Review

An assessment of interventions that target risk factors for elder abuse

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What is known about this topic

• Elder abuse is an important public health and societal problem which requires a response from both the primary healthcare and social service sectors.
• Current knowledge about the effectiveness of many of these approaches is limited.
• There is a need to identify evidence-based interventions.

What this paper adds

• Identifies a body of empirical research that evaluates prevention interventions.
• No accounts of multi-modal interventions addressing key risk factors at the level of the elder person were identified.
• There is currently insufficient evidence to guide the implementation of interventions that prevent abuse.

Abstract

Although there is increasing concern about both the prevalence of, and harms associated with the abuse of older adults, progress in the development of interventions to prevent its occurrence has been slow. This paper reports the findings of a systematic review of the published literature that identified studies in which the outcomes of preventative interventions are described. A total of eight different intervention trials, published since 2004, are described across the primary, secondary and tertiary levels of prevention and in terms of the types of risk factor that they target. The current evidence to support the effectiveness of these interventions is not only limited by the small number of outcome studies but also the poor quality of evaluation designs and the focus of many interventions on single risk factors. It is concluded that work is needed to strengthen the evidence base that supports the delivery of interventions to prevent elder abuse.

Keywords: elder abuse, intervention, prevention, risk factors

Introduction

Governments and healthcare providers are increasingly facing a range of different challenges associated with meeting the needs of an ageing population. A specific issue arises in fulfilling their responsibility towards ensuring the safety and well-being of older adults, who are often identified as particularly vulnerable to abuse that is perpetrated by both family members and professional caregivers. Indeed, elder abuse is increasingly being recognised as an important public health problem, which requires a response from both the primary healthcare and social service sectors. Yet, even though a number of different types of intervention have been trialled, including advocacy programmes, support groups, care co-ordination and public education, and multidisciplinary case management approaches (Dong 2015), current knowledge about the effectiveness of many of these approaches is limited (Ploeg et al. 2009). The aim of this study
was to systematically review the evidence gathered over the last 10 years relating to the outcomes of these interventions. This is an important task, not only in relation to the development of evidence-based interventions, but also to decision-making with regard to the wider implementation of those interventions that can be expected to be most effective. We start, by briefly outlining what is known about the prevalence of elder abuse in western societies and those factors that appear to be associated with its occurrence.

Defined by the WHO (2008) as encompassing physical, sexual, psychological/emotional and financial act(s) of deliberate harm and/or neglect, elder abuse can have devastating consequences for the older person. It has, for example, been associated with increased risk of premature death, greater use of healthcare services (especially emergency service use and hospitalisation), increased nursing home placement, disability, chronic pain, financial ruin, psychosocial distress and poor physical health (Burnes et al. 2014). There is reason to suspect that it is commonplace, although there are significant challenges associated with any attempt to collect accurate prevalence data in a context in which elder abuse has historically been regarded as an essentially private matter. Cooper et al.’s (2008) review, for example, concluded that over one in three carers working in residential care settings will admit to perpetrating some form of abuse. Of course, and as Schiamberg et al. (2011) point out, even this is likely to underestimate the true extent of the problem given that it is derived from the reports of caregivers themselves. Inconsistent definitions of ‘abuse’ have also hampered the collection of reliable data, especially in relation to the different contexts in which it occurs. Abuse can, for example, occur in the home or in a care facility; the perpetrator can be a close relative such as spouse or an adult child, friend, stranger or healthcare professional; and abuse can occur as part of a lifelong pattern of family violence or only emerge when the older person becomes frail and dependent.

Elder abuse is best conceptualised as resulting from a complex interaction between the victim and perpetrator, which is influenced by specific individual characteristics, the quality of the relationship, and the influence of the wider social and cultural environment. A review by Johannesen and LoGiudice (2013) identified a number of different risk factors for abuse among elders living in the community. Those that related to the elder person included cognitive impairment, behavioural problems, psychiatric illness or psychological problems, functional dependency, poor physical health or frailty, low income or wealth, trauma or past abuse, and ethnicity. Factors associated with the perpetrator were caregiver burden or stress, and psychiatric illness or psychological problems, with factors associated with the relationship categorised as family disharmony, poor or conflictual relationships, and a range of environmental considerations including low social support and living with others. The risk factors most strongly associated with abuse were at the relationship (family disharmony, poor or conflictual relationships) and environmental (low levels of social support) levels. A recent review by Dong (2015) identified physical impairment on the part of the elder as a particular risk factor, with elders with Alzheimer’s disease reported to be 4.8 times more likely to have experienced elder abuse than those without. It is also the case that older adults are often placed in high-risk situations as a result of the need for the long-term care that is required to manage chronic disease (Schiamberg et al. 2011). There is a smaller body of literature which has sought to identify risk factors for elder abuse that are specifically associated with institutional care; however, some of the characteristics that have been associated with maltreatment in care home settings are a lack of staff qualifications and training, staff shortages, high personal stress among staff, burnout, negative attitudes, and incorrect or inadequate application of legislative safeguards in the care of older people (WHO, 2008).

From a public health perspective, any formal attempt to prevent elder abuse should target known risk factors associated with this form of maltreatment, seeking to either reduce their presence or intensity. To that end, the aim of this study was not only to examine the strength of evidence that exists to support the delivery of current interventions to prevent elder abuse but also to identify the types of risk factor that are targeted. Consideration is also given to whether interventions lie within the primary level of prevention (preventing abuse before it arises and targeting whole populations), the secondary level (mitigating or preventing the further development of abuse by targeting at-risk individuals) and the tertiary level (preventing further occurrences of abuse by targeting known perpetrators). For this study, the WHO’s (2008) definition of elder abuse as an intentional or unintentional single act or multiple acts and/or omissions that result in distress or harm to older adults, with this harm being physical, verbal, psychological/emotional, sexual and/or financial in nature has been adopted.
Interventions to prevent elder abuse

Method

Search strategy and selection criteria

Preliminary searches were carried out by two researchers, independently, using multidisciplinary databases which allowed a wide range of relevant articles from low-, middle- and high-income countries to be located. A combination of search terms and limiters (e.g. 2004-present, English language, full-text) were applied. The final search terms used (which resulted in the most relevant hits in August 2015) were: (elder* or old* or aged) AND (abuse or violent* or mistreatment or maltreatment or rape) AND (program* or initiative or impact or interven* or evaluat* or outcome or legislat* or law or legal or measure* or treatment or policy or trial) AND (prevent or reduce or improve or help or assist* or effective* or protect*). This resulted in a total of 6725 identified articles.

The initial screening involved a review of the abstracts by both researchers. Articles were retained if they: (i) described a study (i.e. not a discussion or policy review); (ii) were peer-reviewed; (iii) included outcome data (including qualitative/descriptive data); (iv) defined elder abuse victims as being at least 60 years of age; (v) were available as full text; (vi) were in English; (vii) were published during or after 2004; and (viii) had a prevention or intervention focus. Articles were excluded if they did not meet the above criteria, were not relevant (e.g. considered cancer/medical issues in elderly people), provided insufficient detail, were duplicates of studies already included and focused exclusively on elder self-neglect. Articles identified as potentially relevant were then read in their entirety (full text) by the two researchers to determine their suitability for inclusion. Opinion differed in relation to only two papers, and after each re-reading and discussing inclusion criteria, a consensus was reached. Figure 1 provides a full flow chart of the search process. This resulted in a final pool of only eight studies which were screened for methodological quality using the Maryland Scientific Methods Scale (Farrington et al. 2002), a system that ranks research designs according to the strength of internal validity. Scores on this scale generally reflect the level of confidence that can be placed in an evaluation’s conclusions about cause and effect – in other words, the degree of certainty that any observed changes are a direct result of a particular programme or service. Level 0 studies employ qualitative research methodologies using interviews, focus groups or other qualitative methods. Level 1 studies are correlational study with no comparison group, whereas Level 2 studies report a temporal sequence between the intervention and the outcome (pre-post study), or the presence of a comparison group without demonstrated comparability to the intervention group. Level 3 studies involve a comparison between two or more comparable units of analysis, one with and one without the programme (no random assignment to groups) and Level 4 studies involve a comparison between multiple units with and without the programme, or using comparison groups that evidence only minor differences and include studies in which it has been clearly demonstrated that, before the intervention, there is very little difference between comparison groups. Finally, Level 5 studies utilise random assignment and analysis of comparable units to programme and comparison groups and are considered to provide the strongest evidence. The identified studies were then classified as intervening at the primary, secondary or tertiary level of intervention and a record made of the primary risk factors targeted in the intervention.

Results

Most of the studies identified by the search strategy were descriptive and reported only limited outcome data, with only one study utilising a quasi-experimental or controlled design (Teresi et al. 2013). At the level of primary prevention only two studies were identified (see Table 1), both of which targeted the risk factor of inadequate training in professional carers. The first of these, reported by Smith et al. (2010), involved a presentation about elder abuse to nursing assistants, with participants asked to record their reactions. There was no pre-post testing, randomisation of participants or control comparisons. The second, published by Harmer-Beem (2005), involved training dental hygienists to improve their awareness of the issue. Responses to a pre- and post-test postal questionnaire suggested that the training did increase their ability to recognise elder abuse and neglect.

Only one study was classified as a secondary-level intervention (see Table 2). In this study, reported by Hsieh et al. (2009), nursing home staff who were identified as at risk from their scores on a caregiver elder abuse behaviour scale received an educational intervention and participated in group discussion. Comparison with the ratings of a control group revealed that those in the intervention group reported lower levels of behavioural abuse and greater knowledge about abuse.

Table 3 outlines the five studies which were classified as describing the outcomes of interventions at
the tertiary level of prevention. These interventions targeted risk factors in the areas of inadequate training, physical health and disability, breakdown in family relationships, and a lack of case review or co-ordination between responsible agencies. The methods to assess effectiveness varied from client satisfaction, the effectiveness of team working, the identification of abuse, and staff gains in knowledge and reporting behaviours. The most methodologically rigorous of these (rated as a 4 in the Maryland system) involved a training intervention with professional caregivers to 1405 residents from 47 New York City long-term care facilities (nursing homes) (Teresi et al. 2013). The programme aimed to improve the identification and intervention of resident-to-resident elder mistreatment, with the intervention group showing higher levels of recognition and documentation of mistreatment following training. The other studies examined intervention to improve co-ordination between responsible agencies and improve team effectiveness (Wiglesworth et al. 2006, Navarro et al. 2010), to identify abuse (Heath et al. 2005) and to address family dysfunction (Holkup et al. 2007).

Discussion

The identification of elder abuse as a significant and potentially increasing public health and societal problem requires a strategic response. The aim of this review was to identify those preventative interventions that have been shown to have the potential to reduce abuse by addressing those risk factors that are thought to be associated with its occurrence. However, the results of a systematic search of the published literature identified only a few studies that have attempted to systematically evaluate the outcomes of this type of intervention. A lack of information about programme outcomes creates particular problems for policy makers who, it has been suggested, often struggle to make evidence-based decisions about which programmes to replicate, generalise or scale up. This leads to a situation where
## Table 1 Primary prevention interventions targeting known risk factors associated with elder abuse

<table>
<thead>
<tr>
<th>Author(s) (year)</th>
<th>Country</th>
<th>Risk factors – targeting who and why</th>
<th>Setting; participants; type of abuse (N)</th>
<th>Intervention</th>
<th>Maryland scale rating for methodological rigour</th>
<th>Outcome measure: key findings (effect size or odds ratio where reported)</th>
<th>Limitations</th>
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<tbody>
<tr>
<td>Smith et al. (2010) USA</td>
<td>Professional caregivers</td>
<td>Inadequate training</td>
<td>Setting: Tertiary education Participants: Students in a nursing assistants course (N = 78) Type of abuse: Physical, and psychological</td>
<td>Information presented about elder abuse in the form of PowerPoint presentation (information about elder abuse including the extent of the occurrence, what to be aware of when working with elderly people, and reporting) and YouTube video (news report video footage of cases of elder abuse) as part of a didactic presentation about standards and ethics as part of the nursing curriculum.</td>
<td>0 (use of interviews, focus groups or other qualitative methods).</td>
<td>Students recorded their reaction to the material presented in the context of their previous knowledge of elder abuse. Students responded to material in a visceral way and provided evidence through their written comments of deeper thought and reflection of the issue of elder abuse. Of the 37% of students who entered information about their previous knowledge of elder abuse, 28.5% stated they never knew much and that the presentations/discussion increased their awareness; 53.5% knew about elder abuse but had not thought much about it; 18% did not hear anything knew from the presentations/discussion.</td>
<td>No pre-post testing; no control group or randomisation used; and no follow-up to see if students’ self-reported understanding held across time.</td>
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| Harmer-Beem (2005) USA | Professional caregivers | Inadequate training | Setting: Dental professionals’ training programme Participants: Dental Hygienists (N = 25) Type of abuse: Physical abuse and neglect. | Pre and post 10-item survey conducted. Intervention was abuse awareness (including elder abuse) training to increase reporting behaviour. Topics covered included ethical and legal responsibilities to report child and elder abuse; factors contributing to abuse; how to date bruising; how to phrase open-ended questions to determine child and elder abuse. | 2 (the comparability of the comparison groups is seriously compromised and no attempt has been made to control for this). | Mean scores were compared on a 10-item questionnaire pre-post training using t-tests. There was a significant increase in self-reported ability to recognise abuse and neglect, increase understanding of factors contributing to abuse, how to make a report and an increase in the likelihood to make such a report (P = 0.05) | Non-randomised sample with no follow-up. Participants’ perceived likelihood to act on suspected abuse does not necessarily translate to change in behaviour, which is unknown from the study. |
many programmes do not progress beyond the pilot or development stage or are limited in scope to the specific context in which they were first developed. The challenge for practitioners is twofold: first, to have greater clarity about the specific outcomes that programmes might be expected to achieve; and, second, to find ways to reliably assess their capacity to bring about change.

Of the interventions identified in this study, only two adopted an evaluation design (experimental or quasi-experimental) that might be expected to determine the causal relationship between the delivery of the intervention and the reduction of risk. This suggests that some work is required before current interventions to prevent elder abuse can achieve the level of evidence that would support their implementation on a wider scale. It is also worth noting that most of the interventions identified in this review targeted single risk factors (e.g. knowledge of the issue in caregivers), rather than the broader range of risk factors that interact to create a situation in which abuse is likely to occur. There were no accounts of multi-modal interventions addressing key risk factors at the level of the elder person (e.g. cognitive impairment, poor physical health or frailty, low income or wealth), the perpetrator (e.g. caregiver burden or stress, poor or conflictual relationships) and the setting (e.g. staff training, reporting of abuse). The development of more integrated and comprehensive interventions is clearly one area that requires attention. Indeed, current approaches to intervention appear to largely overlook the multi-faceted and multifunctional nature of violence (Anderson & Bushman 2002), even though it is possible that a range of other services and programmes are available that target other types of risk factor. Given that these were not

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<th>Author(s) (year)</th>
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<th>Maryland scale rating for methodological rigour</th>
<th>Design; Outcome measure; key findings (Effect size or odds ratio where reported)</th>
<th>Limitations</th>
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<tr>
<td>Hsieh et al. (2009) Taiwan</td>
<td>Professional caregivers Risk factors: Inadequate training; Work stress; Caregiver abusive behaviour</td>
<td>Setting: aged care facilities. Participants: Professional caregivers/ nursing home staff (N = 100) who scored 20 or more on the Caregiver Psychological elder abuse behaviour scale. Half of staff members participated in an 8-week education group. Type of abuse: Psychological abuse.</td>
<td>The intervention programme covered ageing and associated problems related to managing residents’ health problems, institutional elder abuse, factors associated with caregivers’ abuse behaviour, relaxation and stress management, dealing with stressful caregiving situations and obtaining personal resources. Each of the 8 weekly sessions consisted of a lecture on the topic (30 min), free sharing and mutual support among group members (40 min) and integrative discussion (20 min).</td>
<td>3 (a comparison between two or more comparable units of analysis, one with and one without the programme).</td>
<td>Quasi-experimental, case-control, pre-post design with between institutional control. Pre- and post-tests scores on Caregiver Psychological Elder Abuse Behaviour Scale (CPEAB), the Work Stressors Inventory (WSI) and the Knowledge of Gerontology Nursing Scale (KGNs) compared between intervention group and control group with salary as covariate. Compared with the control group, participants in intervention group scored significantly lower on caregiver psychological elder abuse behavioural scale after the intervention, and higher on knowledge test ($F = 4.02$ and $5.83$, $P = 0.048$ and $0.018$, respectively) but there was no significant difference on work stress measure scores pre-post intervention.</td>
<td>Non-randomisation of participants. Different institutions used for experimental group and control group – may be influence of different work environment.</td>
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### Table 3 Tertiary prevention interventions targeting known risk factors associated with elder abuse

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<th>Author(s) (year)</th>
<th>Risk factors – targeting who and why</th>
<th>Setting; participants (N); type of abuse</th>
<th>Intervention</th>
<th>Maryland scale rating for methodological rigour</th>
<th>Design; Outcome measure; key findings (Effect size or odds ratio where reported)</th>
<th>Limitations</th>
</tr>
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<tr>
<td>Wiglesworth et al. (2006) USA</td>
<td>Professionals who respond to suspected victims of elder abuse in the community. Risk factor: Systemic – lack of co-ordination between responsible agencies; lack of multidisciplinary collaboration.</td>
<td>Setting: Forensic. Participants: A total of 52 professional staff from a specialist elder abuse centre were surveyed regarding 246 cases referred to the centre during a 1-year period. Type of abuse: Physical, psychological and financial.</td>
<td>Multidisciplinary staff members reviewed cases of suspected elder abuse. All were cases that they had been collaborators on over the past 12 months. The survey questions related to the collaborators’ perceptions of how effective the specialist elder abuse centre was in case management outcomes. Collaborators formulated goals and strategies in response to each case presented and developed a time line to review progress.</td>
<td>0 (mixed methods design, but the main analysis relies on qualitative data).</td>
<td>Satisfaction with the involvement of the service was measured using a Likert scale (time taken to get outcome, efficiency and effectiveness of case discussion process). Qualitative responses to written surveys were analysed to extract themes. These related specifically to efficiency and effectiveness where participants believed the abuse centre responded effectively and efficiently in the cases presented.</td>
<td>Survey responses that were done retrospectively. The professionals had worked closely together in all of the cases and this may have affected their responses.</td>
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<tr>
<td>Navarro et al. (2010) USA</td>
<td>Professionals who work with suspected victims of elder abuse in the community. Risk factor: Poor case management.</td>
<td>Setting: Forensic. Participants: De-identified client records to report on client and alleged perpetrator characteristics, including the type(s) of suspected abuse for all cases (n = 315) reviewed during the first 3 years of operation (130 meetings), from March 2006 to December 2008. Type of abuse: Physical, psychological and financial.</td>
<td>Case review with different professionals from the justice system, healthcare, protective services and mental health. The project manager summarises the intervention plan and the team identifies one or two goals, along with a specific time period to receive an update on the case.</td>
<td>2 (the comparability of the comparison groups is seriously compromised and no attempt has been made to control for this).</td>
<td>Participants were surveyed members using a modified Team Effectiveness Inventory (examines mission, goal achievement, empowerment, open and honest communication, positive roles/norms and a global score reflecting overall team effectiveness) following initial planning (baseline; n = 9), at 12 months (n = 12) and 36 months (n = 16) from baseline. Presenters’ experiences were assessed using a customised 15-item instrument. Questions included responses about the team process and why cases were selected for presentation. In addition, to assess process and identify lessons learned, one or more evaluators observed each meeting. It was found that during the first 3 years, core team members actively participated in the reviews. It was also found that presenters and team members provided very favourable evaluations of the effectiveness of the Centre.</td>
<td>Survey data. No comparison group.</td>
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<tr>
<td>Author(s)</td>
<td>Year</td>
<td>Country</td>
<td>Setting</td>
<td>Participants (N)</td>
<td>Type of Abuse</td>
<td>Intervention</td>
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<tr>
<td>Heath et al.</td>
<td>2005</td>
<td>USA</td>
<td>Professionals who responded to suspected victims of elder abuse in the community.</td>
<td>Two hundred eleven adult protective services clients; 74% female; mean age 77.</td>
<td>All forms of mistreatment</td>
<td>A nurse practitioner–geriatrician physician team conducted medical and functional assessments at the place of residence of the client.</td>
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<tr>
<td>Teresi et al.</td>
<td>2013</td>
<td>USA</td>
<td>Professional caregivers</td>
<td>1405 residents; 685 in the intervention group and 720 in the control group</td>
<td>Resident-to-resident mistreatment (physical; sexual; emotional)</td>
<td>Delivery of a training programme for staff that: (a) enhances identification and intervention with respect to episodes of resident-to-resident elder mistreatment (R-REM) in long-term care facilities; (b) increases staff knowledge related to recognition and treatment of R-REM; and (c) increases staff recognition and reporting of R-REM.</td>
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identified in our searches it would appear that needs in these areas are not explicitly identified as risk factors, and the prevention of abuse is not identified as a goal. Accordingly, there appears to be scope to adopt the approach recommended by Douglas and Skeem (2005), which is based on the identification of specific sets of risk factors that are potentially amenable to change through intervention. It also identifies a need to clearly articulate the rationale or logic underpinning programme activities. Programme logic models are simple statements about the inputs, activities and intended impacts of each activity on longer term outcomes which are widely considered to be a pre-requisite for effective evaluation (see Kellogg Foundation 2004), but were not described in any of the studies identified in these searches.

The conclusions of this review are consistent with those of the only previous review of this topic conducted by Ploeg et al. (2009) who concluded that ‘there is insufficient evidence to support any particular intervention related to elder abuse targeting clients, perpetrators or healthcare professionals’ (p. 206). Their study identified a total of only eight different outcome studies that had been published prior to 2008 and the results of our searches clearly show that the evidence base has not grown substantially since this time. The reasons for this are somewhat unclear but may be a result of what remains limited community awareness of this issue. Parallels can be drawn here with public education campaigns over recent years that have created greater awareness of the issue of intimate partner violence and led to an increase in interest in the development and evaluation of effective intervention (Mackay et al. 2015).

The current review is, of course, not without limitations. While limiting the search to English language only avoids the need for the translation of papers, it does potentially exclude relevant papers, as does the use of limited search strategies (beyond searching databases). No contact was made with experts in the field to identify unpublished evaluation studies. In addition, no formal assessment of the methodological quality of each of the identified studies was completed, although the design employed in each of the studies is categorised in Table 1. Nonetheless, this study does provide a further illustration of the types of intervention that have been implemented and which hold at least some promise in preventing the harms associated with the abuse of older adults in both homecare and institutional settings. The challenge is to find ways to extend the practice wisdom that underpins the development of these programmes.
into an evidence base that can be used to support wider implementation.

NOTES

1 The following databases were searched Ebsco (Ageline, Academic Search Complete, PsychInfo, Cinahl Complete, SocIndex, Medline, Medline complete, Social Work Abstracts, Ebook collection (Ebscohost); Embase; Informit; Proquest; Scopus; and Web of Science.

References

*denotes that the paper was identified as an outcome study.