behavioural problems | 211 | -- | 15,99 ± 12,33 | 0-52 |
| Social support | 112 | -- | 10.28 ± 4.21 | 1-18 |
| *Elder characteristics* |  |  |  |  |
| Age (years) | 209 | -- | 79.33 ± 8.62 | 60-102 |

Table 2. Factor loadings of the CASE items

|  |  |  |  |
| --- | --- | --- | --- |
| **CASE items** | **%** **of yes** | **Factors** | **Communality** |
| **1** | **2** |
| Eigenvalue  | -- | 3.93 | 1.07 | -- |
| Percentage of variance explained | -- | 43.00 | 19.54 | -- |
| 1. Do you sometimes have trouble making (\_\_) control his/her temper or aggression?
 | 36.7 | **0.767** | 0.155 | 0.613 |
| 1. Do you often feel you are being forced to act out of character or do things you feel bad about?
 | 44.3 | **0.783** | 0.211 | 0.658 |
| 1. Do you find it difficult to manage (\_\_´s) behavior?
 | 23.8 | **0.692** | 0.276 | 0.556 |
| 1. Do you sometimes feel that you are forced to be rough with (\_\_)?
 | 29.5 | **0.808** | 0.057 | 0.655 |
| 1. Do you sometimes feel you can´t do what is really necessary or what should be done for (\_\_)?
 | 38.1 | 0.139 | **0.841** | 0.727 |
| 1. Do you often feel you have to reject or ignore (\_\_)?
 | 28.1 | **0.712** | 0.203 | 0.549 |
| 1. Do you often feel so tired and exhausted that you cannot meet (\_\_´s) needs?
 | 26.2 | 0.222 | **0.800** | 0.689 |
| 1. Do you often feel you have to yell at (\_\_)?
 | 26.2 | **0.728** | 0.161 | 0.556 |

Note. Items that contributed more to each factor are shown in bold.

Table 3. Correlations between CASE, and CASE subscales with other relevant variables

|  |  |  |  |
| --- | --- | --- | --- |
|  | CASE total score | Interpersonal abuse | Neglect |
| Interpersonal abuse | 0.961\* | -- | -- |
| Neglect | 0.660\* | 0.427\* | -- |
| Social support | -0.180 | -0.188 | -0.053 |
| Frequency of problem behaviour | 0.428\* | 0.363\* | 0.335\* |
| Reaction to problem behaviour | 0.625\* | 0.572\* | 0.390\* |
| Depression | 0.484\* | 0.458\* | 0.259\* |
| Burden | 0.710\* | 0.677\* | 0.442\* |

\*p < 0.01