Interventions and Services which Address Elder Abuse: An Integrated Review

Deirdre O'Donnell, Amanda Phelan, Gerard Fealy

UCD DUBLIN

NCPOP
National Centre for the Protection of Older People

HSE
Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

This study was funded by the Health Service Executive as part of the work of the National Centre for the Protection of Older People (NCPOP), University College Dublin.

This report should be cited as:

O'Donnell, D., Phelan, A. and Fealy, G. (2015) Interventions and services which address elder abuse: An integrated review. NCPOP, University College Dublin.

National Centre for the Protection of Older People (NCPOP)
UCD School of Nursing, Midwifery and Health Systems

Health Sciences Centre
University College Dublin
Belfield, Dublin 4, Ireland
Email: *ncpop@ucd.ie* Web: *www.ncpop.ie*

Acknowledgements

The authors wish to acknowledge the Health Service Executive for funding the programme of research into the protection of older people at the National Centre for the Protection of Older People, UCD. We are grateful to the HSE Steering Group, the HSE Management Group and the HSE National Elder Abuse Steering Committee, as well as the NCPOP User Group for their guidance and support.

The authors also gratefully acknowledge the members of the NCPOP International Advisory Panel for their advice and for sharing their knowledge and expertise, in particular, Professor Simon Biggs, University of Melbourne, Australia, and Professor Karl Pillemer, Cornell Institute for Translational Research on Aging, Cornell University, New York. Finally, thanks to Ms Sandra McCarthy for her assistance with proofreading the document.

Abstract

As the proportion of older people in the population increases, the protection of older people is increasingly the focus of legislative, health and social care responses and targeted interventions to prevent or address elder abuse. Given the global demographic trends which describe population ageing, it is likely that the numbers of older people at risk of mistreatment will continue to increase. Therefore, it is important to ascertain best practice evidence with regard to the development, implementation and evaluation of legal, health and social care responses, services and interventions.

This review brings together evidence from the growing body of research reports and studies in the area of elder abuse and mistreatment. This report presents a review of the published evidence for the effectiveness of responses and interventions aimed at addressing elder abuse. The specific aims of the review were to synthesise and critically appraise published studies and research describing responses and interventions in elder abuse and to establish the current knowledge base regarding the effectiveness of interventions, with the objective of contributing to the evidence-base for good protective practice.

The review presents a somewhat unique examination of the published literature on elder abuse by using Bronfenbrenner's ecological system theory to locate interventions within the levels of the micro, meso, exo and macro-systems. Bronfenbrenner argued that human development is a product of an individual's experience and location within different contextual systems, ranging from the immediate environment to the more remote cultural and societal level, to include values, socioeconomic status, identity and heritage. Using this approach enabled a comprehensive review of interventions and responses, which transcended individual case management approaches to include the wider context of societal structures such as legislation, policy, practices, values and beliefs.

The review included a total of 104 papers, representing 98 individual interventions. Of the 104 papers, 37 were identified as experimental studies, while 67 were identified as descriptive studies or reports of programmes or initiatives aimed at responding to elder abuse. The papers discussed a range of preventative and intervention approaches in elder abuse. However, most of the papers reviewed focused on meso-level interventions, with a total of 52 interventions presented. Within this system, many of these papers focused on educational programmes for professional staff – mainly healthcare professionals – to increase their knowledge, awareness and appropriate responses to elder abuse. While the literature in this area is illuminating, the imbalance within both meso-system and the wider ecological system itself demonstrates a lack of a comprehensive development of interventions that ultimately impact on preventing and ameliorating elder abuse.

The review indicated a scarcity of published interventions targeting the micro-system level, i.e. the older person. Overall, the strongest evidence for efficacy at the micro-system level was found for a psychological and social support intervention targeting at-risk older people and an educational intervention aimed at educating older people who experienced criminal victimisation. The majority of the research papers retrieved, which empirically evaluated interventions using an experimental design, related to the meso-system level and most targeted the relations between micro-system settings which contain the older person. The strongest evidence for the efficacy of an intervention targeting multidisciplinary healthcare providers was found for a short educational course on managing elder abuse. The review uncovered a scarcity of research papers evaluating interventions targeting the exo-system level, although the strongest evidence for intervention efficacy was found for a public education programme combined with home visitation. There was also a scarcity of published evidence concerning interventions targeting the macro-system level.

While some studies demonstrated success in intervention approaches, there is a paucity of good quality evaluations, in terms of robust design, adequate outcome measurement and clear transferability of the intervention. A general finding from the literature was that interventions in elder abuse require an individualised, tailored approach, which should identify the particular features of the alleged abuse and respond with specific and targeted interventions. However, methodological approaches used in testing the effectiveness of targeted interventions have been challenging due to the complexity of elder abuse and its associated issues, such as self-determination, health challenges, victim and/or perpetrator dependencies, family and cultural values, lack of standard understandings, as well as structural, policy and legislative gaps.

This review points to the need to develop a more systems-

level approach when responding to elder maltreatment, with the need for a greater focus on interventions within the micro and macro systems. In addition, innovative designs are warranted in order to generate empirical evidence across the myriad of ecological systems within which the older person exists. Moreover, interventions need to be designed in ways that include the older victim, who is the key stakeholder in the problem and in its ultimate solution.

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1 Introduction

This review presents a synthesis of research findings regarding effective intervention and service delivery for prevention, diagnosis and management of elder abuse. It provides an overview of various strategies for intervention as well as an evaluation of the efficacy of such strategies. This review contributes to the accumulation of knowledge which underscores the delivery of evidence-based social and health care practice in the management of elder abuse.

Since the 1970s elder abuse has been recognised and accepted globally as a significant problem impacting on the daily lives of an increasing older population. Elder abuse is defined by the World Health Organisation 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' (WHO, 2002, p. 3). Research and policy literature identifies five categories of elder abuse and notes that these types of abuse are often concurrent with fluid boundaries between the categories (Naughton *et al*., 2012; Naughton *et al*., 2010; World Health WHO, 2002). The five types are: physical, psychological, financial, sexual and neglect. A national study of elder abuse and neglect, undertaken by researchers at the National Centre for the Protection of Older People (NCPOP) in Ireland, found that 2.2 per cent of community-dwelling people aged 65 years and over had been mistreated or abused in Ireland in the previous 12 months (Naughton *et al*., 2010). By applying this prevalence rate to the general population of people aged 65 years and older in Ireland, the report estimated that a minimum of 10,201 older people experienced mistreatment or abuse in the twelve months prior to data collection. This number was estimated from the census data for 2006 and the national prevalence rate of 2.2 per cent is in line with international reports estimating the occurrence of elder abuse (Biggs, Manthorpe, Tinker, Doyle, & Erens, 2009; WHO, 2011). Elder abuse is a complex and multifaceted phenomenon requiring interventions from social, legal and health care policy makers and social and care services.

In Ireland, significant progress has been made in delivering a comprehensive national response to the problem of elder abuse. This response is grounded in the recommendations arising from a Working Group on Elder Abuse, which was established to advise on governmental policy and legislative reform for the protection of older people (Working Group on Elder Abuse, 2002). Since 2007, the protective services for older people in Ireland have been delivered by a cadre of specially trained social workers, acting as senior case workers (SCWs) for the protection of older people. These senior case workers are based predominantly within the primary care community setting and continuing care services and they report to a general Health Service Executive (HSE) manager. The SCWs provide a case management approach to protective services, which is overseen by a dedicated officer in each of the four HSE administrative regions of Ireland. These dedicated officers report to a multi-disciplinary National Elder Abuse Steering Group. The case management approach is in line with international best practice and emphasises interagency cooperation in the provision of specialist cross-disciplinary responses (Cambridge & Parkes, 2004a; Nerenberg, 2006; O'Donnell *et al*., 2012).

1.1 Rationale

As the global population of older people grows, the protection of older people is increasingly the focus of legislative, health and social care responses and targeted interventions to prevent or address elder abuse. Given the global demographic trends which describe population ageing, it is likely that the numbers of older people at risk of mistreatment and neglect will continue to increase. Therefore, it is important to ascertain best practice evidence with regard to the development, implementation and evaluation of legal, health and social care interventions and services.

The global demographic shift towards an ageing population and greater knowledge of the prevalence, risks and impacts of elder abuse demand reliable, up-to-date evidence for effective health and social care interventions for older people at risk of mistreatment (O'Donnell, Treacy, Fealy, Lyons, & Lafferty, 2014; O'Donnell *et al*., 2012). This evidence is necessary not only to underpin practice, in terms of prevention and service delivery, but also to guarantee cost efficiency and long-term sustainability of effective health and social care for older people (Sheldon, 2001; Sheldon & MacDonald, 1999). In their exploration of the role of evidence in research and practice in social care, Sheldon and MacDonald (1999) note the emphasis within the fields of health and social care on the quality of original studies and research reviews and on the organised dissemination of findings for use in practice. Realising evidence-based social and health care practice is premised upon critical interpretation of research reports with careful

attention paid to understanding the claims of studies in the context of the methodologies employed (Sheldon, 2001; Sheldon & MacDonald, 1999).

It is generally accepted among practitioners, researchers and educators that the accumulation of evaluative research evidence should be the foundation for effective practice in social and health care (Alt, Nguyen & Meurer, 2011; Daly & Schoenfelder, 2011; Ferguson, 2003; Gilgun, 2005; Stolee, Hiller, Etkin, & McLeod, 2012). However, there has been some discussion concerning what constitutes evidence, how it can be evaluated and how best it can contribute to practice (Gilgun, 2005; Sheldon, 2001; Webb, 2001). In a discussion of the evidence-based practice movement, Gilgun (2005) criticised the overemphasis on evidence for interventions and outcomes at the expense of evidence for assessment. The author made a strong case for the inclusion of descriptive, nonexperimental studies within the paradigm of evidence-based practice, particularly as it informs assessment and treatment planning in social care:

> Evidence is information that practitioners apply to various phases of the process of practice and includes published research and theory, practice experience, what service users tell us, personal experience and the responses of service users to our work with them. Which source of evidence has the most weight varies according to the phase of the practice process (Gilgun, 2005, pp. 845–846).

A variety of approaches to the effective delivery of services and interventions for the prevention and management of elder abuse have been identified in the research and policy literature (Imbody & Vandsburger, 2011; Lachs & Pillemer, 2004; Nerenberg, 2008; Penhale, 2010; Ploeg, Fear, Hutchison, MacMillan, & Bolan, 2009; Wilson & Micucci, 2003; Wolf & Pillemer, 2000). These protective and amelioration strategies refer to the detection and referral of elder abuse, investigation and assessment, case management, monitoring and support services targeting victims of abuse, as well as those experiencing caregiver burden or stress. However, systematic reviews of elder abuse research have highlighted a lack of empirically validated evidence upon which to base protective practice (Alt *et al*., 2011; Chalk & King, 1998; Daly, Merchant & Jogerst, 2011; Ploeg *et al*., 2009).

In a systematic review of interventions for elder abuse, Ploeg *et al*. (2009) concluded that there was insufficient evidence to support any particular intervention related to elder abuse, including those interventions targeting older people, perpetrators or health care professionals. The authors argued for further robust research which would establish the evidence base for particular interventions and protective practice in the field of elder abuse. Similarly, Alt *et al*. (2011) undertook a systematic review of literature assessing the efficacy of educational programmes to improve the recognition and reporting of elder mistreatment. They concluded that the existing reports of educational interventions are limited by lack of details, limited evaluation as well as weak research designs. Daly *et al*. (2011) identified 14 studies which reported the development, implementation and evaluation of elder abuse preventative interventions. They noted that a degree of efficacy was established for interventions targeted at the education of caregivers, adult protective service workers and health care personnel. Furthermore, interventions which provided support group meetings for victims of elder abuse as well as daily money management programmes were also found to be effective (Daly *et al*., 2011). However, in conclusion, the authors noted that there was limited evidence which supports any intervention to prevent elder abuse. They called for increased funding for elder abuse research and more rigorous research in the field (Daly *et al*., 2011).

Systematic reviews of elder abuse indicate that, while there is an increasing amount of research and policy literature dedicated to elder abuse and mistreatment, it predominantly comprises descriptive and observational designs and case studies with few intervention trials and insufficient studies with which to undertake meta-analyses (Alt *et al*., 2011; Erlingsson, 2007; Ploeg *et al*., 2009). A systematic review of elder abuse literature confirmed this trend and noted the dominance of research reviews and studies concerning prevalence, typology and definitions of elder abuse (Erlingsson, 2007). This review concluded that knowledge concerning the nature and management of elder abuse was primarily derived from descriptive quantitative studies with limited involvement of older people and family members as participants.

1.2 Aims and objectives

The aim of this review was to synthesise and critically appraise published studies and research related to the efficacy of interventions and protective practice in the field of elder abuse. The review aimed to establish current knowledge related to the effectiveness of interventions with the purpose of contributing to the evidence-base for protective practice.

The objectives of the review were:

- To summarise and describe the published evidence for practice, including intervention trials as well as descriptive accounts of practitioners' personal experience and service users' evaluations and responses to practice.
- To critically appraise existing research studies in order to examine the efficacy of evidence for interventions and service delivery.
- To identify future directions for research to contribute to the development of protective practice and thereby inform evidence-based practice for the management of elder abuse cases.

2.1 The search strategy

A systematic and comprehensive literature search of peer-reviewed published works was performed to identify all evaluation studies of services and interventions targeting the protection of older people from abuse and mistreatment. This systematic search was undertaken in four databases, which included nine indexes, as follows: EBSCO (Academic Search Premier/ CINAHL/ Lista), PubMed (Medline), Web of Science (Social Science/ Science Citation/Arts & Humanities), OvidSP (Medline/ PsychInfo). The search terms used, either singularly or in combinations, were: elder, old*[1], intervention, prevention, care and service, as well as MeSH[2] terms for elder abuse and the mistreatment of older people. The search was restricted to the timeframe January 2000 and October 2013 and this was supplemented by the citations of previous systematic reviews evaluating intervention studies and research which covered earlier timeframes (Alt *et al*., 2011; Daly *et al*., 2011; Erlingsson, 2007; Ploeg *et al*., 2009). Bibliographies of retrieved articles from the databases and from previous systematic reviews were examined for key search terms contained within their titles. Ancestral searching of the relevant items was conducted to identify further publications not discovered in the indexes or outside the identified time frames. Additional studies were identified through manual searching of the annotated bibliography of reference material and published research contained in the research database of the National Centre for the Protection of Older People at UCD (NCPOP).

2.2 Inclusion and exclusion criteria

The main criterion for the inclusion of studies in this review was published material in peer-reviewed English language publications. Only studies which were relevant to the protection of older people from elder abuse and mistreatment were considered. 'Older people' was operationally defined as those aged 50 years and older and the understanding of elder abuse was guided by the World Health Organisation definition (World Health WHO, 2002). Research studies evaluating interventions targeting both community-dwelling or domiciled older people and those in residential settings were included. Intervention studies targeting professionals and practitioners working with older people were also included for review.

In order to account for a broad definition of evidence, as described by Gilgun (2005), retrospective and prospective studies were included, as were studies which adopted experimental and non-experimental or descriptive designs. Literature and citations pertaining to screening tools for elder abuse were excluded as they were deemed to be not pertinent to the aim of the present review, which focused on interventions and services for the prevention and management of elder abuse, rather than its detection.[3] Also excluded were book reviews and chapters, systematic reviews, literature appraisals and government or agency strategy reports; however, these were employed to inform background literature for the review.

2.3 Search results

A total of 7,170 citations were identified from the initial index and database search and 5,417 of these were excluded from the review as they were not relevant to elder abuse intervention or the sample was not eligible. A review of the titles and abstracts of the remaining 1,753 citations was undertaken and, of these, 1,545 did not meet the inclusion criteria and were excluded. This yielded 208 full-text peer-reviewed articles and research publications, which were examined to determine if they met the inclusion criteria for full review. A further 104 articles were excluded at this point, yielding a search result of 104 full text articles and research publications for full review. These articles were sub-divided into non-experimental descriptive studies, which evaluated elder abuse interventions (n=67), and experimental evaluations, which provided empirical evidence on the efficacy of interventions (n=37) (Figure 1).

1 This was inputted as a stem word which would expand the search to any word beginning with old

2 Medical subject heading (MeSH) for the purposes of systematic searching.

3 See Phelan & Treacy (2011) for a comprehensive review of elder abuse screening tools for use in the Irish context.

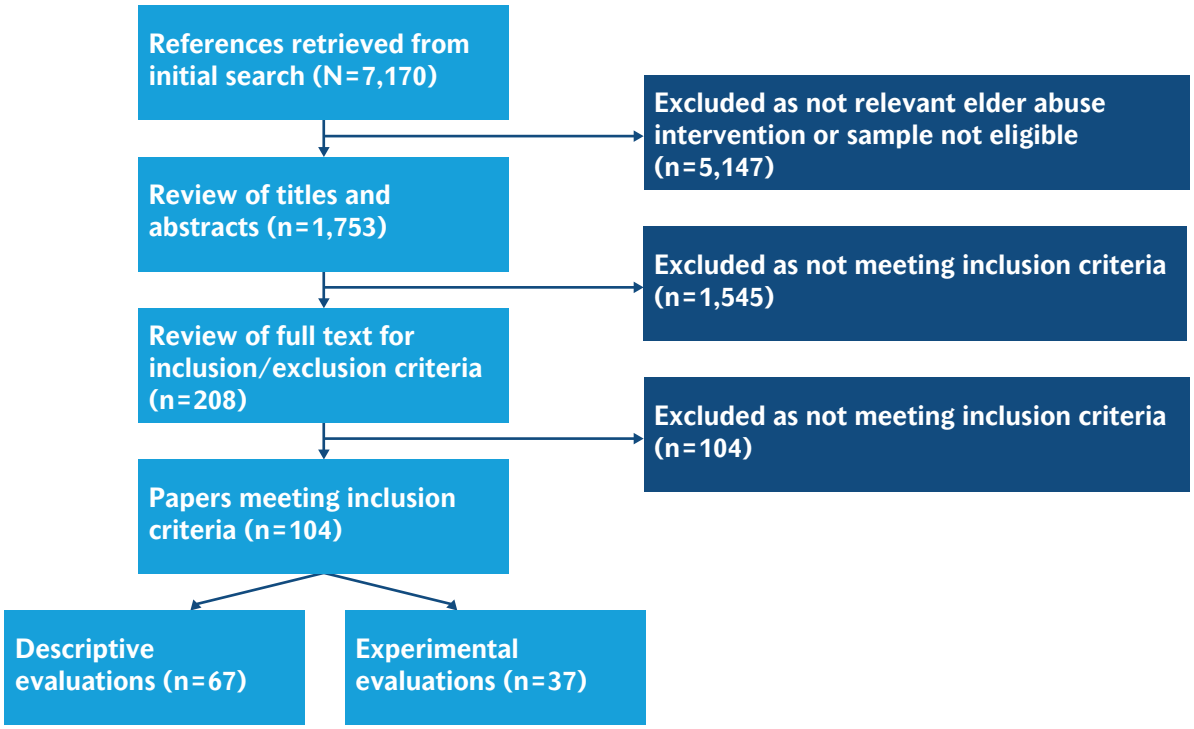

Figure 1 Selection of experimental and descriptive intervention evaluation papers for review

2.4 Ecological systems framework for the presentation of results

The review was undertaken using an ecological systems framework for elder abuse interventions, which examines interventions from the perspective of the older individual as well as the environmental, social and cultural systems in which the individual is situated (Bronfenbrenner, 1979). Increasingly, researchers are employing an ecological lens to examine elder abuse (Norris *et al*.; Phelan 2014; Wango *et al*. 2014). This lens has the capacity to provide inter-related, nested and context-related understandings of the abused older person's life world. Since elder abuse is a complex and multi-dimensional issue, an ecological approach has the potential to capture the multi-level foci of interventionspublished in the extant literature. This review applies Bronfenbrenner's early theory of ecology and ecological transitions (Bronfenbrenner, 1979). This work was further developed in two subsequent theoretical iterations leading to the relevance of proximal processes and the Process-Person-Context-Time (PPCT) model (Rossa & Tudge 2013; Bronfenbrenner & Morris 2006). In his early work, Bronfenbrenner described the ecological theory as follows:

> The ecology of human development involves the scientific study of the progressive, mutual accommodation between an active, growing human being and the changing properties of the immediate settings in which the developing person lives, as this process is affected by relations between these settings, and by the larger contexts within which the settings are embedded (Bronfenbrenner, 1979, p. 21).

As per the early conceptualisation of the ecological systems theory described by Bronfenbrenner (1979), four systems levels were identified for classification of the 98 individual interventions reviewed. These were: micro-system, meso-system, exo-system and macro-system. Figure 2 illustrates these systems levels as they are explained by Bronfenbrenner's ecological systems theory for child development and well-being (Bronfenbrenner, 1979).

Bronfenbrenner's work has been used primarily to interpret and understand the domain of child and adolescent psycho-social development (Bronfenbrenner 1973, 1974, 1975, 1977, 1979a, 1979b). However, this framework is also relevant to the examination of the interrelated context of older people's lives. In this review, the chronosystem was excluded as the majority of the studies focused on single point or short-term interventions and were therefore unsuitable for analysis from a life course perspective and were limited in terms of examining socio-historical circumstances.

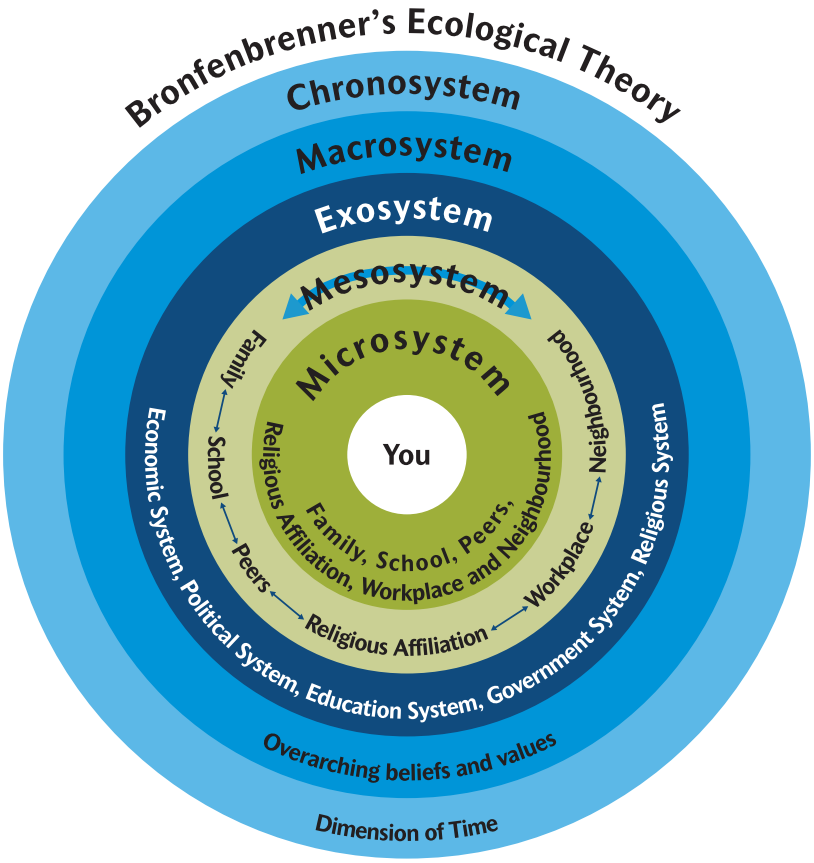

Figure 2 The ecology of human development: Experiments by nature and design (Bronfenbrenner 1979).

For the purposes of this review, micro-system interventions were understood as directly targeting the older person experiencing or at risk of experiencing abuse. Interventions classified under the micro-system level target the relations between the older person and their environment within an immediate setting, such as their family home, their residential care home, their family relations, social network or community group. Meso-system interventions were understood as targeting the connections or relations between microsystem settings which contain the older person. This encompasses the interactions between different micro-systems, such as family, friends, community group, church and so forth. Interventions classified under this ecological level include those targeting caregivers including hospital staff, as well as the interactions between an older person's family, social network, or community setting. Exo-system interventions were understood as targeting the links between the individual's immediate context and a social setting in which the individual does not have an active role, for example, adult protective services, the criminal justice system, the social welfare system, the economic or political system, and the education and health systems. Interventions were included in this ecological level if they addressed the social structures and systems that do not directly contain the older person, but which impact upon the immediate micro-system in which the older person is situated. Macrosystem interventions pertain to the overarching culture in which an older person lives. Interventions classified under this ecological systems level target the overarching beliefs and values of societies. Interventions were included in this ecological level if they addressed socioeconomic status, identity and heritage, as well as discriminatory social values and beliefs understood to be abusive.

The 104 full text articles which met the inclusion criteria for the study were subjected to a full review and were classified according the relevant ecological systems level. Classification was undertaken independently by two study authors (DO'D and AP) using the definitional criterial for the four ecological systems level described above. The authors' independent classifications were compared and any discrepancies were highlighted for discussion and consensus as to their final classification. Where an intervention was considered to be targeting two different ecological systems levels at the same time the authors agreed which systems level was the dominant concern and the intervention was classified accordingly.

2 Design of the Review

Due to multiple papers reporting on the same intervention as well as individual papers reporting on multiple interventions, the 104 papers described 98 individual interventions. In some cases multiple papers described the same intervention and this counted as one intervention. Separate interventions in the same paper from different service providers were counted individually. Multiple interventions by the same service were counted as one intervention. The 67 papers which were identified as descriptive evaluations of elder abuse interventions described a total of 64 individual interventions. A total of 37 papers were identified as experimental studies of the evidence for the efficacy of 34 separate elder abuse interventions. Table 1 summarises the classification of the 98 interventions identified from the detailed review.

Due to the density and large quantity of information provided in the descriptive papers, subthemes were created for the ecological systems level which assisted in the categorisation of these papers (N=67). Table 2 summarises these subthemes, including the categorisation of the 67 descriptive papers.

Table 1: Classification of 98 interventions identified in the literature (n=104)

	Experimental (N=37)	Descriptive (N=67)	Total
Micro-system	5	13	18
Meso-system	25	27	52
Exo-system	3	20	23
Macro-system	1	4	5
Total	**34**	**64**	**98**

Table 2: Categorisation of descriptive papers into ecological system sub-themes

Ecological systems Level	System subtheme	No. of Papers
Micro-system	Review of EA cases	4
	Review of specific aspects related to elder abuse cases (self-neglect,gender & financial abuse)	5
Sub-total		9
Meso-system	Evaluation of service models	14
	• Multi-disciplinary teams, Adult Protective Services, thematic service models. (8)	
	• Financial abuse (2)	
	• Case management service models (2)	
	• Gender based services (2)	
	Educational programmes and training initiatives	11
Sub-total		25
Exo-system	Evaluation of systems and service delivery	14
	• Multi-disciplinary collaboration and case management (6)	
	• Ethos in case interventions (3)	
	• Family based interventions (2)	
	• Typology based service interventions (3)	
	Criminal justice system	9
	System process improvement	5
Sub-total		**28**
Macro-system		5
Total		**67**

2.5 Evaluation criteria for descriptive designs

Jackson (2009) argues that the purpose of descriptive studies is to illuminate a phenomenon as it naturally occurs. These studies comprise both pure description and normative studies, which may be operationalised via observational studies, case studies, programme evaluation, surveys, service descriptions, discussion papers on approaches to reform and educational evaluations. Papers classified under descriptive designs were evaluated and presented according to how the interventions impacted on outcomes for abused older people. Some papers also included preventative actions within intervention foci. Some papers did not offer any evaluation, but simply described an intervention. Following the literature search, 67 papers were identified as having described 64 interventions related to the prevention of or intervention in elder abuse. The data presented in the results provides a review of each study under Bronfenbrenner's (1979) ecological model.

2.6 Evaluation criteria for experimental designs

The criteria for evaluating the evidence for the efficacy of interventions which were evaluated using an experimental design were informed by the evaluation standards for public health interventions developed by Rychetnik *et al*. (2002). These standards address three questions fundamental to the assessment of the methodologies and designs employed by studies to gather and appraise evidence to support claims regarding efficacy of interventions. The three questions are:

1. Is the research design good enough?
2. What are the research outcomes?
3. Is the research transferable?

Each intervention identified for the review which was evaluated using an experimental design was subjected to the assessment standards described by Rychetnik *et al*. (2002) and allocated a rating score reflecting how well the review addressed each of the three questions.

2.6.1 Is the research design good enough?

Three components were identified by Rychetnik *et al*. (2002) as critical to the evaluation of whether the experimental research design of a study was 'good enough'. These components pertained, first, to the assessment of a risk of bias in the research design with particular reference to the ability of the study to ascertain causality. For the purposes of this review, the risk of bias in the study designs was assessed using the criteria established by the Cochrane Foundation (Higgins & Green, 2011). Five sources of bias were identified: selection bias, performance bias, detection bias, attribution bias and reporting bias (Higgins & Green, 2011). Each of the interventions selected for the review was allocated a score for risk of bias which was ascertained by summing rating scores for each of the five sources of bias. Risk of selection bias was determined by whether random sequence generation was used to identify comparison groups. If random sequence generation was present in the study design, the intervention obtained 1 point. Risk of selection bias was also determined by whether there was group allocation concealment from the researchers. If group allocation concealment was present in the study design the intervention also received a score of 1. This resulted in a total maximum score of 2, indicating low risk of selection bias and a score of 0, indicating high risk.

Risk of performance bias was determined by whether there was blinding of the participants and personnel as to group allocation. If blinding was present in the study design the intervention received 1 point. Risk of detection bias was evaluated by whether there was blinding of outcome assessors as to group allocation. Again, if blinding of outcome assessors was present in the study design the intervention received 1 point. Risk of attribution bias was determined by whether or not all of the outcome data was provided. If all the outcome data was provided in the research paper the intervention received a score of 1. Finally, risk of reporting bias was determined by whether there was selective reporting of outcome data. If selective reporting was noted in the research design the intervention received 0 points and if it was not noted it received 1 point. An overall score for risk of bias in the study design was obtained by summing the risk for each of the sources of bias. Each study could receive a maximum score of 6 points, indicating low risk of bias, and a minimum score of 0 points, indicating high risk.

The second component identified by Rychetnik *et al*. (2002) as necessary to evaluate whether the research design of a study was 'good enough' referred to the stability of the programme or intervention being evaluated. This component was evaluated with reference to two criteria. The first criterion was the quality of the intervention implementation, specifically the risk presented by potential confounders. This was measured by three levels of quality: high, medium and low, whereby each of the levels was allocated a respective score of 2, 1 and 0. Therefore, if the intervention implementation of a study was considered to be of high quality the intervention was attributed a score of 2. The second criterion pertained to whether the theoretical basis for the intervention was specified and discussed. If the theoretical basis of the study was identified and discussed the intervention was allocated 1 point. An overall score for the stability of the programme or intervention was obtained by summing the scores for the two constituent criteria. Each study could score a maximum of 3, indicating high stability, and a minimum score of 0, indicating low stability.

The third component identified by Rychetnik *et al*. (2002) referred to the assessment of the outcome measures. This component was evaluated with reference to two criteria. The first criterion was concerned with the adequacy of the outcome measures relevant to the intervention goals, in other words: are the researchers measuring what they are supposed to be measuring? This criterion was measured against three levels of adequacy: high, medium and low, whereby each of the levels was allocated a respective score of 2, 1 and 0. Therefore if the outcome measures were highly relevant to the intervention goals the intervention received a score of 2. The second criterion pertained to whether reliability for the measures was ascertained and if it was adequate. If reliability assessments were undertaken for the outcome measures of the study and they indicated high, medium or low reliability for the measures the intervention received a score of 2, 1 or 0 respectively. An overall score for the assessment of outcome measures was obtained by summing the scores for the two constituent criteria. Each study could receive a maximum score of 4 points, a high level of relevancy and reliability for the outcome measures. A minimum score of 0 indicated a low level of relevancy and reliability.

A global measure indicating the quality of the research design, in terms of risk of bias, the assessment of the intervention or programme and the relevance and reliability of the outcome measures was obtained by summing scores across the criteria for each of these three components. This provided a maximum score of 13 and a minimum score of 0 for each intervention. This individual score indicated the degree to which the research design of the intervention evaluation was 'good enough', as per the standards for evaluating public health interventions developed by Rychetnik *et al*. (2002).

2.6.2 What are the research outcomes?

Rychetnik *et al*. (2002) identified three criteria for evaluating the outcomes measured and reported in an evaluation of a public health intervention or programme. The first criterion referred to whether or not the outcomes were utilisation focussed. For the purposes of this review, this criterion was evaluated by whether or not the outcomes measured were relevant and important to key stakeholders. These stakeholders included older people themselves, their families or carers as well as professionals working with older people or with responsibility for safeguarding older people from abuse. A study selected for inclusion in the review was given a score of 1 if the outcomes were relevant to stakeholders. The second criterion identified by Rychetnik *et al*. (2002) pertained to the reporting of unintended or unanticipated outcomes. A study selected for inclusion in the review was given a score of 1 if the unintended or unanticipated outcomes were reported. The third criterion for evaluating the research outcomes pertained to efficiency, specifically whether cost effectiveness of the intervention or programme was included in the measured outcomes. If efficiency of the intervention or programme at the centre of the study was assessed it was attributed a score of 1.

A global measure indicating the quality of the outcome measures of the research design in terms of relevancy to stakeholders, recognition of unanticipated or unintended outcomes and cost efficiency was obtained by summing scores across each of these three criteria. This provided a maximum score of 3 and a minimum score of 0 for each intervention. This individual global score indicated the degree to which the outcome measures reported for each intervention evaluation could be considered as meeting the standards for evaluating public health interventions developed by Rychetnik *et al*. (2002).

2.6.3 Is the research transferable?

The importance of transferability of public health interventions or programmes was noted by Rychetnik *et al*. (2002) as being critical for evidence-based decisions. For the purposes of this review, this component was evaluated by three criteria. The first criterion referred to the adequacy of the intervention description, specifically, whether sufficient information was provided on the multiple components of the intervention to allow for replication in a different setting or context. Each study selected for inclusion in the review was evaluated as to whether the information provided regarding the intervention was high, medium or low and was attributed a score of 2, 1 or 0, respectively. Thereby, a score of 2 indicated that a high level of information was provided. A score of 1 indicated an adequate amount of information and 0 an insufficient amount of information was provided regarding the intervention.

The second criterion referred to the adequacy of the context description, particularly the social, organisational or political setting in which the intervention was delivered. Specifically, this criterion assessed whether contextual factors which may influence the ability to generalise the findings beyond the specific context were discussed. For the purposes of this review, this criterion was evaluated according to three levels, high, medium and low, and respective scores of 2, 1 and 0 were attributed accordingly. Therefore, if a high level of information was provided regarding the context of the intervention delivery, the intervention received a score of 2 points. A score of 1 point were attributed to interventions if some amount of information about the context was provided and 0 points if the context was not discussed at all.

The final criterion for evaluating the transferability of the research was related to whether or not there was a discussion of the potential impact of the interaction between the context and the intervention upon the transferability of the research findings. For the purposes of this review, this criterion was evaluated according to three levels: high, medium and low, and respective scores of 2, 1 and 0 were attributed accordingly. Therefore if there was a high level of discussion pertaining to the interaction of the intervention and context, which would facilitate transferability, the intervention was attributed a score of 2 points. Similarly, if there was some discussion, albeit not extensive, the intervention was attributed a score of 1 point and no points were attributed if the interaction between the context and the intervention was not discussed in the study.

A global measure indicating the transferability of the study findings, in terms of the degree of information provided about the intervention and the context as well as a discussion regarding the interaction of the intervention and context, was obtained by summing scores across each of these criteria. This provided a maximum score of 6 and a minimum score of 0 for each intervention, representing the degree of transferability for each intervention, whereby a score of 6 indicated a high level of transferability and 0 a low level.

The results of the integrated review are presented according to the ecological systems level to which the interventions were classified. The descriptive studies pertaining to each level are reviewed providing an overview of the types of interventions that are described and evaluated in each of the relevant ecological levels. This is followed by an evaluation of the evidence for the efficacy of the interventions reported in the experimental evaluation papers. This evaluation is undertaken using the study evaluation criteria outlined above.

3 Results

This section describes the findings of the review. The findings are presented according to the ecological system categories described by Bronfenbrenner (1979), namely the micro, meso, exo and macro systems. Each of the research papers is presented separately under each specific ecological system category. This approach enabled the presentation of findings and discussion of findings for each separate study for evaluation purposes in the review.

3.1 Micro-system interventions

Micro-system interventions were understood as directly targeting the older person experiencing or at risk of experiencing abuse. Interventions classified under the micro-system level target the relations between the older person and their environment within an immediate setting, such as their family home, residential care, their family relations, social network or community group.

3.1.1 Descriptive studies

In total, nine descriptive studies were identified under the category of micro-system interventions in elder abuse. Micro-system interventions were classified as those services which directly focused on older people who were either at risk of elder abuse or had experienced elder abuse. As such, the descriptive studies presented in this section relate to common social interactions within or pertaining to the immediate environment of the older person and include family, neighbourhoods, religious systems, peers, hospital staff and others who have direct contact with the older person. For this review, micro-systems included studies where individual cases in practice were evaluated. An individual case evaluation could also include subsequent discussions on extrapolating best practices to meso or exo system levels. Micro-system categorisation also encompassed a specific focus on individual case typology management (e.g. hoarding, case analysis by the MDT) or where contact was made by a service to the older person (e.g. telemarketing), either as a preventative intervention measure or a secondary intervention measure. The majority of studies provided interventions within a secondary care focus when abuse had occurred or was suspected; however, some programmes provided primary prevention for older people at risk of abuse (Alon & Berg-Warman, 2013).

Four papers focused on a review of elder abuse cases, regardless of typologies or the older person's gender. Using a retrospective cohort study, Heath, Kobylarz, Brown, and Castano (2005) examined 211 substantiated elder abuse cases referred by two US adult protection services (APS) to the Linking Geriatrics to Adult Protective Services (LGPS). The APS services referred cases to the LGAPS in the context of unmet health needs, when the older person did not have a healthcare provider or where the older person refused to seek medical assistance outside the home. Within the LGPS, a nurse-practitioner and geriatric physician undertook a home assessment in conjunction with the referring social worker.

The authors reported that five interventions were used in the study, depending on presenting issues. Eighty one percent of older people required one or more service, with 41 percent receiving two or more of the services concurrently. These services were: home health agency services; institutional placement; guardianship actions; urgent medication initiation; and acute hospitalisation. The interventions of institutional placement and guardianship arrangements were found to be statistically significant in addressing caregiver neglect and an assessment finding of dementia, while guardianship was also associated as being useful in financial exploitation and where there was an assessment finding of dementia. The intervention of acute hospitalisation was found to be correlated with the management of physical abuse cases and an assessment finding of pain, depression and weight loss. In the interventions of home help agency services and urgent medication, no statistically significant association with any form of abuse was found, although pain, depression, falling and sensory impairment were assessment findings in the allocation of home help agency services, while depression, pain and weight loss were found to be factors in hospitalisations.

Morris (2010) reported on case interventions provided by Bet Tzedek (house of justice) in Los Angeles (LA), California, a free legal service for low-income families. The review of cases focused on the role of civil attorneys in their contributions to multi-disciplinary teams (MDT) in identifying the relevant legal issues and creating a plan of action to move a case toward prosecution or other legal action. Using case examples the authors demonstrated the contribution of Bet Tzedek to individual cases. Moreover, court records demonstrated that legal resolution was found to be more rapid in cases of conservatorships and restraining orders assisted by the Self-Help Elder Law Clinics, to which Bet Tzedek was a contributor, as well as

having a triage system to identify complex cases requiring more intense input. The authors reported that the service saved both court time and stress to the older person.

Although Morris's (2010) review of Bet Tzedek's interventions in elder abuse cases reported effectiveness in securing legal redress for abuse, the impact cannot be divorced from the facilitative legislative context of LA. The legal pursuit of elder abuse cases is structurally supported and incentivised for lawyers by such cases having a faster resolution of civil elder abuse cases, having the capacity to pursue perpetrators for pain and suffering damages if the older person had died and, for some cases, having as much as treble damages awarded.

Istenes *et al*. (2007) reported on a US programme which evaluated an MDT intervention in individual elder abuse cases. The intervention was the specialised Team in Elder Abuse Mistreatment Project of Summit County (TEAMS), which comprised a geriatrician, social worker, APS, Probate Court Investigator, area agency on ageing and the sheriff's department. TEAMS assisted APS on complex cases which met predetermined referral criteria and provided a comprehensive disciplinary assessment for older people subjected to elder abuse. Although there were relatively small numbers of cases reviewed (n=10), areas of concern reported included financial exploitation, self-neglect and caregiver neglect. From the ten cases reviewed several recommendations were proffered, including guardianship, establishment of a payee, increased family support and nursing home placement. Acknowledging the small volume of cases, the authors reported a 100 percent success rate, as all cases were categorised as resolved and team members were satisfied with the outcomes.

In a Canadian study, Vladescu, Eveleigh, Ploeg, and Patterson (2000) examined the short term outcomes of a community based elder abuse case management programme for competent older people entitled Seniors' Case Management Programme. The programme, which had three case managers, focuses on supporting older people who have been abused and those deemed at high risk, whether or not abuse was an issue. A central ethos of the programme was the promotion of empowerment and delivering a client centred service, and interventions included the delivery of comprehensive explanations and discussions with the older person regarding his/her situation, the development of individual plans of action, the promotion of trusting relationships, and supporting the older person in decision making. The study authors reviewed a sample of 26 closed cases and examined three possible outcomes in the cases: a) where the abuse had ceased (34.6%), b) where there was a partial positive outcome in terms of risk reduction (30.8%), or c) where no positive outcome occurred (32.8%). Resolution was highest in cases of psychological abuse (84%), followed by physical abuse (67%) and financial exploitation (61%). Success rates in resolved cases were higher in cases with a history of over two years' duration (40%) as compared to those under two years' duration (26.7%). For 36.4 percent of cases, case resolution was highly influenced by the older person relocating, for example to independent housing. An increased length of time spent on cases, which ranged between less than one to over five hours, did not correlate to any significant increase in positive outcomes. Case resolution was impacted by the relationship between the older person and the perpetrator. The closer the relationship the more likely the older person would chose harm reduction rather than decisions, such as ceasing contact, which would completely resolve the situation.

Under the micro-systems categorisation, five studies were identified as having a more specific analysis of cases: one focused on cases involving older people demonstrating selfneglect (through hoarding), one considered cases relating to gender and three focused on financial abuse. In a discussion paper on how MDTs should consider the ethical dilemmas inherent in cases addressing older people who self-neglect, Koenig, Chapin, and Spano (2010) acknowledged the challenges in case management in balancing the right to self-determination with the safety risks associated with hoarding activities. Using Maguire's (1975) conceptual approach, the authors discussed a method of examining pertinent issues in case management. Thus, professionals framed case decision making and case planning around questions related to: who is involved, what are the facts, why is the activity occurring, how were referral decisions made, what were the foreseeable effects, and what were the existent viable alternatives identified by the older person, the family or team members. Koenig *et al*. (2010) argued that using the framework allowed ethical clarity in assessing and planning for cases. However, although the paper illuminates the use of the framework in detailing hypothetical composite cases, as an intervention tool, its use remains propositional rather than tested and evaluated.

3 Results

In a paper focusing on interpersonal violence experienced by women over 60 years of age, Tetterton and Farnsworth (2011) used a qualitative case study approach to generate insights into effective counsellors' response interventions as well as the meaning of such interventions as experienced by the women. The authors discussed the necessity of appropriate screening to identify the abuse as well as appreciation of the context of the individual older woman's life. Important aspects of the intervention were welcoming and engaging the woman to ensure the relationship was based on trust, facilitating open discussion and creating a therapeutic environment which encouraged and supported the older person to communicate her story. Within such a therapeutic engagement, the focus was on empowering the older women and supporting decision-making. While the case studies based the recommendations on a depth review of two cases, further work is required to test if the re-orientation of intervention is experienced as helpful to the abused older women.

As financial abuse is a significant category of elder abuse, specific interventions have been developed to enhance individual case management. In this review, three papers were selected under the micro systems category, which focused on different interventions to combat financial abuse. The first paper discussed the multi-disciplinary Financial Abuse Specialist Team (FAST), established in Santa Clara County, California, in 1999 (Malks, Schmidt, & Austin, 2002). Mechanisms to limit the financial abuse included the ability of FAST to freeze assets, emergency filing for conservatorship, capacity assessment and formal referral to law enforcement. Cases deemed to be at low risk were referred to a weekly review committee of APS, Public Guardian, District Attorney and County Counsel, and a decision was made if FAST involvement was required. Malks et al. (2002) write that the FAST programme was successful on a number of levels, including being able to act rapidly to limit the financial abuse. The success of the service was also seen in an increase of 60 percent of reports of financial abuse of older people. However, the authors noted that developing an intervention such as the FAST service requires multi-agency determination and leadership, clarity in shared values to reduce inter-agency friction, acknowledgement of the older person's self-determination, and the need to support continuous staff training and team cohesion.

In some cases, due to physical or cognitive health challenges, older people struggle to manage their finances. In addition, managing a reduced income like a pension can be difficult. Sacks *et al*. (2012) argue that daily money management programmes (DMMs) are vital tools in preventing financial abuse. DMMs vary from supportive assistance to surrogate decision-making. In their study, Sacks *et al*. (2012) collected primary data from eight New York City private non-profit agencies providing DMM services. In addition, 114 retrospective closed cases were reviewed. In their sample, 93 older people had accepted DMM assistance. For 63 older people, DMM support was facilitated until institutionalisation or death, while the programme had attrition of 30 older people. Sacks *et al*. (2012) identified 12 cases of financial exploitation in total. In the review of their findings, the authors suggested that the DMM programme may have a deterrent impact on financial abuse.

The final paper, which described a micro-system approach to financial abuse, focused on the use of telemarketing to defraud older people (Aziz, Bolick, Kleinman, & Shadel, 2000). Older people are frequently victims of fraud and once fraud is perpetrated, the victim may be placed on a MOOCH list, where they can be targeted by other groups engaging in fraudulent activities. In 1998, the National Telemarketing Victim Call Center (NTCC) opened in Los Angeles, California. The Federal Bureau of Investigation, the United States Postal Inspectors, and other members of the Los Angeles Boiler-Room and Telemarketing (BAT) Task Force provided the leadership for the project. Using the lists of names seized from groups engaging in fraudulent activities, BAT alerts potential victims. Following this targeted telephone contact, advice was given about the dangers of telemarketing fraud and the older person was given appropriate information and received a written information pack. In some cases, older people uncovered existing fraudulent activities and the BAT staff were available to intervene. The authors reported that in the first year, 19,958 calls were made, averaging 416 calls per day. Based on direct contact with older people through 4,388 calls, 68 older people were identified as having received suspected fraudulent telemarketing calls. However, the authors did not consider the impact of potential preventative education, nor was the impact evaluated at a later date to elicit how the preventative material was used by the older person if subjected to suspected fraudulent calls.

3.1.2 Experimental studies

A total of five interventions evaluated in five peer-reviewed research papers were identified as pertaining to the micro-system ecological level (Acierno, Rheingold, Resnick, & Stark-Riemer, 2004; Dyer *et al*., 2002; Filinson, 1993; Mariam, McClure, Robinson, & Yang, 2013; Wilber, 1991). Interventions classified at this level were understood to be directly targeting the older person experiencing or at risk of experiencing abuse. The five interventions classified at this ecological level were: a 15 minute educational video and corresponding brochure aimed at educating older people who experienced criminal victimisation, as to healthy coping and safety planning strategies (Acierno *et al*., 2004); an inter-disciplinary geriatric assessment and intervention programme which targeted the psychological and social well-being of patients referred by adult protective services (Dyer *et al*., 2002); a volunteer advocate programme which provided assistance and advocacy to older people experiencing abuse with a particular focus on providing support in the utilisation of the criminal justice system (Filinson, 1993); a programme which sought to mobilise the social and psychological resources of older people considered at risk of abuse and/or self-neglect by targeting their relations with family and their community (Mariam *et al*., 2013); and a daily money management programme which sought to divert older people, referred to protective services, from conservatorship (Wilber, 1991).

Three of the studies evaluated interventions using an experimental design, which incorporated a comparative control group (Acierno *et al*., 2010; Filinson, 1993; Wilber, 1991). Acierno *et al*. (2004) undertook an independent group comparison (control and intervention) experiment on a sample of older people (N=116) who experienced criminal victimisation within the previous 4 weeks. While the study conclusions supported claims for the efficacy of their video based educational intervention, the study design was at considerable risk of bias due to the prioritisation of external validity over experimental control. As such, the intervention delivery replicated real world situations whereby the intervention was delivered by police officers as part of their normal duty. This meant that consistency in intervention delivery and evaluation assessment could not be controlled. Furthermore due to resource constraints no baseline measurements were undertaken with the result that pre and post measurements were not possible and it was not possible to compare the control and intervention group at baseline. The outcome measures were relevant and valid and they were reliably obtained; however intervention efficiency was not measured. The study obtained an overall global score of 13 from 22 for the evaluation of study design, outcomes and transferability.

Filinson (1993) undertook a retrospective case/control (matched) quasi-experiment with a sample of clients referred to protective services (N=84). The conclusions of the study point to the efficacy of a volunteer advocate programme in successful utilisation of the criminal justice system. However, a considerable risk of bias was identified in the matched design arising from poor experimental control as well as potential selection bias in the identification of the experimental group. The outcome measures were relevant, valid and reliably obtained; however there was little discussion of unanticipated outcomes. The intervention was well described in terms of the actions taken but a discussion of the theoretical background of the intervention was absent as was consideration of the context of intervention delivery. The study obtained an overall global score of 9 from 22 for the evaluation of study design, outcomes and transferability.

Wilber (1991) undertook a randomised controlled trial which evaluated the efficacy of a daily money management intervention targeting community-dwelling older people (N=63) referred to protective services. The study found no evidence to support the hypothesis that participation in a daily money management service would lower levels of appointment to conservatorship. However, the integrity of the findings may be undermined by potential confounders in the implementation of the intervention arising from the heterogeneity of the sample and the individualised nature of the intervention. The outcome measures were relevant and valid and were selected on the basis of pre-established reliability; however reliability assessment was not undertaken. Unintended or unanticipated outcomes were discussed, specifically the finding of a significant relationship between appointment to conservatorship and cognitive impairment and psychiatric symptom severity. The transferability of the intervention was compromised due to the tailored nature of the money management programme, which meant that it could not be described in a standardised way. There was however considerable discussion of the complexities of the context in which this type of intervention is delivered and how this limits the impact of the intervention. The study obtained an overall global score of 12 from 22 for the evaluation of study design, outcomes and transferability.

3 Results

Two of the studies classified at the micro-system level employed a quasi-experimental design, typically a pre and post intervention evaluation, to generate evidence for intervention efficacy (Dyer *et al*., 2002; Mariam *et al*., 2013). Dyer *et al*. (2002) reported improvement in depression and social support measures among a sample (N=58) of patients referred by protective services following an interdisciplinary geriatric assessment and intervention. However, there was considerable risk of bias in the study design presented by the lack of internal control, randomisation, or blinding. Furthermore, potential confounders of a heterogeneous sample were not addressed, nor were all the outcome measures identified and reported upon. No unanticipated or unintended outcomes were considered and the efficiency of the intervention was not evaluated. The intervention was not explained in sufficient detail, limiting the transferability. The study obtained an overall global score of 5 from 22 for the evaluation of study design, outcomes and transferability.

Mariam *et al*. (2013) measured the effectiveness of a psychological and social support intervention targeting at risk older people by examining pre to post intervention change. Based on the study findings, the authors concluded that the programme was effective in building working alliances with older people and reducing risk factors for abuse through eliciting change in social and psychological functioning. While the evidence for the efficacy of the intervention was supported by the study design's high external validity as well as a strong theoretical basis, there was considerable risk of bias arising from the lack of experimental control, randomisation or allocation or assessment blinding. The outcome measures were relevant and valid and reliability was measured and reported on for two scales. However, no unintended or unanticipated outcomes were discussed. The intervention was well explained with consideration of the theoretical basis as well as the potential interaction effect of the context in which the intervention was delivered. The study obtained an overall global score of 14 from 22 from the evaluation of study design, outcomes and transferability. Table 3 displays the evaluation criteria and scores for each of the five studies describing interventions classified at the micro-system level.

Summary

In summary, there was a scarcity of research papers retrieved from the literature search which empirically evaluated interventions targeting the micro-system level. Of the five papers included in this review which were categorised under the micro-system ecological level only three were evaluated using a comparative or control group (Acierno *et al*., 2004; Filinson, 1993; Wilber, 1991). Overall the level of evidence found to support any particular intervention at this ecological systems level was weak. Three of the five interventions scored poorly in relation to the strength of the evaluation design in terms of risk of bias, intervention implementation and measurement (Dyer *et al*., 2002; Filinson, 1993; Wilber, 1991). None of the five studies evaluated the efficiency of the interventions. Two of the studies scored greater than 50% in the assessment of the transferability of the intervention, as measured by the adequacy of the intervention description including a discussion of the intervention context (Mariam *et al*., 2013; Wilber, 1991). Overall, of the five papers included for review which were classified at this ecological systems level, the strongest evidence for efficacy were found for a psychological and social support intervention targeting at risk older people (Mariam *et al*., 2013) and an educational video and corresponding brochure aiming to educate older people who experienced criminal victimisation (Acierno *et al*., 2004).

TABLE 3: Evaluation criteria and scores for papers evaluating the efficacy of interventions classified under the micro-system ecological level

Author		Acierno *et al.* (2004)	Dyer *et al.* (2002)	Filinson (1993)	Mariam *et al.* (2013)	Wilber (1991)
Target Group		**People aged 55+ victims of criminal violence (N=116)**	**Patients referred to APS (N=58)**	**Clients referred to APS (N=84)**	**Older people identified as 'at risk' (N=54)**	**Community resident OP referred to financial service (N=63)**
Intervention		**15 minute video and corresponding brochure**	**Interdisciplinary Geriatric Assessment**	**Elderly Abuse Support Group**	**Eliciting Change in Elders at Risk (ECARE)**	**Daily money managment programme**
Comparator Group		**Yes**	**No**	**Yes**	**No**	**Yes**
Evaluating Design	**Assessment of bias**					
	Random allocation	Yes	No	No	No	Yes
	Allocation concealment	No	No	No	No	No
	Blinding of participants and personnel	No	No	Yes	No	No
	Blinding of outcome assessment	No	No	No	No	No
	Incomplete outcome data	No	Yes	No	No	No
	Selective reporting	No	Yes	No	No	No
	Assessment of intervention					
	Quality of implementation (confounders)	Low	Low	Low	High	Low
	Theoretical basis specified	No	No	No	Yes	No
	Assessment of measurement					
	Adequacy of outcome measures	High	High	High	High	High
	Reliability of measures	High	High	Low	Medium	High
	Rating	***8/13***	***4/13***	***6/13***	***8/13***	***5/13***
Evaluating Outcomes						
	Outcomes relevant to stakeholders?	Yes	Yes	Yes	Yes	Yes
	Unanticipated / unintended outcomes?	Yes	No	Yes	Yes	Yes
	Efficiency	No	No	No	No	No
	Rating	***2/3***	***1/3***	***2/3***	***2/3***	***2/3***
Evaluating Transferability						
	Adequacy of intervention description	Medium	Low	Medium	High	Medium
	Adequacy of context description	Medium	Low	Low	Medium	High
	Interaction between context and intervention	Medium	Low	Low	Medium	High
	Rating	***3/6***	***0/6***	***1/6***	***4/6***	***5/6***
Overall Rating		**13/22**	**5/22**	**9/22**	**14/22**	**12/22**

3.2 Meso-system interventions

Meso-system interventions were understood as targeting the connections or relations between micro-system settings which contain the older person. This encompasses the interactions between different micro-systems, such as family, friends, community group, church and so forth. Interventions classified under this ecological level included those targeting caregivers, including hospital staff, as well as the interactions between an older person's family, social network or community setting.

3.2.1 Descriptive studies

Meso-systems interventions describe interventions which have an impact on the service to the older person, rather than being a direct interaction with the older person. This includes evaluations of specific elder abuse education for staff, innovative and creative ways of managing cases, and evaluating existing service delivery (MDT, FAST). Thus, the intervention is at one remove from the older person, but has an impact on the micro-system. A total of 25 studies were allocated to meso-systems. These papers are divided into two main categories: the evaluation of particular case management service models to respond to elder abuse (n=14) and educational programmes and training initiatives (n=11).

Case management service models

This section on service models is sub divided into eight papers which review MDTs, APS or thematic service models, two papers which consider financial abuse, two papers focusing on service models, which are philosophically re-oriented to heightened family and community involvement, and two papers which examine specific gender based services.

Many studies focus on services providing direct case-work type interventions for the older person who may be at risk of abuse or experiencing abuse. Alon and Berg-Warman (2013) evaluated a service model of community based interventions used in three municipalities in Israel. A Specialized Unit for the Prevention and Treatment of Elder Abuse (SUPTEA) was established and staffed by a social worker and paraprofessional with an advisory MDT. In addition, a separate group of 40 social workers undertook two elder abuse training programmes. SUPTEA had a dual intervention focus, involving, firstly, screening and risk assessment and interventions involving one-to-one counselling, group work and family mediation. Legal intervention occurred only when deemed a component of case management. The second focus was on community based work, which aimed to raise awareness, the delivery of educational workshops to older people and conferences for professionals. SUPTEA's intervention model was evaluated through data obtained from 558 questionnaires administered to social workers, 31 interviews with abusers, professionals and older victims and observations of the support groups. Findings demonstrated that staff training and having the facility of SUPTEA improved working procedures on elder abuse case management. The study found that one third of elder abuse cases were closed, with resolution in 18 percent of cases.

The highest success rate was demonstrated in cases of neglect. In terms of care management pathways, the choice of intervention was related to the type of abuse experienced by the older person and an increase in the number interventions in individual cases decreased case improvement rates. Counselling was the most common form of intervention and was used in cases of rights violation (86%) and psychological abuse (82%), but employed less in cases of neglect (64%). Within the provision of supportive services, day-care, medical treatment and homecare were frequently provided, and demonstrated an improvement in 65 percent of cases, particularly in cases of neglect (82%). In terms of the impact of the interventions, data gathered from social workers demonstrated an improvement in 66 percent of all cases with a rate of improvement of 72 per cent in those cases which were defined as neglect cases. Improvement was related to a reduction of abuse frequency or the development of better coping skills and empowerment strategies by the older person. Moreover, for 20 percent of older people, the abuse ceased. Although legal assistance was not pursued as much as other forms of interventions (39%), this demonstrated the greater rate of improvement (82%). Support groups were seen as offering peer understandings and empowering victims of abuse. Thirty three percent of cases showed no improvement and social worker participants in the study suggested this was heavily influenced by the lack of willingness or ability of the abuser to partake in the process. In terms of the community intervention, the project was seen as raising awareness and knowledge of what to do in abuse situations and there was also an increase in identified cases.

Wolf and Pillemer (2000) examined three aspects of case management in 59 cases of elder abuse in three elder abuse response programmes. Although the method of elder abuse responses varied, the study's focus was on global measure outcomes of case resolution. Using specially developed data instruments, the study examined variables from the initial assessment which were associated with case resolution. Secondly, a review of cases at case closure or six months later was undertaken to identify which variables were associated with case resolution and, thirdly, which factors were seen by case workers to contribute to case resolution.

Findings from the study showed that issues such as the type of mistreatment, the severity of abuse, the stress experienced by the older person and the perpetrator and service provision were important variables in case resolution. In addition, functional status of the older person was found to have some impact on case resolution. However, age, gender and relationship between victim and perpetrator were not found to be associated with case resolution. In particular, neglect was associated with resolved cases (30%) rather than non-resolved cases (8%), as the introduction of a new service or a change in living arrangements could have a significant impact on case resolution. Caseworkers identified that interventions focused on alleviating perpetrator stress related to the older person, increasing social supports to the victim, working with other agencies, and separating victim and perpetrator had contributed positively to case resolution. Case resolution was seen to be hindered in cases of physical or psychological abuse, in which the perpetrator was resistant to receiving help and there was a mutual dependency relationship, especially if the perpetrator was a spouse. In considering, the decision of case resolution, it was observed that clinical judgment rather than objective criteria can impact on resolution as workers and supervisors may wish to perceive the input as successful. Wolf and Pillemer (2000) noted that issues of self-determination, family preservation and resistance to service interventions impacted on case resolution. Additionally, future risk did not appear to be assessed, which may be a critical part of the success of interventions, particularly when separation of the older person and the perpetrator was not acceptable. Consequently, recommendations included the use of a family systems approach to case work and the integration of a risk assessment framework rather than simply using case resolution or case closure as an outcome measure.

Two papers examined the work of MDTs in the US (Teaster, Nerenberg, & Stansbury, 2003; Twomey *et al*., 2010). Teaster *et al*. (2003) reviewed the activities of 31 MDTs, including traditional MDTs and more specialised teams, such as FAST, teams focused on clinical health assessment and fatality review teams. Twomey *et al*. (2010) reported on the activities of seven MDTs and describe developmental areas such as team building and training, client services, provision of free neuropsychological assessments, a working geriatric assessment team and the engagement with partner agencies. MDTs were considered as having the capacity to provide expert and targeted advice on case responses as well as increasing members' knowledge on areas such as legislation, advocacy and the identification of service gaps. Both papers considered MDT membership composition, which can vary, but a common finding was that each team had people with leadership and vision. Teaster *et al*. (2003) reported that 71 MDTs accepted referrals for all categories of elder abuse, while seven teams had a sole focus on financial abuse cases. The use of MDTs as a service intervention is supported by the conclusions in both papers as supporting targeted and responsive case planning, enhancing case understandings, promoting efficiency in handling complex cases of elder abuse, educating the public, and ultimately safeguarding vulnerable adults from abuse; however, specific interventions were not examined in either paper (Teaster *et al*., 2003; Twomey *et al*., 2010).

Mosqueda, Burnight, Liao, and Kemp (2004) reported on the work of Vulnerable Adult Specialists Services. Using a retrospective, descriptive analysis, a sample of 269 referred cases of community dwelling elders and adults with disabilities were reviewed. The programme was designed to offer APS, Legal and District Attorney professionals access to trained medical experts who could examine the physical and psychological injuries, assess capacity, document injuries for legal follow up, answer questions and testify in legal cases. The team consisted of two geriatricians, a psychologist, a gerontologist, a social worker and a project co-ordinator. Findings demonstrated that 97 percent of those who initially referred the case indicated that the specialist consultant service was helpful in case investigation, capacity assessment, the investigation of health challenges, the facilitation of legal processes and stimulating client/family action. Thus, as an intervention, this contributed to enhanced responses through informed, tailored and efficient case management.

Navarro, Wilber, Yonashiro, and Homeier (2010) evaluated the Los Angeles County Elder Abuse Forensic Center through an examination of three hundred and thirteen de-identified client records, representing 130 team management case meetings. The authors also reviewed participant surveys, presenters' experiences and evaluator observations to evaluate the case management process. Results indicated that collaboration led to various targeted outputs, including medical and neuropsychological assessments, court testimony, links to assistance from outside services, such as mental health services, and enhanced support to both APS and law enforcement investigators. However, the authors noted the limitations of multiple systems trying to independently co-ordinate plans, but this was counterbalanced by strong meeting attendance and members' perception of intervention effectiveness.

Reis and Nahmiash (1995) described Project Care, an intervention model to combat abuse of older people in community settings in Canada. Project Care provided a multi-dimensional service, which included a focused screening tool package for elder abuse as well as a responsive intervention service. Interventions involved home care assessment, MDT case review, the development of non-professional 'volunteer buddies' to listen to and assist abused older people and/or the perpetrators, a victims' empowerment group, and a community-level response committee for population advocacy and education. The authors reported that, in a two-year period, the project delivered an intervention service to 218 older people over 60 years of age and demonstrated cost effectiveness and case effective management via screening, community awareness, specialist response teams and community supports.

Jackson and Hafemeister (2013) reviewed the impact of five intervention variables, in terms of their association with the continuation of abuse after APS investigation. The variables were: a change in living arrangement, the appointment of a guardian, continuing contact with abuser, perceptions of future risk and consequences for the abusive individuals. From a convenience sample of 71 substantiated elder abuse cases, case based interviews were conducted with APS caseworkers (n=71), elderly victims (n=51) and third-party persons (n=35) familiar with the victims' circumstances. Findings demonstrated that elderly victims were more likely to experience ongoing abuse when they continued to live with the abuser and when the abuser did not experience any negative consequences of abuse perpetration. Entry of the case into the justice system as a consequence of the abusive behaviour had a positive impact on abuse cessation; however appointment of a guardian and perceptions of risk were not related to continuation of abuse. The authors noted that guardianship may have a consequential impact on victim-abuser separation. Jackson and Hafemeister (2013) argued that any intervention for elder abuse must include a focus on abusers and that continued monitoring is imperative in the event of continued contact or where the perpetrator lacks any experience of personal consequences for abuse perpetration.

Velasco (2000) reported on two interventions to prevent and respond to elder abuse. The first, the Elder Abuse and Financial Exploitation Prosecution Unit, was established in 1995 in Ventura County, California, as a legal entity for the investigation and prosecution of cases as well as community outreach and activities promoting the prevention of elder abuse. The second, the Senior Crime Prevention Program within the Victim Services Division, was a programme that focused on heightening awareness and preventing elder abuse. The programme disseminated information on abuse prevention, referral agencies and support agencies as well as delivering presentations to older people and relevant professionals. The authors reported on the success of the programme, in terms of increased elder abuse referrals to law enforcement agencies and increased legal cases filed.

Another study with a focus on a service intervention for financial abuse was described by Aziz (2000). The Los Angeles County Area Agency on Aging (AAA) Fiduciary Abuse Specialist Team (FAST) was created in January 1993 to combat elder financial abuse in Los Angeles County, California. FAST provided expert consultation on financial abuse with the aim of helping victims to recover or prevent the further loss of their assets and achieve the highest possible quality of life. In addition, FAST provided education and training to raise awareness of financial abuse and anticipatory guidance in the form of prospective health, legal and financial planning. Aziz (2000) reported that FAST promoted cooperation for optimum, appropriate and speedy outcomes for the older victim of financial abuse and that the most advantageous outcome was the enhanced impact of the Los Angeles County's network of public and private organisations in combatting elder financial abuse.

Nerenberg (1999) observed that many Western European ways of addressing family violence tend to minimise family involvement in ameliorating the abuse and that family structures and values differ within populations. Two papers considered community-based interventions for addressing elder abuse (Groh & Linden, 2011; Holkup, Salois, Tripp-Reimer, & Weinert, 2007). In a Canadian study, Groh and Linden (2011) described an innovative service response to elder abuse in Ontario. Using the concept of restorative justice, the authors instigated a new organisational model as a response service pathway in elder abuse and case management intervention. Restorative justice offers an alternative method of addressing elder abuse by focusing on the needs of the older person, the offender and the community. Braithwaite (2004:28) observes that restorative justice is 'about the idea that because crime hurts, justice should heal'. In a review of this model, cases were screened using defined criteria and referred to the service if suitable. Guided by a trained facilitator, case intervention allowed a method of conflict management and resolution to emerge within the dialogue between the abused older person, the perpetrator and other stakeholders. Groh and Linden (2011) reported that in 2005 the most common case conclusion was 'completely resolved' (n=21), with 15 cases defined as 'warning' and 6 as 'unfounded'. Three evaluation methods were used to review the project: a self-evaluation (Community Care Access Centre of Waterloo Region, 2003) and two subsequent evaluations carried out in 2004 (Stones, 2004) and 2005 (Linden, 2006). The self-evaluation demonstrated that the project had a partial achievement of goals, but challenges presented in terms of underestimation of resources and time required for the project, including time needed to train police. However, the project was deemed successful due to its high outreach work and the fact that it addressed or was addressing 44 cases. In addition, interagency collaboration was strengthened.

In the first external evaluation of the restorative justice project (Stones 2004), surveys and interviews with the service providers and victims were used. Surveys demonstrated clarity of outreach presentations and changes in community attitudes. The interviews consisted of a small sample of seven case workers' involvement in 10 different cases. Mixed results were demonstrated, in terms of victim satisfaction, victim having a major role and having the victim's story conveyed. However, over 70 percent agreed that the victim was protected and experienced fair treatment. All of the participants agreed that restorative justice promoted the victim's safety, was an efficient service, encouraged a change in the perpetrator and had the capacity to meet perpetrator's needs. Stones (2004) concluded that the programme, while successful, was not suitable for all elder abuse cases, required more sustainable funding, less volunteer services, and an increase in service referrals.

The final evaluation involved a review of case referrals, case management, information sharing and seventeen interviews (Stones, 2004). Findings demonstrated that in the eighteen months of the programme, the number of referrals remained low and did not justify the project costs Another challenge was the difficulty in recruiting family members who were not directly involved in the process to engage in the mediation circles. The impact of the project was seen as generating awareness of elder abuse, developing strong response networks and that restorative justice gave a voice to older people, which could otherwise be lost in traditional responses to elder abuse. The sensitivity of elder abuse acted as a barrier to engagement in the programme and, even when restorative justice circles were being convened, this was time consuming and reliance on volunteers was difficult. Also, issues such as cognitive deterioration and complex family composition could complicate aspects of the programme's success. Acknowledging these issues and experiences, the restorative justice approach was considered as unsuitable as a primary means of addressing elder abuse. However, the programme underwent revision and the restorative justice principles were used to establish the Elder Abuse Response Team (EART), which became part of the Waterloo Regional Police Service domestic violence unit (Linden, 2006). Within this service, restorative justice was replaced with a conflict management approach as the guiding philosophy; however other more traditional service options are also available.

Acknowledging that alternative methods of addressing elder abuse require integration with cultural beliefs and norms of the target population, Holkup et al. (2007) evaluated a community based participatory approach, entitled the family care conference, with reservation communities of Native Americans. The service was facilitated by trained Native American women, who had community credibility as well as a depth understanding of the life world of the older person. The programme was elder focused, family centred and community based. Of 26

referred cases, 3 were diverted for tribal court intervention, 12 did not engage in the family care conference service and one case was pending a meeting. The intervention was facilitated by family nominated community members and a spiritual advisor and was staged to conform to the values of Native Americans. The authors reported that the intervention programme offered a culturally compatible and valuable method of addressing elder abuse concerns, which integrated the use of the family itself to generate acceptable solutions in a safe environment.

Brandl, Hebert, Rozwadowski, and Spangler (2003) identified 34 specific US-based support groups for abused people, mainly older women, and interviewed the support group facilitators. The authors reported that these groups reduced the experience of isolation for the older abused women and promoted communities of mutual support, which fostered strategies of individual emancipation and empowerment. The study elucidated specific gender related issues as well as challenges and advice pertaining to the establishment and practical facilitation of support groups.

In a second review on a service for abused older women, Seaver (1997) examined a dedicated Milwaukee programme which facilitated weekly support meetings, volunteer mentors, shelter and community education and case management. Referred through multiple sources, the women were asked to discuss their situation and define their own goals so that they could regain control. Being believed and listened to in a non-judgmental way were considered essential elements of the intervention as well as having facilities which matched need, including legal and practical help. Seaver (1997) reported that 132 older women availed of the service over a three-year period and that 52 (39%) of the women freed themselves from abuse; five (3%) continued to work on stopping the abuse and 73 (56%) still remained in the situation. The author also reported that many older women were bound to the relationship through being dependent themselves or being depended on by others and, consequently, those most likely to stay in the situation were women who were disabled or had highly dependent spouses or adult children. Seaver (1997) concluded that intervention responses need to contextualise case management to incorporate the practical and ethical dilemmas that older women can face when experiencing abuse.

Educational initiatives

Legal staff, clergy, policing services, and health and social care professionals have a duty of care in responding appropriately to elder abuse. This requires them to understand the issue, recognise the abuse and know how to act to ameliorate the situation. This requires knowledge, which is often presented through targeted educational programmes. This section considers eleven papers which reported on elder abuse educational interventions for various professional disciplines and staff. Most educational interventions were focused on general elder abuse education and targeted to health and social care staff and other professionals. One reported educational programmes within inter-faith communities and three reported educational programmes targeting specific areas related to elder abuse, namely self-neglect, elder death reviews and sexual abuse.

In an early study, Hudson (1992) examined the impact of an eight-module education programme delivered to 210 nurses' aides in ten long-term care facilities. The programme was evaluated using a pre and post intervention questionnaire and was considered a success. The participants recognised that education in elder abuse was sensitive and reported that they required time to reflect and discuss issues in depth. In the course of the evaluation, the nurses' aides described their experiences of working in long term care facilities as stressful and reported feeling powerless and not being valued in the team.

Radensky and Parikh (2008) reported on a train the trainer programme for home health aides working within the Jewish Home and Hospital Lifecare System in New York. All aides were trained by a nurse, who was the case manager and training incorporated instruction in signs of elder abuse and appropriate reporting pathways. Enhanced education on the topic of elder abuse was also provided to nurses, social workers and translator escorts. Protocols were developed regarding case conferences and processes as well as further education on following up cases. Programme evaluation was via a follow up telephone audit and a chart audit. The telephone audit indicated that some one-to-one training was not undertaken so closer monitoring was required. Chart audits demonstrated that despite some additional clarity being needed for documentation, there was both an increase in case referrals and efficiency in case management.

Smith *et al*. (2010) evaluated a blended learning elder abuse programme which was implemented with 78 nursing assistant students in North Carolina. After completing required theory and engaging in class reading and discussion, students were requested to view a Power Point presentation and a You Tube video. Immediately after the video, students completed a ten minute online discussion and online radio button evaluation based on their review of the materials used in the programme and their previous knowledge of elder abuse. Results demonstrated that students could articulate elder abuse responsibilities in practice situations and students illustrated how such information could be used to assist in reporting and documenting suspected cases, as well as the need for comprehensive care standards. Although students indicated that they had previously received information on elder abuse, 50 percent of the respondents considered that the blended learning programme did not have a significant impact beyond awareness, but that the programme stimulated additional personal emphasis on the topic. Smith *et al*. (2010) concluded that traditional text learning only sensitises the student to context, but the educational intervention has the capacity to offer a more depth comprehension of elder abuse.

McGarry and Simpson (2007) described a learning resource developed for nursing students at the University of Nottingham, UK. The programme involved a number of approaches including a review of the students' own attitudes to older people, the impact of organisational culture on elder abuse, an interactive lecture, a video presentation and a small group discussion. The authors reported that the learning resource received positive feedback from the students, who identified the professional, practical and ethical responsibilities associated with addressing elder abuse.

In an evaluation of an Irish elder abuse and self-neglect programme with public health nurses and social workers, Day, Bantry-White, and Glavin (2010) discussed the value of facilitating an interdisciplinary education workshop. The workshop presented foundational information on understandings and characteristics of elder abuse and self-neglect and examined disciplinary roles and responsibilities under Irish policy, legislation and procedures. Twenty-five students completed evaluation sheets and an open discussion was also facilitated. Findings demonstrated that the workshop increased awareness and contributed to a critical approach to inter disciplinary case management related to elder abuse. Students valued the collaborative approach and the critical engagement and found that the case studies demonstrated a concrete working through of 'real life' exemplars.

Corley, Davis, Jackson, and Bach (2006) reported on the Spirit of Aging Rising (SOAR) programme which was implemented with Masters in Social Work students and staff from California State University, Los Angeles, and community agency representatives who were experts in ageing and cross-cultural issues. The curriculum addressed three themes in relation to critical issues in ageing: elder abuse, family caregiving and mental health, and students were presented with issues related to the needs of older people and how to empower older people. Content also included the biological changes of age and ageing theories pertaining to elder abuse. Learning experiences included debating risk factors, assessing older people and ethical dilemmas in abuse cases and impact of quality of life. The evaluation of the SOAR programme focused on the educational process and change with the Master's in Social Work programme rather than an impact on practice. Through data from a focus group discussion with teaching faculty, the programme was considered sustainable and favourably evaluated with intentions to further integrate the module into the post-graduate and undergraduate curriculum.

Heath, Dyer, Kerzner, Mosqueda, and Murphy (2002) reviewed medical training in four medical schools in the US and found that collaborative training with APS was invaluable for students. In particular, the authors reported that having the opportunity to be involved in real life cases enhanced understandings and responses to elder abuse case management. Additionally, the participating APS specialists from social work and other disciplines were able to gain a deeper insight into how a medical input could contribute to case assessment and management.

In the US, elder abuse is a reportable offence and legislation names mandated reporters. Harmer-Beem (2005) investigated the impact of a dental hygienist elder abuse training programme on mandatory reporting. Using a ten-item evaluation survey, which focused on the recognition and reporting of abuse and neglect, the evaluation study examined the dental hygienists' perceived likelihood of reporting if they encountered suspected abuse and whether training would change their perceived

likelihood to report. Although, the sample size was small (n=25) responses, results indicated that training increased the self-perceived likelihood of mandatory reporting and participants' knowledge of procedures involved in reporting.

Gironda *et al*. (2010) described three US-based projects in California, aimed at increasing knowledge and awareness of elder abuse among health care professionals. The three projects, based at UCLA School of Dentistry, the City College of San Francisco, the San Diego State University and the University of California, involved, respectively, awareness training for undergraduate dentistry students; an eight-hour course on elder abuse for EMTs, health care interpreters and community workers; advanced training on self-neglect to 82 APS workers; and a three-day training programme for coroners and medical examiners. The authors reported that the UCLA project resulted in raised faculty awareness on ageing issues and targeted knowledge on the topic and the mandated responsibility to report. While no evaluation data was reported for the CCSF project, the authors described how the participants had limited awareness of how to respond in cases of elder abuse in the pre-training period.

Gironda *et al*. (2010) also described three additional elder abuse initiatives. These included a case assessment and review project by the Institute on Aging involving a multidisciplinary assessment team (MAT) approach; a project by WISE and Healthy Aging entitled the Seniors Against Investment Fraud (SAIF) and aimed at recognising and preventing financial and investment fraud. While the various initiatives described were not formally evaluated, Gironda *et al*. (2010) argue that the most significant impact of the initiatives has been the formal introduction of elder abuse training for mandated reporters. In developing and implementing the programmes, they observed that such programmes depend on building positive relationships between stakeholders and being adaptable and flexible through a modular approach. Interventions also need to incorporate a cultural aspect and include baseline knowledge of ageing processes so that measures of elder abuse and neglect can be judged. Other areas of note are the need for standardised education and training while being sensitive to disciplinary needs and perspectives. In their review of these educational interventions, Gironda *et al*. (2010) acknowledged the challenges inherent in such initiatives, such as facilitating engagement with professionals, ensuring that students understand the basic concepts and their practical application and having a programme which suits busy professionals. The authors concluded that the programmes demonstrated enhanced professional training, promoted inter-agency collaboration, increased professional competencies and formalised a determined focus on elder abuse.

Although most educational interventions reviewed were directed towards health and social care professionals, some innovative projects have targeted other professional groups who interact with older people. Proehl (2012) described an educational intervention involving two public sector organisations and an inter faith community. Some authors describe the role of organised religion and faith in addressing elder abuse and older people can often have a close affinity with religious leaders (Lafferty, Treacy, Fealy, Drennan, & Lyons, 2012) (Wilson & Podnieks & Wilson 2003, 2005).

Proehl (2012) reported on an educational programme for clergy supported by on-line resources and involving lay readers who delivered information on elder abuse to the congregation. The evaluation of the programme involved several aspects: reviewing relevant documentation, observation of meetings, training sessions, two educational summits and participant interviews and a survey among clergy and lay leaders who attended the educational summit. The findings demonstrated increased awareness of elder abuse and its prevention within the faith community and an increased ability to respond appropriately. The project also resulted in strengthened community networks and individual responses involved counselling older people, closer monitoring of the situation and referrals to medical personnel or APS. The project also highlighted that consultation with APS was more acceptable and could lead to formal reporting. Educational summits were shown to be important fora to elicit interest in further training in elder abuse. The authors noted that while the intervention had an impact on addressing elder abuse, its sustained impact relied on having appropriate leadership and integration into existing programmes within health and social care services.

Teitelman and O'Neill (2000) described a pilot programme among APS workers entitled Investigating Adult Sexual Abuse, and based on maximising the older person's autonomy and right to consensually engage in sexual activities. Addressing the emotional aspects of sexual abuse was acknowledged as fundamental as well as

recognising that family members may also need to be supported if sexual abuse is discovered. Although not formally evaluated, informal evaluation indicated an increased confidence in addressing sexual abuse of older people based on participants' enhanced knowledge and skills.

3.2.2 Experimental studies

Interventions classified at the meso-system level were understood to target the connections or relations between micro-system settings, for example the interactions between family, friends, community group, church and so forth. A total of 25 interventions evaluated in 27 peer-reviewed research papers were identified as pertaining to the meso-system ecological level. These were divided into seven different categories: support groups for older people including survivor groups; interventions targeting perpetrator behaviour; and interventions which targeted caregivers, including informal carers, nurses and nursing assistants/aides, physicians, first responders and other types of formal healthcare professionals, such as dentists.

Support groups for older people

Of the 25 intervention evaluations retrieved for this review and classified under the mesosystem level, two described support group interventions (Bowland, Edmond, & Fallot, 2012; Brownell & Heiser, 2006). Bowland *et al*. (2012) undertook a randomised controlled experiment evaluating the efficacy of a spiritual therapeutic group intervention with older women survivors of interpersonal violence (N=45). In this experiment a significant positive effect was found for the intervention on the outcome measures of depressive symptoms, anxiety and physical symptoms. These positive effects were maintained at a three month post intervention followup. The study design was rated highly (11 from 13), in terms of addressing potential bias, the quality of the intervention and the relevance and reliability of the outcome assessment. However, unintended or unanticipated outcomes were not identified and analysis of the efficiency of the intervention was not undertaken. The intervention was well described, in terms of the structure and implementation of the therapeutic content, which was delivered by trained personnel. The context was also well described including a description of the demographics and characteristics of the sample. The study was attributed an overall rating score for the integrity of the analysis of 16 from 22.

Brownell and Heiser (2006) undertook a randomised controlled experiment evaluating the efficacy of a psycho-educational support group with older female victims of family mistreatment (N=16). The outcomes measured in the assessment of intervention efficacy included: locus of control, social support, depression, somatisation and guilt. No significant effect was found for the intervention on any of the outcome measures; however the risk of under-powering undermines this finding. Furthermore, considerable risk of bias was posed by the lack of group allocation concealment as well as blinding of participants, personnel and outcome assessors. The intervention was well explained in terms of curriculum content for the support group and it was implemented with consistency. The outcome measures were relevant and measured reliably with reference to previously established scales. However, reliability data were not provided. No unintended outcomes were reported from the intervention and the cost effectiveness or efficiency was not evaluated. The context of the intervention delivery was explained in terms of the inclusion and exclusion criteria for sample selection, but was not discussed with relevance to the generalizability of the findings to other settings or locations. Furthermore there was no discussion of the potential impact on the transferability of the findings presented by the interaction between the intervention and the context. The study was attributed an overall rating score for the integrity of the analysis of 12 from 22. Table 4 displays the evaluation criteria and scores two studies describing support group interventions classified at the meso-system level.

TABLE 4: Evaluation criteria and scores for papers evaluating the efficacy of interventions classified under the meso-system ecological level and targeting victim/survivor support groups

Author		Bowland *et al.* (2004)	Brownell and Heiser (2006)
Target Group		**Older women survivors of IPV (N=45)**	**Older female victims of family mistreatment (N=16)**
Intervention		**Spiritual therapeutic group**	**Psycho-educational support group**
Comparator Group		**Yes**	**Yes**
Evaluating Design	**Assessment of bias**		
	Random allocation	Yes	Yes
	Allocation concealment	Yes	No
	Blinding of participants and personnel	No	No
	Blinding of outcome assessment	Yes	No
	Incomplete outcome data	No	No
	Selective reporting	No	Yes
	Assessment of intervention		
	Quality of implementation	High	High
	Theoretical basis specified	Yes	Yes
	Assessment of measurement		
	Adequacy of outcome measures	High	High
	Reliability of measures	High	Medium
	Rating	***11/13***	***9/13***
Evaluating Outcomes			
	Outcomes relevant to stakeholders?	Yes	Yes
	Unanticipated / unintended outcomes?	No	No
	Efficiency	No	No
	Rating	***1/3***	***1/3***
Evaluating Transferability			
	Adequacy of intervention description	High	Medium
	Adequacy of context description	High	Medium
	Interaction between context and intervention	No	No
	Rating	***4/6***	***2/6***
Overall Rating		**16/22**	**12/22**

Interventions targeting perpetrators

Of the 25 interventions retrieved for this review and classified under the meso-system level, two described and evaluated interventions which targeted perpetrators of elder abuse (Campbell Reay & Browne, 2002; Scogin *et al.*, 1989). Campbell Reay and Browne (2002) undertook a non-randomised quasi-experiment (pre and post-test) design to evaluate the efficacy of an education and anger management programme among a sample of perpetrators of elder abuse (N=19). The authors reported a significant effect for the training post intervention and at 6 weeks follow-up for the outcome measures of strain, depression and anxiety. Furthermore, significant effect was also found for cost of care as well as conflict tactics and reductions in these measures were maintained at 6 weeks follow-up. However, the study design received a score of 7 from 13, reflecting a considerable risk of bias presented by the lack of a control group or randomisation. The internal validity of the study was limited by the lack of blinding of participants, personnel or outcome assessors as well as convenience sampling strategy employed. The intervention implementation was weak due to the fact the educational training was delivered on a one-to-one basis with no evidence to support the assumption of standardisation of implementation of the training or the educational materials. The theoretical basis of the intervention was well explained in terms of theories of phased transition approach to anger management. The outcome measures were relevant to the research goals and they were reliably assessed with reliability data provided. The transferability of the intervention was considered to be low (1 from 6) as, although the intervention was adequately

TABLE 5: Evaluation criteria and scores for papers evaluating the efficacy of interventions classified under the meso-system ecological level and targeting perpetrators of elder abuse

Author		Campbell Reay and Browne (2002)	Scogin *et al.* (1989)
Target Group		**Perpetrators of elder abuse (N=19)**	**Caregivers at risk of abusing (N=95)**
Intervention		**Education and anger management programme**	**Caregiver training programme**
Comparator Group		**No**	**Yes**
Evaluating Design	**Assessment of bias**		
	Random allocation	No	No
	Allocation concealment	No	No
	Blinding of participants and personnel	No	No
	Blinding of outcome assessment	No	No
	Incomplete outcome data	No	No
	Selective reporting	No	No
	Assessment of intervention		
	Quality of implementation	Low	Low
	Theoretical basis specified	Yes	No
	Assessment of measurement		
	Adequacy of outcome measures	High	Medium
	Reliability of measures	High	Low
	Rating	***7/13***	***3/13***
Evaluating Outcomes			
	Outcomes relevant to stakeholders?	Yes	Yes
	Unanticipated / unintended outcomes?	No	No
	Efficiency	No	No
	Rating	***1/3***	***1/3***
Evaluating Transferability			
	Adequacy of intervention description	Medium	Low
	Adequacy of context description	Low	Low
	Interaction between context and intervention	Low	Low
	Rating	***1/6***	***0/6***
Overall Rating		**8/22**	**4/22**

described, little information was provided pertaining to how the intervention was standardised nor the interaction between the intervention and the context in which it was delivered. The study was attributed an overall rating score for the integrity of the analysis of 8 from 22.

Scogin *et al.* (1989) evaluated the evidence for the efficacy of a caregiver training programme targeting caregivers found to be abusive or at risk of abuse (N=95) using a non-randomised control/intervention comparison design. The authors concluded that cognitive behavioural training can reduce psychological distress and perceptions of cost of care among potential perpetrators of abuse. However, considerable risk of bias was identified in the study design arising from the lack of randomisation, group allocation procedures and limited blinding. Furthermore, internal validity was compromised by the heterogeneous study sample. The rationale for selecting the outcome measures was not discussed nor was the reliability and validity of the measurement tools explained. No unintended outcomes were reported and the efficiency of the intervention was not evaluated. The transferability of the intervention was poor (0 from 6) as, although the intervention content was outlined, there was little discussion of the theoretical context and no consideration of the interaction between the intervention and the context in which it was delivered. The study was attributed a global score of 4 from 22 for study design, outcomes and reliability. Table 5 displays the evaluation criteria and scores for the two studies classified at the meso-system level, which describe interventions targeting perpetrators and potential perpetrators of elder abuse.

Interventions targeting informal caregivers

Of the 25 interventions retrieved for this review and classified under the meso-system level, three described and evaluated interventions which targeted informal caregivers (Drossel, Fisher, & Mercer, 2011; Hébert *et al*., 2003; Phillips, 2008). Drossel *et al*. (2011) employed a quasi-experimental (pre and post) design to evaluate the evidence for the efficacy of an intervention providing dialectic behaviour therapy skills training to non-professional caregivers of people with dementia (N=16). The authors found a positive effect for the intervention on psycho-social adjustment, specifically increased problem-focused coping, enhanced emotional well-being and less fatigue. However, considerable risk of bias in the study design was found to result from the lack of a control or comparator group as well as the lack of randomisation or blinding. The potential for confounding variables presented by a small heterogeneous convenience sample as well as multiple intervention delivery sites was not addressed in the design. The intervention was well described and discussed in terms of content, structure and theoretical basis and the outcome measures used to evaluate efficacy were relevant and measured reliably. However, there was little attention given to describing the context in which the intervention was delivered (setting, timing, etc.) and to how the context and intervention might have interacted to affect outcomes. The study was attributed an overall global score of 13 from 22 for the evaluation of design, outcomes and transferability.

Hébert *et al*. (2003) undertook a multi-centre randomised controlled experiment to evaluate the efficacy of a psycho-educative group programme targeting caregivers of people with dementia (N=118). The outcome measures used by the authors to evaluate efficacy included self-perceived health, care recipient's disease and caregiving issues. The authors found a significant effect post intervention for their psycho-educative programme targeting caregivers of people with dementia on the outcome measures of reaction to and the frequency of behavioural problems of care-recipients. No effect was found on more global outcome measures of stress, psychological distress, burden and social support. A relatively low level of risk for bias was identified in the evaluation of the study design (11 from 13). The sample was well powered to detect a moderate effect size and the participants were randomised into a control or intervention group. The authors provided a strong rationale for the validity and reliability of an extensive amount of outcome measures and they noted unanticipated outcomes from the intervention. The transferability of the intervention was rated highly (4 from 6) as the intervention was clearly outlined with a strong theoretical basis and description of the context in which it was delivered. There was limited discussion of the potential impact on efficacy of the interaction between the intervention and the context in which it was delivered. The study was attributed an overall global score of 17 from 22 for the evaluation of design, outcomes and transferability.

Phillips (2008) evaluated the efficacy of psycho-educative nursing intervention using a randomised controlled experiment which measured intervention effect on the frequency and intensity of physical and verbal/psychological aggression toward older caregiving wives and daughters (N=83) by care recipients. The authors found evidence which supported the efficacy of the intervention in reducing the verbal aggression experienced by caregivers of older men. Furthermore, these caregivers experienced significantly less depression, anger and confusion following the intervention. However, this effect was not found for caregivers of older women and the intervention was found to have no significant effect on the experience of physical aggression, disruptive behaviour and social function. The randomised controlled experiment was found to have limited relative risk of bias (11 from 13) due to the presence of a comparator group and randomisation. The intervention was well explained in terms of content, structure and theory and the outcome measures were valid and relevant and measured reliably. Unanticipated outcomes were discussed, specifically the influence of the care recipient's gender on efficacy. The study obtained a score of 3 from 6 for intervention transferability due to the strong explanation and description of the intervention but the limited consideration of how the context in which the intervention was delivered might interact with outcomes. The study obtained an overall global score of 16 from 22 for the evaluation of design, outcomes and transferability. Table 6 displays the evaluation criteria and scores for the three studies classified at the meso-system level, which describe interventions targeting informal caregivers of older people.

TABLE 6: Evaluation criteria and scores for papers evaluating the efficacy of interventions classified under the meso-system ecological level and targeting informal caregivers

Author		Drossel *et al.* (2011)	Hébert *et al.* (2003)	Phillips (2008)
Target Group		**Caregivers of people with dementia (N=16)**	**Informal caregivers of people with dementia (N=95)**	**Older cargiving wives and daughters (N=83)**
Intervention		**DBT skills training manual**	**Psycho-educative group programme**	**Psycho-educative nursing intervention**
Comparator Group		**No**	**Yes**	**Yes**
Evaluating Design	**Assessment of bias**			
	Random allocation	No	Yes	Yes
	Allocation concealment	No	No	Yes
	Blinding of participants and personnel	No	No	No
	Blinding of outcome assessment	No	Yes	No
	Incomplete outcome data	No	No	No
	Selective reporting	No	No	No
	Assessment of intervention			
	Quality of implementation	Medium	High	High
	Theoretical basis specified	Yes	Yes	Yes
	Assessment of measurement			
	Adequacy of outcome measures	High	High	High
	Reliability of measures	High	High	High
	Rating	***8/13***	***11/13***	***11/13***
Evaluating Outcomes				
	Outcomes relevant to stakeholders?	Yes	Yes	Yes
	Unanticipated / unintended outcomes?	Yes	Yes	Yes
	Efficiency	No	No	No
	Rating	***2/3***	***2/3***	***2/3***
Evaluating Transferability				
	Adequacy of intervention description	High	High	High
	Adequacy of context description	Medium	High	Medium
	Interaction between context and intervention	Low	Low	Low
	Rating	***3/6***	***4/6***	***3/6***
Overall Rating		**13/22**	**17/22**	**16/22**

Interventions targeting first responders

Of the 25 intervention evaluations retrieved for this review and classified under the meso-system level, two described and evaluated interventions which targeted first responders (Nusbaum, Cheung, Cohen, & Keca, 2006; Nusbaum, Mistretta, & Wegner, 2007; Seamon, Jones, Chun, & Krohmer, 1997). One evaluation measured the effect of a workplace educational programme on attitudes and behaviours of police and firefighters responding to a situation of potential elder abuse (Nusbaum *et al.*, 2006; Nusbaum *et al.*, 2007). The authors employed a quasi-experimental (pre and post) design over three time points to measure the effect of an intervention which aimed to increase awareness and detection of neglect and abuse of older people among police and firefighters (N=101). The authors found no significant effect for their intervention and concluded by highlighting the difficulty of using educators external to an organisation to drive attitudinal and behavioural change. However, there was considerable risk of bias in the study design arising from compromised experimental control, a convenience sample, no randomisation or blinding. The heterogeneity of the sample obtained across multiple sampling sites poses a risk of confounders which threatened intervention implementation. There was also considerable loss in the sample due to attrition which was not addressed in the discussion of the research design. The theoretical basis of

the intervention was not discussed and the authors provided limited detail on the content and structure of the educational programme which would limit transferability. No unanticipated outcomes were discussed and the efficiency of the intervention was not assessed. The study obtained an overall global rating of 5 from 22 for the evaluation of study design, outcomes and transferability. Seamon *et al.* (1997) undertook a quasi-experiment (pre and post) to evaluate the efficacy of a 45 minute training video on improving the ability of prehospital emergency medical service personnel (N=60) to identify and report suspected cases of elder abuse. The outcomes measured in the experiment included identification of elder abuse and neglect, willingness to report suspected cases, definitions of elder abuse and neglect and mandatory reporting requirements. The authors found evidence to support the efficacy of their educational video; however, there was considerable risk of bias in the study posed by a convenience and heterogeneous sample and lack of experimental control. The theoretical basis of the intervention was not discussed and nor were the procedures for intervention implementation outlined sufficiently. While the outcome measures were relevant to the detection, management and reporting of elder abuse by first responders, the validity and reliability of the measurement tools were not reported. No unanticipated outcomes were considered. While the efficiency was not directly assessed the cost of video production and development was given.

TABLE 7: Evaluation criteria and scores for papers evaluating the efficacy of interventions classified under the meso-system ecological level and targeting first responders

Author		**Nusbaum *et al.* (2006); Nusbaum *et al.* (2007)**	**Seamon *et al.* (1997)**
Target Group		**First responders police and firefighters (N=101)**	**First responders paramedics, EMTs (N=60)**
Intervention		**Project EXPORT — education**	**45-minute training video**
Comparator Group		**No**	**No**
Evaluating Design	**Assessment of bias**		
	Random allocation	No	No
	Allocation concealment	No	No
	Blinding of participants and personnel	No	No
	Blinding of outcome assessment	No	No
	Incomplete outcome data	No	No
	Selective reporting	No	No
	Assessment of intervention		
	Quality of implementation	Low	Low
	Theoretical basis specified	No	No
	Assessment of measurement		
	Adequacy of outcome measures	High	High
	Reliability of measures	Low	Low
	Rating	***4/13***	***4/13***
Evaluating Outcomes			
	Outcomes relevant to stakeholders?	Yes	Yes
	Unanticipated / unintended outcomes?	No	No
	Efficiency	No	Yes
	Rating	***1/3***	***2/3***
Evaluating Transferability			
	Adequacy of intervention description	Low	Medium
	Adequacy of context description	Low	Low
	Interaction between context and intervention	Low	Low
	Rating	***0/6***	***2/6***
Overall Rating		**5/22**	**8/22**

The video was well described in terms of structure and content but the contexts for intervention implementation were not considered nor were the possible interaction effects of context and intervention. The overall global rating attributed to this study in an evaluation of research design, outcomes and transferability was 8 from 22. Table 7 displays the evaluation criteria and scores for the two studies classified at the meso-system level, which describe interventions targeting first responders.

Interventions targeting nurses and nursing assistants/aides

Of the 25 intervention evaluations retrieved for this review and classified under the meso-system level, 6 described and evaluated interventions which targeted nurses or nursing assistants/aides (Braun, Suzuki, Cusick, & Howard-Carhart, 1997; Désy & Prohaska, 2008; Goodridge & Johnston, 1997; Hsieh, Wang, Yen, & Liu, 2009; Pillemer & Hudson, 1993; Teresi *et al*., 2013). Braun *et al*. (1997) evaluated a short-course educational programme aiming to prevent elder abuse that may arise within the nursing relationship as a result of professional burnout, resource constraints or stress. They employed a quasi-experimental (pre and post) design using a sample of nurses' aides working in a nursing home (N=105). Their study found a positive evaluation of the learning materials by the participants with a significant increase in job satisfaction post intervention. However, a considerable risk of bias was found for the design presented by weak internal control, a non-representative convenience sample and no comparative control or blinding. The sample recruitment procedures were poorly explained and the outcomes were measured using purpose-build tools with no reference to validity or reliability. The intervention was well explained in terms of structure, content and theoretical basis, aiding in transferability. The study obtained an overall global rating of 10 from 22 for the assessment of design, outcomes and transferability.

Désy and Prohaska (2008) described and evaluated the Geriatric Emergency Nursing Education (GENE) course providing education and training on geriatric nursing, which included a module on the identification, management and reporting of elder abuse and neglect. They employed a quasi-experimental (pre and post) design with a sample of emergency nurses (N=63) and found positive effect for the intervention on knowledge of geriatric concepts and self-rated ability to provide care in a number of relevant areas including appropriate referral to protective services. However there was considerable risk of bias in the study design posed by the lack of a comparative control and blinding. Furthermore, internal validity was threatened by a convenience heterogeneous sample. The intervention pertained to overall geriatric nursing and the recognition and management of elder abuse was a subsidiary concern. The outcomes were measured using bespoke tools with no reference to validity or reliability assessments. The efficiency of the intervention was not assessed. While the intervention is described in terms of overall content and structure there was insufficient detail to aide transferability. The theoretical basis was not discussed nor was the context in which the intervention delivered. The overall global rating attributed to this study for the assessment of design, outcomes and transferability was 6 from 22.

Goodridge and Johnston (1997) evaluated a specific abuse prevention programme which was designed and developed by the Coalition of Advocates for the Rights of Infirm Elderly (CARIE). They evaluated the efficacy of this programme on a sample of nursing assistants (N=136) in a long-term care facility using a quasi-experimental (pre and post) design. The programme was positively evaluated by the nursing assistants and the pre/post tests indicated a positive effect for the intervention in terms of the sample's attitudes towards older patients and a significant decline in self-reported nursing assistant-resident conflict. However, the research design was at considerable risk of bias due to the lack of a comparator control, randomisation or blinding. The outcomes are relevant to nursing home management as well as the reduction of conflict between nurse assistants and residents and there were strong reliability assessments for the measures of conflict and burnout. No unintended or unanticipated outcomes were reported and efficiency was not assessed. While the intervention was well explained in terms of general content and goals, there was limited discussion of the theoretical basis. There was limited description given of the context in which the intervention was delivered with a general discussion of the influence of contextual factors on working conditions. The study was attributed an overall global rating of 5 from 22 for an assessment of design, outcomes and transferability.

Hsieh et al. (2009) employed an experimental design incorporating a comparator control group to evaluate the efficacy of an educational support group programme for

geriatric caregivers. This case-control study recruited caregivers (N=100) from four nursing homes in southern Taiwan. The experiment found a significant positive effect in reducing psychological abusive behaviour by caregivers and promoting knowledge of geriatric care giving. However no significant effect was found for reducing work stress. The study design was considered to be at risk of bias due to the lack of randomisation into case and control group as well as the lack of blinding. Allocation procedures were not well explained. The outcomes were relevant and measured with reliability. No unintended outcomes are reported and efficiency was not directly assessed although it was pointed out that the programme may influence existing training for nursing caregivers. The intervention is summarily described with little detail as to content or theoretical basis. The contexts in which the intervention was delivered (two institutional settings) were not described. The study obtained an overall global rating for the evaluation of design, outcomes and transferability of 10 from 22.

Pillemer and Hudson (1993) evaluated a specific abuse prevention programme which was designed and developed by the Coalition of Advocates for the Rights of Infirm Elderly (CARIE). They employed a quasi-experimental (pre-post) design with a sample of nursing assistants (N=114) randomly selected from 10 nursing homes. The evaluation of the CARIE programme found a significant positive effect for evaluations of the intervention as well as improvements on a number of indicators, including reduced conflict with and abuse of residents. While the lack of a comparator control group in this study poses a risk of bias this is somewhat offset by the randomisation used in the selection of study participants from a representative crosssection of nursing homes. The large sample size also increases the external validity for the study findings; however this increases the potential for confounding variables due to increased heterogeneity. The outcomes were relevant to the research goals; however the measurement tools were not identified nor their validity or reliability addressed. No unanticipated outcomes were reported and efficiency was not measured. The intervention development was thoroughly explained with discussion of content, structure and theoretical basis. The authors described the context in which the intervention was delivered and noted the interaction effect between context and intervention efficacy. The study obtained an overall global rating of 14 from 22 for the assessment of research design, outcomes and transferability.

Teresi *et al*. (2013) evaluated an intervention which sought to reduce resident to resident elder mistreatment in an institutional setting through awareness raising and training of nursing staff in appropriate prevention and management strategies. They employed a clustered randomised trial, randomised at facility level with matched controls, targeting certified nursing assistants and measuring outcomes on residents (N=1405) randomised into a control and intervention group. The authors found a significant positive effect for the intervention on knowledge and recognition of resident to resident elder mistreatment. Furthermore there were significantly increased levels of reporting of mistreatment among the intervention group. This complex clustered trial addressed potential bias through randomisation in the selection of nursing homes (6 from 21) and further randomisation of the long stay units within each facility (N=47) into control and intervention groups. The randomisation procedures were well explained ensuring allocation blinding as well as blinding of outcome assessors. All of the outcome data was reported and measured with reliability. No unanticipated or unintended outcomes were discussed and the efficiency of the intervention was not addressed. The intervention was thoroughly described with strong implementation quality, aiding transferability. The context in which the intervention was delivered was discussed with reference to the interaction effect between efficacy and context. This study obtained an overall global rating of 18 from 22 for the assessment of study design, outcomes and transferability. Tables 8a and 8b display the evaluation criteria and scores for the six studies classified at the meso-system level, which describe interventions targeting nurses or nursing assistants/aides.

TABLE 8a: Evaluation criteria and scores for papers evaluating the efficacy of interventions classified under the meso-system ecological level and targeting nurses and nursing assistants/aides

Author		Braun *et al.* (1997)	Désy and Prohaska (2008)	Goodridge and Johnston (1997)	Hsieh *et al.* (2009)	Pillemer and Hudson (1993)
Target Group		**Nurse aides in nursing homes (N=105)**	**Emergency nurses (N=63)**	**Nursing assistants (N=136)**	**Nurses and nurse aides (N=100)**	**Nursing assistants (N=114)**
Intervention		**Video and booklet education material**	**Geriatric Emergency Nursing Education**	**CARIE Abuse Prevention Programme**	**Educational support group programme**	**CARIE Abuse Prevention programme**
Comparator Group		**No**	**No**	**No**	**No**	**No**
Evaluating Design	**Assessment of bias**					
	Random allocation	No	No	No	No	Yes
	Allocation concealment	No	No	No	No	No
	Blinding of participants and personnel	No	No	No	No	No
	Blinding of outcome assessment	No	No	No	No	No
	Incomplete outcome data	No	No	No	No	No
	Selective reporting	No	No	No	No	No
	Assessment of intervention					
	Quality of implementation (confounders)	Medium	Low	Medium	High	High
	Theoretical basis specified	Yes	No	No	No	Yes
	Assessment of measurement					
	Adequacy of outcome measures	Medium	Medium	Low	High	High
	Reliability of measures	Low	Low	Medium	High	Low
	Rating	***5/13***	***3/13***	***3/13***	***8/13***	***7/13***
Evaluating Outcomes						
	Outcomes relevant to stakeholders?	Yes	Yes	Yes	Yes	Yes
	Unanticipated / unintended outcomes?	No	No	No	No	No
	Efficiency	Yes	No	No	No	No
	Rating	***2/3***	***1/3***	***1/3***	***1/3***	***1/3***
Evaluating Transferability						
	Adequacy of intervention description	High	High	Medium	Medium	High
	Adequacy of context description	Medium	Low	Low	Low	High
	Interaction between context and intervention	Low	Low	Low	Low	High
	Rating	***3/6***	***2/6***	***1/6***	***4/6***	***6/6***
Overall Rating		**10/22**	**6/22**	**5/22**	**10/22**	**14/22**

TABLE 8b: Evaluation criteria and scores for papers evaluating the efficacy of interventions classified under the meso-system ecological level and targeting nurses and nursing assistants/aides

Author		**Tersei *et al.* (2013)**
Target Group		**Certified nursing assistants (from five large (>250) bed nursing home facilities — clustered (N=300+)**
Intervention		**R-REM training intervention on recognition and reporting**
Comparator Group		**Yes**
Evaluating Design	**Assessment of bias**	
	Random allocation	Yes
	Allocation concealment	Yes
	Blinding of participants and personnel	No
	Blinding of outcome assessment	Yes
	Incomplete outcome data	No
	Selective reporting	No
	Assessment of intervention	
	Quality of implementation	High
	Theoretical basis specified	Yes
	Assessment of measurement	
	Adequacy of outcome measures	High
	Reliability of measures	High
	Rating	***12/13***
Evaluating Outcomes		
	Outcomes relevant to stakeholders?	Yes
	Unanticipated / unintended outcomes?	No
	Efficiency	No
	Rating	***1/3***
Evaluating Transferability		
	Adequacy of intervention description	High
	Adequacy of context description	High
	Interaction between context and intervention	Medium
	Rating	***5/6***
Overall Rating		**18/22**

Interventions targeting physicians

Of the 25 intervention evaluations retrieved for this review and classified under the meso-system level, 5 described and evaluated interventions which targeted physicians (Cooper, Huzzey, & Livingston, 2012; Famakinwa & Fabiny, 2008; Jogerst & Ely, 1997; Shefet *et al*., 2007; Uva & Guttman, 1996). Cooper *et al*. (2012) evaluated evidence for the efficacy of a short group educational programme on trainee psychiatrists (N=40) using a quas-experimental (pre and post) design undertaken at three time points. The authors found evidence to support the efficacy of the intervention in increasing recognition of abusive caregiving strategies as well as knowledge of the management of elder abuse. The lack of a comparative control group, randomisation or blinding increases the risk of bias for the study design. The intervention implementation was described without discussion of potential confounders such as prior experience or the self-selection of participants. All of the outcomes were reported and were relevant to the goals of the study. The reliability and validity of the outcome measures was not stated. The authors discussed an unanticipated outcome from the intervention, which was that a rise in vigilance and confidence in managing elder abuse post intervention did not correspond with an increased likelihood of the participants asking an older patient about abuse. The intervention was summarily described in terms of content and there was no discussion of the theoretical basis. This study obtained an overall rating of 7 from 22 for the evaluation of study design, outcomes and transferability.

Famakinwa and Fabiny (2008) evaluated the efficacy of a small group teaching session on the topic of caregiver stress delivered to medical residents (N=40) using a quasi-experimental (pre and post) design. The authors reported that significant positive effect was found for the intervention on recognition of elder abuse and an understanding of caregiver stress. However, considerable risk of bias was found in the evaluation of the study design due to poor internal control from the lack of a comparator group, randomisation or blinding. The authors selectively reported outcomes and did not discuss the outcomes for which no positive effect was found. The outcome measurement instruments were bespoke with little reference to their validity or reliability. The outcomes are relevant to educators generally and recognition of elder abuse is measured as part of a battery of other measurements concerned with caregiver stress and burden. The efficiency of the intervention is not addressed. The intervention is generally described in terms of the overall structure with insufficient information provided as to content or theoretical basis. The context in which the intervention was delivered, i.e. different hospital settings, was not discussed in relation to its potential impact on the findings. This study obtained an overall global rating of 6 from 22 for the evaluation of study design, outcomes and transferability.

Jogerst and Ely (1997) undertook a case/control non-randomised comparison of family practice residents in order to evaluate the efficacy of a home visit programme, which was delivered as part of a geriatric rotation. The aim of the programme was to enable family practice residents to evaluate patients for elder abuse and capacity in their homes. The authors reported a positive effect of the programme on residents' self-rated ability to diagnose elder abuse and assess a patient's home environment post intervention. The study deployed a retrospective comparison group and therefore randomisation and blinding was not possible. This increased the risk of bias and reduced the experimental control in the design. However, the study had high external validity as it captured real world settings comparing a new education programme as it was being implemented with a previous existing programme. The potential for systemic differences between the comparator or intervention group may have given rise to confounder variables. The outcome measures are relevant but the measurement instruments were not assessed for reliability. No unintended outcomes were reported and the efficiency of the programme was not assessed. The education programme was well explained in terms of structure and content, but with little reference to the theoretical basis. The context in which the intervention was delivered was not addressed. This study obtained an overall rating of 7 from 22 for the assessment of study design, outcomes and transferability.

Shefet *et al*. (2007) evaluated the efficacy of a national domestic violence experiential training programme based on standardised patients to improve the knowledge, skills and detection rates of primary care physicians (N=74). The programme pertained to three areas of domestic violence, one of which was elder abuse. The authors reported a positive significant effect for the intervention in self-perceived capabilities and overall case management of domestic violence among participants. However, considerable risk of bias was found in the study design, which did not include a control comparator, randomisation or blinding. The heterogeneous national sample also presented a threat to internal experimental control for potential confounders. The intervention was delivered in 15 different workshops which may pose a threat to validity; however detailed discussion of the standardisation procedures were provided and the intervention development and content were outlined. While the outcome measures are relevant to the goals of better elder abuse detection and management, the results are compiled for all three branches of domestic violence and it is difficult to discern the findings related to the elder abuse branch specifically. The reliability and validity of the outcome measurement tools was not assessed. The intervention was very well described in terms of structure and content. However, the contexts in which the intervention was delivered were not addressed in relation to their potential impact upon findings. The study obtained an overall rating score of 8 from 22 for the evaluation of research design, outcomes and transferability.

Uva and Guttman (1996) evaluated the efficacy of a 50 minute education session on elder abuse with emergency medical residents (N=31) using a matched controlled survey. The outcome measures used to assess efficacy pertained to knowledge of elder abuse and self-rating of the intervention. The authors reported a significant positive effect for the intervention on elder abuse knowledge post training and at 1 year follow-up. Although the participants were randomised into a pre-intervention survey group and a post intervention survey group there

was insufficient information provided as to whether the groups were adequately matched to act as controls for each other. This gave rise to a considerable risk of bias and reduced experimental control for potential confounding variables. The outcome measures are relevant to the study goals and to the goal of increasing awareness and reporting of elder abuse in emergency departments; however there is no discussion of the validity or reliability of the measures. No unintended outcomes were reported and the efficiency was not evaluated. The intervention was summarily described with limited information as to structure, content or theoretical basis. The context in which the intervention was delivered was not discussed in such a way as to enhance transferability. The study obtained an overall global rating for the evaluation of design, outcomes and transferability of 8 from 22. Tables 9 displays the evaluation criteria and scores for the five studies classified at the meso-system level, which describe interventions targeting physicians.

Interventions targeting multidisciplinary healthcare providers

Of the 25 intervention evaluations retrieved for this review and classified under the meso-system level, 5 of the interventions targeted a range of health care providers, either singularly or in multidisciplinary experimental studies (McCauley, Jenckes, & McNutt, 2003; Mills *et al*., 2012; Richardson, Kitchen, & Livingston, 2002, 2004; Sugita & Garrett, 2012; Vinton, 1993). McCauley *et al*. (2003) created and evaluated a multidisciplinary continuing medical education videotape on interpersonal violence (ASSERT), which incorporated a module on elder abuse. They employed a quasi-experimental (pre and post) design with a sample of physicians (N=120) and other healthcare providers including nurses and social workers (N=172). The authors found a significant level of improvement for knowledge and attitudes towards interpersonal violence and the intervention was rated positively by the participants. However, the study was considered to be at risk of bias due to the lack of a comparator control group, no randomisation and no blinding. While the large sample sizes increase external validity they threaten the internal experimental control due to heterogeneity and the risk of confounding variables. While the outcome measures of knowledge and attitude are relevant, they pertain to all forms of interpersonal violence; therefore their validity for measuring elder abuse outcomes may be compromised. While the content validity of the measurement tools are well established there were no reliability assessments undertaken. The authors reported an unanticipated outcome for the intervention, which was the low baseline knowledge among physicians and, while the efficiency of the intervention was not directly assessed, the authors made reference to its accessibility and standardisation. The intervention was well explained in terms of content and development but the theoretical basis was not discussed. There was little discussion of the potential interaction effect of context and intervention efficacy. The study obtained an overall global rating of 10 from 22 for the assessment of design, outcomes and transferability.

Mills *et al*. (2012) evaluated evidence for the efficacy of an education programme concerning elder investment fraud and financial exploitation. The programme targeted a range of healthcare professionals (N=127), including physicians, nurses, social workers, occupational therapists and physiotherapists. The outcomes measured to assess efficacy included self-assessed ratings of the programme as well as the implementation of programme material into practice, specifically the number of elder abuse cases identified 6 months post the intervention. The authors reported a positive effect for the intervention using summary descriptive statistics. However, considerable risk of bias was found for this study design, attributed to the lack of a control group, randomisation or blinding. The considerable heterogeneity of the sample undermines experimental control of confounding variables and a response bias was demonstrated from the high attrition rates at 6 months follow-up. The outcomes were relevant to the programme developers but were measured with no reference to validity or reliability. The intervention development was described in great detail, demonstrating strong validity, but the theoretical basis was not discussed. The context in which the intervention was delivered was not discussed with reference to its potential impact upon intervention efficacy. The study obtained a global overall rating of 7 from 22 for the assessment of study design, outcomes and transferability.

Using a randomised controlled trial Richardson *et al*. (2002) and Richardson *et al*. (2004) evaluated the efficacy of attendance at a short educational course on managing elder abuse with healthcare staff (N=64), including nurses, care assistants and social workers. The authors reported a significant positive effect for the intervention on knowledge and management of abusive scenarios. The risk of bias in

TABLE 9: Evaluation criteria and scores for papers evaluating the efficacy of interventions classified under the meso-system ecological level and targeting

Author		Cooper *et al.* (2012)	Famakinwa and Fabiny (2008)	Joergst and Ely (1997)	Shefet *et al.* (2007)	Uva and Guttman (1996)
Target Group		**Trainee psychiatrists (N=40)**	**Medical residents (N=40)**	**Family practice residents (N=71)**	**Primary care physicians (N=74)**	**Emergency medicine residents (N=31)**
Intervention		**Brief group education session**	**Small group teaching session**	**Home visit programme**	**National Domestic Violence Experiential Training Programme**	**50-minute education session**
Comparator Group		**No**	**No**	**Yes**	**No**	**Yes**
Evaluating Design	**Assessment of bias**					
	Random allocation	No	No	No	No	Yes
	Allocation concealment	No	No	No	No	Yes
	Blinding of participants and personnel	No	No	No	No	No
	Blinding of outcome assessment	No	No	No	No	No
	Incomplete outcome data	No	No	No	No	No
	Selective reporting	No	No	No	No	No
	Assessment of intervention					
	Quality of implementation (confounders)	Medium	Medium	Medium	Medium	Medium
	Theoretical basis specified	Yes	No	No	No	No
	Assessment of measurement					
	Adequacy of outcome measures	High	Medium	High	High	High
	Reliability of measures	Low	Low	Low	Low	Low
	Rating	***5/13***	***5/13***	***5/13***	***5/13***	***7/13***
Evaluating Outcomes						
	Outcomes relevant to stakeholders?	Yes	Yes	Yes	Yes	Yes
	Unanticipated / unintended outcomes?	Yes	No	No	No	No
	Efficiency	No	No	No	No	No
	Rating	***2/3***	***1/3***	***1/3***	***1/3***	***1/3***
Evaluating Transferability						
	Adequacy of intervention description	Low	Low	Medium	High	Low
	Adequacy of context description	Low	Low	Low	Low	Low
	Interaction between context and intervention	Low	Low	Low	Low	Low
	Rating	***0/6***	***0/6***	***1/6***	***2/6***	***0/6***
Overall Rating		**7/22**	**6/22**	**7/22**	**8/22**	**8/22**

the study design was addressed through the use of a control, randomisation, as well as blinding of personnel delivering the intervention and blinding of outcome assessors. The researchers aimed for a maximum variation sample, which increased external validity; however reduced internal validity was evident, in terms of controlling for confounders such as whether the participants were qualified or not, working in community or residential settings, and so forth. The outcome measures are relevant to the research goals and reliability and validity assessments were undertaken for the measurement of knowledge of the management of elder abuse. The intervention was not well described in terms of content or structure and the theoretical basis was not discussed. The context in which the intervention was delivered was not addressed; therefore the transferability of the study was rated poorly. The overall global rating attributed to the study for the assessment of design, outcomes and transferability was 13 from 22.

Sugita and Garrett (2012) evaluated the efficacy of an intervention to increase knowledge and self-perceived likelihood to report elder abuse among oral healthcare providers (N=103). They conducted a quasi-experiment (pre and post) and reported post intervention increases in awareness of reporting processes, knowledge and awareness of elder abuse, knowledge of mandated reporter requirements and increased recognition of elder abuse. However, the study was considered to be at considerable risk of bias due to the lack of a control group, randomisation or blinding. A large convenience and heterogeneous sample was obtained for the study, posing a risk to the internal experimental control over potential confounding variables. The outcome measures are relevant, particularly as they pertain to mandated reporters; however, the validity and reliability of the measurement tools was not discussed. The intervention implementation was sound; however the theoretical basis of the intervention was not discussed. The intervention was described in terms of general content and topics, but there was no discussion of the potential interaction effect of context and intervention efficacy. The study obtained a global rating of 7 from 22 for the evaluation of the design, outcomes and transferability.

Vinton (1993) evaluated an elder abuse and neglect prevention education programme on a mixed sample of caregivers (N=107), which included homemakers, personal care aides, respite workers, case managers, administrators, nurses, social workers and law enforcement officers. They undertook a quasi-experiment (pre and post) and concluded that case managers showed the most improvement in their knowledge of elder abuse law as well as the nature of elder abuse and the principles that guide protective services. However, the study design was considered to be at considerable risk of bias due to the lack of a control group, randomisation or blinding. The convenience sample was heterogeneous, thereby limiting internal experimental control for confounding variables such as professional background. The intervention was also conducted over multiple sites, thereby compromising the integrity of implementation. The outcomes measured concerned an overview of the nature of elder abuse and the law, but did not measure the management of elder abuse cases specifically. The reliability and validity of the measurement tools were not discussed. The intervention was described in detail in relation to content and structure, but there was no discussion of the theoretical basis. There was limited discussion of the context in which the intervention was delivered thereby compromising transferability. The study obtained an overall rating of 6 from 22 for the assessment of design, outcomes and transferability. Tables 10 displays the evaluation criteria and scores for the five studies classified at the meso-system level, which describe interventions targeting a variety of health and social care professions.

Summary

In summary, the majority of the research papers retrieved from the literature search, which empirically evaluated interventions using an experimental design, were classified under the meso-system ecological level. A total of 25 from the 37 papers identified targeted the connections or relations between micro-system settings which contain the older person. These 25 papers were divided into seven categories: support groups for older people including survivor groups (n=2); interventions targeting perpetrator behaviour (n=2); and interventions targeting caregivers including: informal carers (n=3), nurses and nursing assistants/aides (n=6), medics and physicians (n=5), first responders (n=2) and other types of formal healthcare professionals, such as dentists (=5).

Both papers which empirically evaluated interventions targeting support groups for older people employed a comparator or control group in the experimental design (Bowland *et al*., 2012; Brownell & Heiser, 2006). While the

TABLE 10: Evaluation criteria and scores for papers evaluating the efficacy of interventions classified under the meso-system ecological level and targeting health and social care providers either singularly or in multidisciplinary experimental studies

Author		McCauley *et al.* (2003)	Mills *et al.* (2003)	Richardson *et al.* (2002, 2004)	Sugita and Garrett (2012)	Vinton (1993)
Target Group		**Clinicians (N=120) nurses and social workers (N=172)**	**Physicians, nurses, social workers (N=35)**	**Employees of local health trust or social services (N=64)**	**Oral health care providers (dentists, hygienists and assistants) (N=103)**	**Cross selection of health and social care professionals**
Intervention		**IPV Video ASSERT**	**Elder Investment Fraud and Financial Exploitation Education**	**Education course**	**Training symposium**	**Educational training session**
Comparator Group		**No**	**No**	**Yes**	**No**	**No**
Evaluating Design	**Assessment of bias**					
	Random allocation	No	No	Yes	No	No
	Allocation concealment	No	No	Yes	No	No
	Blinding of participants and personnel	No	No	Yes	No	No
	Blinding of outcome assessment	No	No	Yes	No	No
	Incomplete outcome data	No	No	No	No	No
	Selective reporting	No	No	No	No	No
	Assessment of intervention					
	Quality of implementation (confounders)	Medium	Low	Medium	Medium	Medium
	Theoretical basis specified	No	No	No	No	No
	Assessment of measurement					
	Adequacy of outcome measures	High	High	High	High	Medium
	Reliability of measures	Low	Low	High	Low	Low
	Rating	***5/13***	***4/13***	***11/13***	***5/13***	***4/13***
Evaluating Outcomes						
	Outcomes relevant to stakeholders?	Yes	Yes	Yes	Yes	No
	Unanticipated / unintended outcomes?	Yes	No	Yes	No	No
	Efficiency	No	No	No	No	No
	Rating	***2/3***	***1/3***	***2/3***	***1/3***	***0/3***
Evaluating Transferability						
	Adequacy of intervention description	High	High	Low	Medium	High
	Adequacy of context description	Medium	Low	Low	Low	Low
	Interaction between context and intervention	Low	Low	Low	Low	Low
	Rating	***3/6***	***2/6***	***0/6***	***1/6***	***2/6***
Overall Rating		**10/22**	**7/22**	**7/22**	**8/22**	**8/22**

use of a controlled experimental design enhanced the internal validity of the two papers, both were rated poorly in relation to outcomes evaluation; in particular, neither paper evaluated the efficiency of their interventions nor did they discuss any potential unintended or unanticipated outcomes. Of the two papers in question, the strongest evidence was found to support the efficacy of a spiritual therapeutic group intervention with older women survivors of interpersonal violence (Bowland *et al*., 2012).

The quality of the evidence reported in two papers which evaluated interventions targeting perpetrators was found to be weak (Campbell Reay & Browne, 2002; Scogin *et al*., 1989). Neither study employed a comparator or control group which resulted in compromised internal control. Both study designs were found to be at considerable risk of bias due to the lack of random allocation, blinding and poor sampling strategies. Furthermore, the transferability of the interventions described in both studies was rated poorly due to the lack of discussion of standardisation or the interactive effect of context and intervention efficacy. Both papers also rated poorly in terms of outcomes evaluation; neither paper evaluated efficiency nor did they discuss potential unintended or unanticipated outcomes.

Three of the papers retrieved and classified under the meso-system ecological level targeted informal caregivers (Drossel *et al*., 2011; Hébert *et al*., 2003; Phillips, 2008). Two of the papers employed a comparator or control group and were rated highly in terms of the quality of the experimental design (Hébert *et al*., 2003; Phillips, 2008). None of the three papers evaluated the efficiency of their interventions, but they did discuss unintended or unanticipated outcomes and, as a result, rated highly in terms of outcomes assessment. Furthermore, all three papers provided a thorough description of their interventions in relation to the theoretical basis as well as the context for delivery. The strongest evidence for efficacy was found for a psychoeducative programme targeting caregivers of people with dementia on the outcome measures of reaction to and the frequency of behavioural problems of care-recipients (Hébert *et al*., 2003). The evidence supporting the efficacy of a psycho-educative nursing intervention in reducing the verbal aggression experienced by caregivers of elderly men as well as reducing caregivers' experiences of depression, anger and confusion was also rated highly (Phillips, 2008).

The quality of the evidence reported in two papers which evaluated interventions targeting first responders was found to be weak (Nusbaum *et al*., 2007; Seamon *et al*., 1997). Neither study employed a comparator or control group, which resulted in compromised internal control. Both study designs were found to be at considerable risk of bias due to the lack of random allocation, blinding and poor sampling strategies. Both papers also rated poorly in terms of outcomes evaluation; in particular they did not discuss potential unintended or unanticipated outcomes. Seamon *et al*. (1997) did, however, evaluate efficiency. The transferability of the interventions described in both studies was rated poorly due to the lack of discussion of the interactive effect of context on intervention efficacy.

Six of the papers retrieved and classified under the meso-system ecological level described and evaluated interventions which targeted nurses or nursing assistants/ nurses' aides (Braun *et al*., 1997; Désy & Prohaska, 2008; Goodridge & Johnston, 1997; Hsieh *et al*., 2009; Pillemer & Hudson, 1993; Teresi *et al*., 2013). Just two of the papers employed a comparator or control group in the experimental design (Hsieh *et al*., 2009; Teresi *et al*., 2013). Three of the five intervention evaluations scored poorly in relation to the strength of the evaluation design in terms of risk of bias, intervention implementation and measurement (Braun *et al*., 1997; Désy & Prohaska, 2008; Goodridge & Johnston, 1997). Just one of the six studies evaluated the efficiency of the outcomes used to measure the efficacy of the interventions (Braun *et al*., 1997). Three of the studies scored greater than 50% in the assessment of the transferability of the intervention as measured by the adequacy of the intervention description, including a discussion of the intervention context (Braun *et al*., 1997; Pillemer & Hudson, 1993; Teresi *et al*., 2013). A very high rating was assigned to the quality of the evidence supporting an intervention which sought to reduce resident to resident elder mistreatment in an institutional setting through awareness raising and training of nursing staff in appropriate prevention and management strategies (Teresi *et al*., 2013).

Five of the papers retrieved and classified under the meso-system ecological level described and evaluated interventions which targeted physicians (Cooper *et al*., 2012; Famakinwa & Fabiny, 2008; Jogerst & Ely, 1997; Shefet *et al*., 2007; Uva & Guttman, 1996). Overall the level of evidence found to support any of the interventions in this category was weak. All five studies rated poorly in relation to the strength of the evaluation design in terms of risk of bias, intervention implementation and

measurement. Only one of the papers discussed unintended outcomes (Cooper *et al*., 2012). Furthermore, none of the studies evaluated the efficiency of the interventions and none of them scored greater than 50% in the assessment of transferability, as measured by the adequacy of intervention description.

Five of the papers retrieved and classified under the meso-system ecological level described and evaluated interventions which targeted multidisciplinary healthcare providers (McCauley *et al*., 2003; Mills *et al*., 2012; Richardson *et al*., 2002, 2004; Sugita & Garrett, 2012; Vinton, 1993). Overall the level of evidence reported by the five papers classified in this category was weak. Just one of the studies employed a comparator or control group (Richardson *et al*., 2002, 2004).

The remaining four studies rated poorly in relation to the strength of the evaluation design in terms of the risk of bias, intervention implementation and outcome measurement. None of the five studies evaluated the efficiency of the intervention and only one discussed potential unanticipated or unintended outcomes (Richardson *et al*., 2002, 2004). Just one study scored higher than 50 per cent in the assessment of the transferability of the intervention, as measured by the adequacy of the intervention description, including a discussion of the intervention context (McCauley *et al*., 2003). Of the five studies, the strongest evidence for efficacy of intervention was found for a short educational course on managing elder abuse (Richardson *et al*., 2002, 2004). The authors reported a significant positive effect for the intervention on knowledge and management of abusive scenarios.

3.3 Exo-system interventions

Exo-system interventions were understood as targeting the links between the individual's immediate context and a social setting in which the individual does not have an active role, for example, adult protective services, the criminal justice system, the social welfare system, the economic or political system, as well as the education and health systems. Interventions were included in this ecological level if they addressed the social structures and systems that do not directly contain the older person, but which impact upon the immediate micro-system contexts in which the older person is situated.

3.3.1 Descriptive studies

Exo-system responses represent a further step from the older person in terms of direct contact. Exossystem interventions address general models, systems and foci in which services are delivered, discussion papers on alternative approaches to case management and ethos, and legal perspectives of protection. The review of the literature identified twenty-eight papers which were classified under exo-system approaches. These papers are sub-divided into: evaluations of systems of service delivery (n=14); criminal justice systems (n=9); and systems process improvement (n=5).

Evaluation of systems of service delivery

This section reviews six papers on service delivery related to multi-disciplinary collaboration and case management systems, three papers which discuss the specific ethos in case interventions, two papers which argue for a service re-orientation to family based intervention and three which discuss typology specific service improvements.

Dyer, Heisler, Hill, and Kim (2005) describe the multiple service interventions developed in the US to combat elder abuse with a particular focus on team development, focus and challenges. APS has developed in the US as responsive systems to elder abuse, but in comparison to funding for other areas of family violence, elder abuse has not received the same support. Responsibilities of APS include receiving elder abuse reports, triaging cases, case investigations, case conclusions and intervention where elder abuse is confirmed. Most reported cases concern self-neglect and many cases of suspected abuse are not reported due to various reasons. APS works closely with medical case management teams who conduct comprehensive geriatric assessments. Some elder abuse cases require legal intervention by the criminal justice system, which comprises law enforcement officers and prosecutors. In addition, the civil justice system can assist in areas of protecting and restoring assets and the establishment of surrogate decision makers. Abuse victims may apply for court orders, conservatorships and guardianships or pursue legal remedies in the case of theft, breach of contract and negligence. In fiduciary abuse specialist teams (FAST) described by Dyer *et al*. (2005), various relevant disciplines, including police, APS, medical and nursing staff, prosecutors, bank officials, probate experts, and real estate personnel, volunteer their expertise in reviewing cases of financial abuse.

Other types of collaborations have evolved to address different aspects of elder mistreatment, including code enforcement teams, fatality review teams, and various victim advocacy programmes. Other macro-impact resources are the Area Agencies on Aging, shelters, the National Center for Elder Abuse (NCEA), the National Clearinghouse on Abuse in Late Life, the Department of Justice's Office on Violence against Women and the American Bar Association Commission on Law and Aging.

Reingold (2006) and Solomon and Reingold (2012) discuss the intervention model developed by the Weinberg Center for Prevention, Intervention and Research in Elder Abuse based in Riverdale New York. The Weinberg model represented a multi-focused programme with both community and institutional services for older people who were abused. A MDT was based at the Centre and collaborated closely with APS, legal and other medical services. Services included prevention strategies, screening for elder abuse, the provision of both a long term shelter and emergency protective shelter services, tailored case assessment, planning and implementation prevention, legal review and intervention strategies, as well as training for informal carers, banking staff, healthcare professionals, the public and law enforcement personnel. The programme also had an in built focus on research to develop case based knowledge and evaluate programmes.

The Centre facilitated referral via a toll free number, where advice was given on proceeding to emergency accommodation or visitation by the community based team. For those admitted via emergency shelter, assessment was undertaken in the Hebrew Home's ElderServe medical day programme, staffed by medical social workers, nurses and specially trained staff, which operated on a twenty-four hour basis. Assessments led to decisions whether the older person was offered a short-term stay and facilitated to return to the community, with supports in place, or offered a place in one of four designated apartments in a senior housing community. Another care option was long-term admission to the Hebrew Home.

Innovative outreach education also targeted local unions representing service staff in residential buildings throughout Westchester County, the Bronx, and Manhattan, who may become aware of elder abuse (Reingold, 2006). Following the consolidation of the Weinberg Centre model, seven other non-profit organisations replicated the model of care in their own community (Solomon & Reingold, 2012). Although no evaluative evidence was provided, the intervention, the combination of community and institutional services, as well as outreach services, appeared able to respond to all types of abuse in a contemporaneous way. In addition, the MDT and community collaborations allowed the individual elements of each case to be appropriately addressed, for example, legal medical, social and the care options provide for emergency, short term, long term and community pathways.

Teaster and Wangmo (2010) reported the outcomes of an evaluation of Kentucky's MDT Local Coordinating Councils on Elder Abuse (LCCEAs), a state-wide MDT network to prevent and intervene in cases of elder abuse as well as co-ordinating local community resources and developing crisis response teams. The study examined the outcomes of LCCEAs and whether such structures were replicable in other states with the objective of developing a 'promising practices score sheet' to assist other states' development of coordinating councils. From a total of 39 existing LCCEAs, 32 councils participated. Findings demonstrated that LCCEAs provided expert elder abuse case consultation to service providers, facilitated training and updated members on new developments in services and legislation as well as lobbying for better response systems. The majority of respondents identified that they were directly involved in coordinating investigations or carrying out care planning, with 50 percent undertaking case reviews. Most reported a regular attendance of 5 to 10 members at meetings and council composition was multi-disciplinary with APS, police and nurses being the most prominent council members. The study found a lack of standardisation in policy guidelines and variations in procedures and membership attendance. Nevertheless, positive outcomes of the programme included awareness raising and response systems to elder abuse through training, advocacy and information. In addition, LCCEAs identified appropriate resources for elder abuse, generated local networks, while identifying service gaps and service challenges. In particular, the legal and bank advice was reported to be inadequate even though these were important demands for case responses. In addition, the authors concluded that an intervention like the LCCEAs requires sufficient support, in terms of additional funding and structural funding to maximise potential outputs (Teaster & Wangmo, 2010).

The use of a team approach in elder abuse has been examined by Swanson Ernst and Smith (2012), who suggest that MDT evaluations can be methodologically weak due to a scant focus on the initial investigation and subsequent assessment, with few studies considering cost effectiveness. Swanson Ernst and Smith (2012) reviewed administrative data from a total of 869 cases of elder abuse in Maryland, US, to elicit the differences between a nurse-social worker team and a lone social worker intervention. The study focused on four areas related to case intervention, namely: a) case disposition by type of maltreatment at the end of the investigation period; b) risk at intake and at case closure; c) approach type and relationship to recidivism; and d) programmatic cost effectiveness. Review findings demonstrated that a combined nurse and social worker team resulted in some benefits for addressing cases, in terms of potential risk reduction. However, in terms of prevention of recidivism or when risk reduction took account of all unit reductions having equal social preferences, such benefits did not justify the cost in all cases of elder abuse when compared with case management by lone social workers.

One paper examined the impact of entering the elder abuse service response system on nursing home placement. Lachs, Williams, O'Brien, and Pillemer (2002) used data from the New Haven Established Population for Epidemiologic Studies in the Elderly [EPESE] cohort to examine the risk of nursing home placement. The study involved cross matching EPESE data with data from the Connecticut Ombudsman and Elderly Protective Service records to identify if any EPESE participants interfaced with the service in the period 1982–1992. Following this, the authors calculated the amount of older people who were placed in nursing homes who either had: abuse substantiated, self-neglect substantiated or had not interfaced with APS. The authors reported that within the identified timeframe, 202 older people of the total study cohort of 2807 were referred to APS, with self-neglect being the most common reason for referral. Of the older people referred to APS and found to have substantiated abuse, 23 out of 44 were placed in nursing homes (52.3%) and, for those identified as having substantiated self-neglect, this figure was higher at 83 out of 120 (69.2%). In contrast, for older people who had no contact with APS, the figure was 829 out of 2650 (31.8%), indicating that the intervention of APS appeared to greatly increase the risk of nursing home admission.

Based on 56 closed cases in the New York area, Brownell and Wolden (2002) compared two approaches in responding to elder abuse, a crime victims approach and a social support approach. Although victim safety with resultant case resolution was achieved in 62.5 per cent of the cases, findings demonstrated no significant difference in the overall effectiveness of outcomes within both approaches. Moreover, while the study emphasised the necessity of having a complementary legal and social services support for optimum outcomes for older abused victims, specific types of abuse were considered to require targeted interventions. For instance, while older people with self-neglect were seen as requiring social services intervention only, financial abuse, addressed through legal intervention was demonstrated to have a more successful resolution outcome. Thus, micro-systems interventions in elder abuse required planning guided by the type of abuse experienced. Accordingly, careful discrimination of care response pathways was viewed as central to positive outcomes, since multiple interventions in individual cases may not result in increased positive outcomes for the older person (Alon & Berg-Warman, 2013).

In an effort to improve intervention services for cases of elder abuse and neglect, Sengstock, Hwalek and Stahl (1991) examined the implementation of new theoretical models into practice delivery in two rural and two urban areas of Illinois. These models were mandatory reporting, legal intervention and an advocacy model. Data were collected from a total of 204 cases via nine methods, including report and intake forms, instruments for the assessment and verification of abuse, service plan forms, worker activities reports and evaluation forms. Findings indicated no differences between the service delivery models or the case outcomes. For example, the legal intervention programme did not demonstrate the highest rate of providing legal assistance in case management and the two advocacy programmes did not have the highest rates in the variety of service utilisation. Thus, the authors concluded that basing services on a theoretical model does not serve the interests of case management. In addition, Sengstock *et al*. (1991) observed that mandatory reporting could impact on rapport with the older person and lead to a premature termination of services and could also inflate case reports where the older person is less dependent and therefore may be less in need of service intervention.

Using a case analysis approach, Cripps (2001) reviewed 100 elder abuse cases, representing 267 abuse situations, which used an advocacy and rights-based approach to support older victims to make person centred choices and act on these choices. Advocacy interventions were examined under three headings, as follows: informal, linked to an informal support system; formal, linked to statutory services; and protective, linked to legal intervention and police involvement. Case success in the approach was evaluated by the advocate, who decided on the extent of the intervention success. Advocates identified that, in half of the cases, the abuse was resolved, with a further 34 per cent reporting some improvement in their situation. The remaining 16 per cent of cases was described as not wanting to pursue the intervention beyond the initial contact phase. The approach emphasised the importance of informal networks in supporting victims to assert their rights and was fundamental to the success of the intervention.

Recognising that prevalence studies have pointed to elder abuse being a social challenge that predominantly occurs in families, two papers advocate for a service which focuses on an ethos of family involvement. In a discussion on new approaches to managing conflict in families, Wall and Spira (2012) recognised that entrenched patterns of family interaction can create barriers in communication and decision-making. They proposed the use of family centred therapy and therapeutic mediation frameworks as ways of addressing family decisions and facilitating the best interests of the older person and family well-being. The approach employed a phased process of assessment, intervention, mediation and termination. All stages focused on giving credence to historical issues in the family, examining existing perspectives, promoting communication and addressing unresolved issues through effective problem solving pathways. The process also involved mediation to promote positive family functioning and promoting goal achievement, new skill acquisitions, and family member reflections.

In presenting an alternative response to elder abuse, Bergeron (2002) observed that family preservation approaches are not prominent features in elder abuse case management. Family preservation is based on the belief that systems and the older person's environment work together to facilitate family flourishing and protect against harm (Templeman & Austin 2003) and the conceptual approach stems from both social and ecological models of practice. Bergeron (2002) cross referenced New Hampshire elder protection workers' practice decisions in physical abuse cases against an index of characteristics from family preservation literature to identify if such an approach was recognised and applied by elder protection workers and if this was promoted by the service providers. Findings suggested that a family preservation model may be advantageous, since much elder abuse legislation mandates care interventions with the older person and perpetrator. Legislation is also seen to support the principle of self-determination for competent adults and, as Bergeron (2002, p. 556) argued, older people 'make better choices for themselves if solution choices are also being offered to other family members'.

Within the papers identified under meso-systems and systems of service delivery, three papers examined specific typologies or characteristics of case presentations. Acknowledging that interventions need to be structured to meet particular needs of older people, Anetzberger *et al*. (2000) examined a model of intervention for older people with dementia, which was implemented by a consortium of practice, research and representative groups in Cleveland, Ohio. Multi-agency project members developed several products to accomplish the project goals of more comprehensive prevention and amelioration of elder abuse in people with dementia. The project involved APS workers and Alzheimer's Association staff and volunteers and consisted of several interventions, including: an educational programme focusing on information about dementia, elder abuse; a joint workshop for APS workers and dementia workers; relevant screening tools for APS and Alzheimer's Association staff and volunteers; collaborative protocols between partners; and a resource handbook for caregivers containing information and three brief assessment tools.

The intervention was considered successful, as demonstrated through a case example of the new collaborative approach; however, case success was hampered by challenges, including ineffective interagency communication and insufficient understanding of the potential role each agency could assume in handling elder abuse situations known to both. The challenges led to the development of a new model for case referral, the Referral and Services Model for Prevention and Intervention of Abuse in Clients Affected by Dementia. Evaluation of the interventions demonstrated the programme was a success in terms of increased willingness to cross refer cases

between agencies, and a subsequent increase in case referrals and collaboration between agencies. In addition, the materials developed were considered easily transferrable to other geographic regions and services.

Horning, Wilkins, Dhanani, and Henriques (2013) described a complex elder abuse case relating to cognitive impairment and financial abuse. As an assistive mechanism, the authors presented a decisional flowchart for clinicians to assist in detecting and intervening in financial abuse of older people. However, this was based on experience rather than rigorous methodological testing of the tool.

Kaye and Darling (2000) reviewed the State of Oregon's response to combating financial abuse of older people through a multi-sector approach. The Oregon Attorney General established a task force in 1994, which spearheaded legislative change and activities to address the issue. This response had a multi-level focus, which included multi-media training for banking staff, an 'Elder Financial Exploitation Prevention Program' for older people, technological aids to end unsolicited phone calls or mail, the distribution of financial exploitation prevention information to older people and MOOCH lists, used to identify older people who had been targeted for financial fraud. Kaye and Darling (2000) failed to offer evaluative evidence of effectiveness, in terms of a reduction of financial abuse cases, increased reporting or prosecutions.

Criminal justice system

This section reviews descriptive studies and discussion papers which examined the criminal justice system, including legal and policing services, as well as the impact and protection afforded by statutes. Acknowledging the complexity of elder abuse and the fact that this issue is not traditionally considered within the domain of the criminal justice system, Heisler (2000) reported on the emerging legal responses for elder abuse cases. Some states of the US have enhanced legislation for elder abuse offences and have assigned abuse as a serious felony. Training and education have been mandated for law enforcement personnel in some states and has been developed as supportive programmes in other states for both law enforcement and prosecutors. In the management of cases, special investigation units and/or specialised investigators have emerged, with dedicated processes in case management. Within the elder abuse multi-disciplinary teams, members of the criminal justice system have important advisory and contributory roles in case management. Heisler (2000) comments that court systems have also sought to improve processes with earlier court hearings, changes in victim involvement and a relaxation of hearsay rules.

Blakely and Dolon (2001) examined perceptions of APS workers of the support given by criminal justice professionals in elder abuse cases in 47 states in the US. Based on a survey among 395 APS workers the authors found that police were helpful in detecting and addressing elder abuse cases, demonstrating improved police involvement and interaction. Several reasons were suggested for this improvement, including additional exposure to collaborating on cases, an increase in cases, cross discipline training and protocol development. In contrast, victims' assistants, which were available in 295 of the respondents' areas, were found to be less than useful in both detecting and managing cases and the authors suggested this was due to a deficit in establishing disciplinary relationships between police, victim assistants, prosecutors, judges, or other criminal justice professionals. The authors reported that the input of criminal justice professionals, in terms of other forms of helping, prevent the abuse or sanctioning the abuser were disappointing and circumvention of the criminal justice system could render older people at a higher risk of abuse.

Lai (2008) examined the literature related to elder abuse and policing and observed a lack of research focusing on coordinated community responses to elder abuse. The author discussed mandatory reporting, suggesting that it removes subjective practitioner judgment in reporting suspected abuse and can protect the older person. However, disadvantages were also discussed, such as raising risk thresholds for the older person, weakening autonomy, and compromising the inherent confidentiality of the older person-practitioner relationship. Lai (2008) supported the emergence of older person empowerment strategies facilitated by community policing in tandem with MDT community level interventions as essential strategies to address elder abuse.

Recognising that the legal intervention of durable power of attorney could be abused and also disempowering, both Kohn (2006) and Black (2008) examined the inherent challenges in decision making regarding the best interests of the older person. Kohn (2006) observed that because of the autonomous scope of power afforded to the nominated

representative, or 'agent', decisions may be at variance with the older person's values and choices. Agent decisions can be fundamentally problematic since durable power of attorney does not require discussion with the older person, yet such decisions can have a significant impact on the older person. This practical conundrum is contrary to the nominated representative's underlying legal duty of obedience. Kohn (2006) argues that there must be advanced mandatory communication of nominated representatives with the older person for certain 'fundamental' transactions, thus facilitating a process based on the promotion of autonomy. Black (2008) similarly emphasises the necessity to have power of attorney safeguards so that substitute actions by the agent are in good faith and represent the older person's best interests. Both Kohn (2006) and Black (2008) concluded that legislation needs to facilitate comprehensive protective safeguards for older people while also providing for sanctions against nominated representatives who abuse power of attorney mechanisms.

Currently, in the US, all 50 states and the District of Columbia have mandatory reporting laws for healthcare staff, with 43 states having mandatory reporting for suspected cases of elder abuse (Mills & Brenner 2015). Two papers (Daly, Jogerst, Brinig, & Dawson, 2003; Jogerst *et al*., 2003) examined the correlation of wording in states' legislation to rates of reported, investigated and substantiated cases of elder abuse. Daly *et al*. (2003) reported that mandatory reporting was legislated for in 44 states and the District of Columbia. In total, data was collected on domestic elder abuse reports for 17 states, investigations for 47 states and substantiation for 35 states for the year 1999. State APS statutes were also individually reviewed. The prevalence of elder abuse ranged from 4.5 to 14.6 per 1000 elders, and rates of investigation ranged from 0.5 to 12.1, while substantiation rates ranged from 0.1 to 8.6 (Jogerst *et al*., 2003). Findings demonstrated that community awareness and professional knowledge of state statutes concerned with elder abuse can impact on reporting, with higher report rates in states with mandatory public education on elder abuse. In addition, the presence of mandatory reporting was correlated to a significantly higher investigation rate, while a higher number of abuse definitions and case workers with sole responsibility for elder abuse investigations increased substantiation rates (Jogerst *et al*., 2003). However, neither the wording for a mandatory reporter nor specifying who should report had a significant impact on reporting, investigation or substantiation. In statutes which specified a penalty for non-reporting, neither the penalty, the severity of the specified penalty, or the reporting timeframe had an impact on reporting, investigations or substantiations. However, the authors surmised that legislation should specify a timeframe within which intervention is initiated and this would expedite protective actions.

In the United States physicians are commonly named as mandatory reporters, yet reporting rates can be low among this group. Rodriguez, Wallace, Woolf, and Mangione (2006) investigated the impact and outcome of mandatory reporting through interviews with 20 Los Angeles based primary care physicians to elicit the factors influencing their reporting patterns. Reporting patterns were influenced by several factors in the patient-physician relationship, including the level of trust in the relationship, the physician's fear of incorrect reporting, a fear of loss of rapport due to reporting and the perceived impact on the older person's quality of life, with the risk of placement in a residential care facility. The physician's perceived locus of control in the situation was also reported to be a factor in the decision to report. This was compounded by the issue of having legal liability if reporting did not occur, while dealing with malpractice considerations in the event that a report was unfounded. Such legal concerns could make physicians require sufficient evidence to report rather than simply reporting on suspicion. Rodriguez *et al*. (2006) concluded that mandatory reporting leads to paradoxes in physicians' practice, which need to be acknowledged and addressed accordingly. Consequently, the study questions the practical benefit of mandatory reporting as an intervention for elder abuse as, in most cases, participating physicians decided according to what they believed was in the best interest of their patient rather than a statutory obligation to report.

Noting that medical documentation in the legal redress of elder abuse cases can be problematic, Koin (2003) described the development of a comprehensive medical forensic examination form for elder abuse. The form incorporated a section to be completed by health professionals who have undergone special forensic training in elder abuse and a section to be completed by physicians, physician assistants, nurse practitioners, and assault-specialist nurses. The form enabled assessment of several aspects of the case, including cognition, consent for forensic examination, context descriptions, relevant check lists, pain assessment and physical examination findings.

Systems process improvement

This section considers papers that provide information on areas such as system decisions and processes as well as system evaluations within the context of serious case reviews (SCRs). Cambridge and Parkes (2004a, 2004b) and Cambridge, Beadle-Brown, Milne, Mansell, and Whelton (2011) considered the effectiveness of adult protection processes in the UK as an intervention mechanism in adult abuse. On foot of the implementation of policy for vulnerable adults (Dept of Health, 2000), Cambridge and Parkes (2004a) reported on the implementation of a two-day intervention programme focusing on decision making in adult protection cases in Kent and Medway Social Services Department. The focus of the intervention was to ensure accountable, multi-disciplinary case management, which placed older people at the centre of decision making as well as developing positive relationships through communication and action strategies. A review of systems of decision making in the Kent area demonstrated a diversity of practices and showed that the introduction of the No Secrets policy (Dept of Health, 2000) had increased caseloads and increased the impetus to have effective, transparent decision making. The need for particular communication and technical competencies emerged via the intervention training with a recommendation for the development of advocacy models as increasing the potential of user involvement in case management. Drawing from the experience of training initiatives, of which the decision making intervention was a component, and the evaluation of specialist adult protection coordinator roles, Cambridge and Parkes (2004b) supported the development of a specific case management rationale in adult protection to standardise practice.

A later study by Cambridge *et al*. (2011) reviewed the processes and outcomes of adult protection referral data collected by Kent and Medway social services between 1998 and 2005. Based on more than 6100 referrals, the review demonstrated that the policy shift and increased referrals had led to increased investigations with police collaboration and regulatory involvement. The potential functioning of investigations led to the effective targeting of resources. Findings demonstrated that the presence of adult protection co-ordinators was associated with higher levels of investigation and joint investigation, higher levels of case monitoring, a lower proportion of cases where no further action resulted and more positive user outcomes, such as post-abuse work with victims and perpetrators and increased monitoring. Thus, integrating a data monitoring system in vulnerable adults' abuse services was shown to have the potential to contribute to service reviews and more effective service delivery.

Instituting a serious case review (SCR) is a common response to a concern about care practices, a death or a life threatening injury in combination with suspected abuse or neglect, either in the home or in a care setting. The function of SCRs is to identify service gaps, compounding issues and challenges, which contributed to a negative outcome, and to learn from this by integrating findings to improve policy, education and care practices. As such, SCRs are a service level intervention for practice improvement. In the United Kingdom, Manthorpe and Martineau (2012) explored the experiences of ten members of the adult safeguarding board, which commissions SCRs and four independent chairs of SCRs. Their findings demonstrate that SCRs were seen to facilitate multiagency organisational learning, rather than apportioning blame. An important focus of the process was to learn from system failings and to focus on practice improvement. However, Manthorpe and Martineau (2012) recognised that there could be tension between a 'no blame perspective' and a review of potential negligence in the SCR. An independent chair was seen as advantageous in that he/she remained objective and could elicit better responses from agencies and command public confidence. Participants reported that SCR complied with guidance from the Association of Directors of Adult Social Services (ADASS) (2006, 2010). Although the value of SCRs as an intervention was recognised, participants in the study advocated for legislation to support SCRs in order to improve processes and information gathering. Based on the review, Manthorpe and Martineau (2012) recommended the development of thresholds for triggering SCRs, family involvement at all stages of the process and appropriate supports for SCR Chairs.

3.3.2 Experimental studies

Three interventions evaluated in four peer-reviewed research papers were identified as pertaining to the exo-system ecological level (Davis & Medina-Ariza, 2001; Davis, Medina, & Avitabile, 2001; Jogerst, Daly, Dawson, Brinig, & Schmuch, 2004; Navarro, Gassoumis, & Wilber, 2013). Interventions classified at this ecological level target the social structures and systems which do not directly contain the older person,

but which impact upon their immediate micro-system context. These interventions are aimed at the connections between the older person's immediate context and their wider social setting in which they do not have an active role. The interventions retrieved for this review, which were classified at the exo-system level include: a community level intervention aimed at reducing repeat incidences of elder abuse through a public education programme combined with targeted home visits from law enforcement and social workers (Davis & Medina-Ariza, 2001; Davis *et al*., 2001); compulsory training for mandated reporters in the state of Iowa, USA (Jogerst *et al*., 2004); and an elder financial abuse forensic centre providing multi-disciplinary consultation for complex cases of elder financial abuse (Navarro *et al*., 2013).

Two of the studies employed a case-control matched design (Jogerst *et al*., 2004; Navarro *et al*., 2013) and the third study evaluated efficacy using a nested randomised controlled design (Davis & Medina-Ariza, 2001; Davis *et al*., 2001). Jogerst *et al*. (2004) evaluated the impact of compulsory education of mandated reporters using a retrospective case-control non-randomised comparison whereby they compared investigation and substantiation rates before and after the implementation of the intervention. The study found no significant impact for the intervention on investigation and substantiation rates; however there was a limitation to the internal validity of the study design arising from the retrospective case/control matching. However, the study had high external validity in that it employed existing data and there was blinding of investigators and subjects. While the outcome measures were considered to be relevant, reliability assessments were not undertaken or discussed. No unintended or unanticipated outcomes were reported. There was limited description of the intervention and no discussion of the theoretical basis. The non-standardised delivery of the intervention would likely give rise to confounding variables and limit transferability. The study obtained an overall global score of 10 from 22 for the evaluation of study design, outcomes and transferability. Navarro *et al*. (2013) employed a case-control experimental design to evaluate the effect of a forensic centre on the prosecution rates for elder financial abuse. The authors found a significant effect for the intervention on prosecution rates and concluded their evaluation with an endorsement for a multidisciplinary approach to complex cases of elder financial abuse. The cases (n=237) and controls were matched using propensity scoring reducing the risk of bias associated with a non-prospective controlled design. The authors prioritised strong ecological validity, replicating real-world settings, over internal control and, due to the retrospective design, there was limited control over intervention implementation. The outcome measures were considered relevant and valid and they were reliably obtained; however this reliability was dependent upon complete case records. No unintended outcomes were reported and efficiency was not assessed. However, there was reference to a future study which would evaluate cost and feasibility. The intervention was well described in terms of content and structure and there was reference to the potential interaction effect of the context upon external validity of the intervention. The study obtained an overall global score of 12 from 22 for the evaluation of study design, outcomes and transferability.

Davis *et al*. (2001) and Davis and Medina-Ariza (2001) employed a nested randomised controlled design targeting housing projects (N=60) at the community level and households (N=403) at the individual level to evaluate the efficacy of a public education programme combined with home visitations. Randomisation into a control and intervention group occurred at both levels and the outcome measure was rates of repeat incidences of elder abuse. The authors concluded that the combination of education and home visits increased the likelihood of reporting elder abuse. Some degree of risk of bias was found for the evaluation of the study design due to the lack of blinding or allocation concealment; however this was understood in light of the nature of designing evaluations of the implementation of existing policy. There was extensive outcome data reported which paralleled the study aims and these outcomes were considered relevant, valid and reliably obtained. Unanticipated outcomes were reported, specifically the relationship between intervention exposure and the number of disclosures of abuse to researchers. The efficiency of the intervention was also addressed. There was considered to be good transferability in the study due to the thorough explanation of the intervention, in terms of structure, content and theoretical basis. Furthermore, there was considerable discussion of the interaction between the intervention and the context in which it was delivered. The study obtained an overall global score of 18 from 22 for the evaluation of study design, outcomes and transferability. Table 11 displays the evaluation criteria and scores for each of the three studies describing interventions classified at the exo-system level.

TABLE 11: Evaluation criteria and scores for papers evaluating the efficacy of interventions classified under the exo-system ecological level

Author		Davis and Medina-Ariza (2001); Davis *et al.* (2001)	Jogerst *et al.* (2004)	Navarro *et al.* (2013)
Target Group		**Housing projects (N=60) and older people (N=403)**	**Case-control two US States**	**Cases referred to APS for elder financial exploitation (N=237)**
Intervention		**Public education and home visit**	**Mandatory reporting**	**Forensic centre for elder financial abuse**
Comparator Group		**Yes**	**Yes**	**Yes**
Evaluating Design	**Assessment of bias**			
	Random allocation	Yes	No	No
	Allocation concealment	No	No	No
	Blinding of participants and personnel	No	Yes	Yes
	Blinding of outcome assessment	No	No	No
	Incomplete outcome data	No	No	No
	Selective reporting	No	No	No
	Assessment of intervention			
	Quality of implementation	Medium	Low	Medium
	Theoretical basis specified	Yes	No	No
	Assessment of measurement			
	Adequacy of outcome measures	High	High	High
	Reliability of measures	High	Medium	Medium
	Rating	***9/13***	***6/13***	***8/13***
Evaluating Outcomes				
	Outcomes relevant to stakeholders?	Yes	Yes	Yes
	Unanticipated / unintended outcomes?	Yes	No	No
	Efficiency	Yes	No	No
	Rating	***3/3***	***1/3***	***1/3***
Evaluating Transferability				
	Adequacy of intervention description	High	Low	Medium
	Adequacy of context description	High	High	Medium
	Interaction between context and intervention	High	Medium	Medium
	Rating	***6/6***	***3/6***	***3/6***
Overall Rating		**18/22**	**10/22**	**12/22**

Summary of exo-system experimental studies

In summary, there was a scarcity of research papers retrieved from the literature search which empirically evaluated interventions targeting the exo-system level. Overall the level of evidence found to support the interventions identified at this ecological systems level was reasonably high. All three papers employed a control or comparator group in their experimental design (Davis & Medina-Ariza, 2001; Davis *et al.*, 2001; Jogerst *et al.*, 2004; Navarro *et al.*, 2013). Two of the studies rated fairly well in relation to the strength of the evaluation design in terms of risk of bias, intervention implementation and outcome measurement (Davis & Medina-Ariza, 2001; Davis *et al.*, 2001; Navarro *et al.*, 2013). Only one of the studies evaluated the efficiency of the intervention and discussed potential unanticipated or unintended outcomes (Davis & Medina-Ariza, 2001; Davis *et al.*, 2001). All three of the studies scored greater than 50% in the assessment of transferability of the intervention, with one study scoring 100% (Davis & Medina-Ariza, 2001; Davis et al., 2001). Of the three studies the strongest evidence for efficacy was found for a public education programme combined with home visitation (Davis & Medina-Ariza, 2001; Davis *et al.*, 2001). The authors concluded that the combination of education and home visits increased the likelihood of reporting elder abuse.

3.4 Macro-system interventions

Macro-system interventions pertain to the overarching culture in which an older person lives. Interventions classified under this ecological systems level target the overarching beliefs and values of societies. Interventions were included in this ecological level if they addressed socioeconomic status, identity and heritage as well as discriminatory social values and beliefs understood to be abusive.

3.4.1 Descriptive studies

The macro-system is classified as the culture in which the older person lives and represents the most remote impacting level from the older person. However, the macro-system encompasses areas of legislative imperatives, public policy, values, priorities, identity and heritage. The review of the literature identified five papers which were classified under macro-systems. These papers present a broad ranging scope in terms of response development, delivery and reform or general argument for the re-orientation of services.

Connolly (2010) presented a review of legal perspectives in relation to elder abuse. Legislation to protect an individual's freedom falls under two areas: police power and 'parens patriae'. Legal redress for wrongdoing can be pursued under a variety of ways depending on setting, abusive act and jurisdiction. The author discusses three common options in the US: local, state and federal elder abuse-case prosecutions, and highlights some of the challenges in each of the three levels. These include an inability or unwillingness of the older person to testify, lack of experts or resources, practical limitations inherent in domestic elder abuse, elder abuse in long term care facilities or fraud or exploitation cases. The authors note that federal elder abuse prosecutions in a community home setting are relatively rare and that the focus for federal prosecutions is balancing public health and law enforcement. In the context of 'parens patriae', older people who are deemed particularly vulnerable, such as those cognitively impaired, may be protected through legislative instruments such as guardianship and civil commitment. Connolly (2010) also describes some court focused initiatives including elder justice centres, in-home protective order initiatives, and elder abuse order of protection. While existing legal interventions have scope to address elder abuse cases, Connolly (2010) remarks that a more cohesive legal approach is required for protection and case redress and proposed several recommendations to achieve a more effective legal response to elder abuse. Among the recommendations were the need for an MDT advisory committee, the need for enhanced evaluation reports and enhanced elder abuse forensics.

Hawes, Moudouni, Edwards, and Phillips (2012) chart the challenges in legislative reform leading up to the Patient Protection and Affordable Care Act (2010) in the US, which marked the culmination of multiple earlier efforts of reform in Congressional sessions. These earlier attempts included the Elder Justice Act and the Nursing Home Transparency and Improvement Act, which sought to introduce legislative change focused on improving quality and reducing elder abuse in nursing homes by strengthening oversight and enforcement penalties, expanding staff training, and increasing the information on nursing home quality available to consumers and regulators. When eventually signed into law in 2010, the new provisions of the Patient Protection and Affordable Care Act (2010) provided for areas of transparency in nursing home care delivery, quality provision and quality assurance, accountability and enforcement procedures.

Gibson and Greene (2013) argue that testimony in court cases related to financial abuse of older people requires a reorientation to social framework evidence, a form of evidence based on general research results (Walker & Monahan 1987). The authors consider the context of financial abuse of older people as fundamentally unique and therefore requiring jurors to be informed of the particular contributing psychological factors. Based on careful psychological assessment, relevant testimony can be presented, which enables the specific nuances of a case to be taken into account by jurors. Social framework evidence can be of particular importance in cases where the older person is unable or unwilling to testify. Gibson and Greene (2013) investigated whether social framework evidence existed in relation to elder financial abuse by surveying a sample of 132 jurors and 28 experts in elder financial abuse. Findings demonstrated that although jurors articulated some knowledge of older people and financial abuse, they were not well informed on several important relevant areas, indicating that expert testimony was an advantage to inform court cases. Findings demonstrated that jurors tended to draw on their own previous experience in arriving at opinions, which could

ultimately lead to misinformed decisions and consequent verdicts. Consequently, Gibson and Greene (2013) advocate for court contributions of expert witnesses to assist comprehensive case understandings by jurors based on reliable and informed testimony.

Groh (2005) discussed the restorative justice approach to addressing elder abuse. Restorative justice represents an egalitarian, community based response which is tailored to cultural values and holds that abuse represents a disruption in harmonious human relationships, rather than simply a legal violation. Groh (2005) argues that response systems should include restorative justice, which seeks to reinstate positive relationships through meaningful discourse aimed at healing and restoring relationships.

Nakanishi, Nakashima, Sakata, Tsuchiya, and Takizawa (2013) surveyed government municipalities in Japan to examine detection and intervention elder abuse response systems in relation to staffing and finance. The authors also reviewed the relationship between the development of detection and intervention responses and elder abuse reporting and substantiation rates. Using a cross sectional design, questionnaires were mailed to 1,750 municipalities and generated a 53 per cent final response rate (n=927). Findings demonstrated that sufficient staffing is necessary to develop responsive systems and those municipalities with developed intervention systems for elder abuse detection and intervention generated higher rates of both suspected and substantiated cases. Moreover, the rates of reporting and substantiations were positively associated with progressive systems. Yet findings demonstrated that staff training and guidance documents were not in themselves sufficient to increase reporting and substantiation. Such improvements required a multi-dimensional approach. The authors recommended that national social policy makers should examine strategies to help municipalities assign sufficient staff to elder abuse detection and intervention programmes.

3.4.2 Experimental studies

One intervention evaluated in one peer-reviewed research paper was identified as pertaining to the macro-system ecological level (Leedahl & Ferraro, 2007). The macro-system refers to the overarching culture in which an individual lives. Interventions classified at this level target the predominant beliefs and values of society, including discriminatory social values and beliefs understood to be abusive. The intervention retrieved for this study and classified at the macro-system level was an educational programme designed to effect change in public attitudes and perception of elder abuse as it is reported in the media (Leedahl & Ferraro, 2007). The efficacy of the educational programme was evaluated using a randomised controlled trial design with a mixed age sample (N=60). The outcome measure used to evaluate efficacy was the sample's response to different news stories reporting different types of abuse.

Leedahl and Ferraro (2007) concluded that they found evidence to support the efficacy of education about elder abuse, in the form of reading material, to effect positive change in perceptions of the importance of elder abuse as a topic for media reporting. However, the study findings were considered to be undermined by the considerable risk of bias in the design due to the lack of blinding of participants and evaluators. Furthermore, the quality of the intervention was considered to be weak due to the potential confounders such as the hawthorn effect and the heterogeneity of a convenience sample. The outcome measures were considered to be unlikely to provide a thorough assessment of efficacy and the reliability of the outcome measurement was not discussed. The intervention was not well explained with limited discussion of structure and context and no discussion of theoretical basis. The study obtained an overall global score of 4 from 22 for the evaluation of study design, outcomes and transferability. Table 12 displays the evaluation criteria and scores for the study describing an intervention classified at the exo-system level.

Summary

In summary, there was a scarcity of research papers retrieved from the literature search, which empirically evaluated interventions targeting the macro-system level. The one paper retrieved and categorised at this level was rated very poorly in terms of study design, outcome measurement and transferability of the intervention being evaluated.

TABLE 12: Evaluation criteria and scores for papers evaluating the efficacy of interventions classified under the macro-system ecological level

Author		**Leedahl and Ferraro (2007)**
Target Group		**Consumers of general media (N=60)**
Intervention		**Education on elder abuse**
Comparator Group		**Yes**
Evaluating Design	**Assessment of bias**	
	Random allocation	Yes
	Allocation concealment	No
	Blinding of participants and personnel	No
	Blinding of outcome assessment	No
	Incomplete outcome data	No
	Selective reporting	No
	Assessment of intervention	
	Quality of implementation	Low
	Theoretical basis specified	No
	Assessment of measurement	
	Adequacy of outcome measures	High
	Reliability of measures	High
	Rating	***3/13***
Evaluating Outcomes		
	Outcomes relevant to stakeholders?	No
	Unanticipated / unintended outcomes?	Yes
	Efficiency	No
	Rating	***1/3***
Evaluating Transferability		
	Adequacy of intervention description	Low
	Adequacy of context description	Low
	Interaction between context and intervention	Low
	Rating	***0/6***
Overall Rating		**4/22**

4.1 Introduction

The aim of this review was to synthesise and critically appraise published research evidence and other published descriptive reports related to the efficacy of interventions and protective practices in the field of elder abuse. The objectives were to summarise and describe the published evidence for practice, including intervention trials as well as descriptive accounts of practitioners' personal experience and service users' evaluations and responses to practice. The review critically appraised studies in order to examine the quality of their designs and the efficacy of evidence for interventions. The review examined interventions that focused on staff training and development and also wider public policy responses to elder abuse.

Prevalence and incidence data demonstrate that elder abuse is a significant global public health challenge (Naughton *et al*., 2010; O'Keefe *et al*., 2007; Lifespan of Greater Rochester Inc. 2011). As the overall proportion of older people in the population increases, it is anticipated that the prevalence of abuse and neglect will increase and it is therefore essential that older people's safety is assured though public policy initiatives, targeted interventions and through practical measures. Yet, it is recognised that funding to support interventions to combat elder abuse has lagged behind funding for other forms of abuse within the family violence spectrum (Dyer *et al*., 2005). This review examined the published literature on elder abuse interventions to illuminate practices and strategies to combat maltreatment of older people.

Acknowledging that elder abuse transcends a simplistic interpersonal relationship between perpetrator and victim, the studies identified for this review were contextualised and presented within Bronfenbrenner's (1979) ecological model. This allowed the authors to consider the multiple, yet interlinking, levels and approaches to the protection of older people. While many cases of elder abuse involve close family ties and ending contact can resolve maltreatment, older people in close relationships tended to choose harm reduction instead, so that family relationships could be sustained (Vladescu *et al*., 2000). Thus, interventions need to take this into account in case management approaches or risk the older person withdrawing from the service.

Within the 67 descriptive papers reviewed, the majority focused on the exosystem (n=28) and meso-system (n=25). Some of the literature offered evaluation of specific programmes (Alon & Berg-Warman 2013; Wolf & Pillemer 2000), while others simply described interventions (Kaye & Darling 2000; Horning *et al*. 2013) or proposed a revision of response approaches (Groh 2005; Connolly, 2010).

4.2 Descriptive studies

The literature indicates that no single approach is sufficient to address elder abuse as each case differs and can be complicated by issues of physical and mental health challenges as well as self-determinism, culture, taken-for--granted norms and family ties. Thus, unique, targeted interventions lead to more effective outcomes (Brownell & Wolden, 2002). Addressing elder abuse requires multiple and co-ordinated approaches, which involve increasing public awareness, addressing cultural norms and effective multi-disciplinary collaboration in areas such as health, policing, law and social care (Connolly, 2010; Nakanishi *et al*., 2013; Velasco, 2000). Responses to elder abuse should also address the spectrum of requirements such as emergency care, home support, counselling, sheltered housing, long term care and appropriate MDTs (Reingold, 2006; Solomon & Reingold, 2012).

A number of gaps were evident in the focus of the papers reviewed. For example, gender based studies are relatively scant, yet the experience and perpetration of abuse can be different for men and women (Seaver, 1997; Tetterton & Farnsworth, 2011). In addition, the use of a social based model used in domestic violence does not appear to be widely deployed as an intervention for elder abuse. This may be due to ageist assumptions that facilities like women's refuges are only suitable for younger age groups.

Lachs *et al*. (2002) identified that older people entering into APS greatly increased the risk of nursing home placement. While relocation or a move to a nursing home is seen as a valid response (Vladescu *et al*., 2000), particularly for caregiver neglect and in cases involving dementia (Heath *et al*., 2005), there is little debate in the literature concerning whether relocation could be against the older person's wishes and, thus, abusive in itself (Rodriguez *et al*., 2006). Such a practice response denies the element of happiness, in terms of assessing professional interventions, and could further victimise the older person (Munby, 2008).

In studies which do present intervention findings, successful outcomes are closely related to professional review of referred cases as being resolved or unresolved

after the intervention, with some measure of success equated with risk reduction (Wolf & Pillemer, 2000) or where the older person became more empowered and demonstrated increased ability to cope. However, case resolution lacks a standard definition and it is unclear whether case resolution is with reference to a service point of view or a client perspective (Alon & Berg-Warman, 2013). A further complication in the success of interventions rests with the older person's decision on whether or not to engage with the process, continued cohabitation and/or the lack of cooperation of the perpetrator, rather than the intervention itself (Heath *et al*., 2005; Jackson & Hafemeister, 2013). Some studies presented elder abuse preventative programmes; however, the success of such programmes was generally not measured, thereby raising a concern regarding their efficacy. Most of the interventions described also related to the duration of service involvement with the older person and no studies considered the integration of future risk when cases were closed (Wolf & Pillemer, 2000).

Perpetrator inclusion is an important aspect of assessment and amelioration of elder abuse. However, most studies describing interventions and services aimed at addressing elder abuse do not include an evaluation of outcomes of interventions with perpetrators, which is central to case management (Jackson & Hafemeister, 2013). Moreover, the success of interventions, as reported by older people themselves, is rarely addressed; rather, evaluations tend to focus on service case practice reviews with professionals. Thus, intervention outcomes presented in this review are predominantly reflective of a subjective, disciplinary context.

Another aspect of the descriptive studies reviewed is the general absence of studies examining interventions related to dementia specific case management; this is despite the fact that the prevalence of maltreatment in this sub-group of older people is high relative to the general population of older people (Cooper *et al*., 2008) (Yan & Kwok, 2011). Some studies refer to the protection of older people with dementia through legal intervention, such as guardianship or durable powers of attorney, and enhanced medical assessment and intervention, but these tend to be in the context of general elder abuse case management and lack a specific focus and evaluation of case management with people with cognitive challenges. One exception to this was the study reported by Anetzberger *et al*., (2000), which demonstrated that APS and services for people with Alzheimer's disease benefit from mutual multi-agency collaboration in case management.

In relation to statutes on the provision of surrogate decision making and power of attorney, such legislation can be limited in so far as the nominated agent may not always make decisions which are ultimately in the best interests of the older person (Black, 2008; Kohn, 2006). Despite this, legal interventions are seen to be successful in cases of financial abuse (Malks *et al*., 2002) and specific legal services for elder abuse (Morris, 2010) result in accelerated legal resolution of conservatorships and restraining orders. Even in the context of court cases, Gibson and Greene (2013) argue that expert testimony is required to assist jurors to understand abuse of older people, as otherwise, fundamental and essential elements of the case may not be fully appreciated and may impact on court judgments. Moreover, choosing the appropriate legal path and reforming the legal system for appropriate redress is important (Connolly, 2010).

The issue of mandatory reporting is also considered as an intervention. However, there are opposing arguments regarding this form of intervention. While studies demonstrate that statutes on mandatory reporting impact on the numbers of reports and investigations (Daly *et al*., 2003; Harmer-Beem, 2005; Jogerst *et al*., 2003), Rodriguez *et al*. (2006) note that there are a number of paradoxes in terms of operationalising mandatory reporting. Issues related to conflicting interests, weakening autonomy, litigation, reduced thresholds for reporting and endangering existing family relationships have been identified as barriers to reporting (Lai, 2008; Rodriguez *et al*., 2006), while the older person's decision to cease communications with response services has also been identified as a challenge (Sengstock *et al*., 1991).

Some papers have identified that a family based approach, which is also culturally acceptable, can offer a non-adversarial method of resolving conflict and may reduce the potential for family divisions, which may, in turn, result from formal legal proceedings (Bergeron, 2002; Groh, 2005; Groh & Linden, 2011; Holkup *et al*., 2007; Wall & Spira, 2012). Using a family mediation or restorative justice approach has the potential to address historical interpersonal problems, as well as moving to the restoration and promotion of positive relationships. This approach is supported by evidence from Wolf and Pillemer (2000) who reported that the older person's wish for family preservation impacted on case resolution. In addition, the use of such approaches needs careful alignment with cultural values within communities and families so that acceptable responses are offered. However, evaluations of

restorative justice have demonstrated its limitations and while this approach has advantages, it should be part of an integrated response system rather than a sole response (Stones, 2004, Linden, 2006). Training of interfaith communities has also demonstrated some success, mainly in the context of initiating contact with APS to discuss concerns. However, such approaches are considered as part of the response system to elder abuse rather than an exclusive intervention (Groh, 2005).

Advocacy and empowerment was central to some interventions for older people who had been abused (Seaver, 1997; Tetterton & Farnsworth, 2011; Vladescu *et al*., 2000). Vladescu *et al*. (2000) demonstrated the effectiveness of an empowerment approach for psychological abuse. Empowerment can also be underpinned by an informal, democratic community based support system that promotes social capital and provides a cost effective method of addressing elder abuse (Cripps, 2001; Reis & Nahmiash, 1995). Such approaches also have the advantage of being person centred and equipping older people to develop coping strategies and resilience to abusive behaviours.

Although abuse mainly occurs in the home environment, few studies addressed interventions focused on safeguarding older people in care. Hawes *et al*. (2012) presents the development of specific legislation to promote high quality care and the safety of older people in care facilities through the Patient Protection and Affordable Care Act. In a separate paper, Connolly (2010) outlines legal responses to abuse situations and the options related to local, state or federal elder abuse case prosecution pathways. Beyond this, the interventions do not consider combating elder abuse, either at a systems or institutional level or at the level of individual staff themselves.

Many papers discussed the importance of education and training in the topic of elder abuse and the responsibilities of care workers and other service personnel in relation to mandatory reporting. While education can increase the identification and reporting of elder abuse, education needs to supplemented through case experience, critical engagement, sustained focus and effective evaluation (Day *et al*., 2010; Heath *et al*., 2002; Nakanishi *et al*., 2013; Radensky & Parikh, 2008; Smith *et al*., 2010). Some studies illuminate the power dynamics and commercial issues which impact on a reluctance to report. For example, care staff can experience stress and a sense of powerlessness within care systems, leading to reporting apathy (Hudson 1992). Gironda *et al*. (2010) found a lack of reporting could be due to a perception of losing future business contracts and also being sensitised to issues of abuse and neglect.

Some papers examined the role of multi-disciplinary teams in elder abuse interventions. In all papers reviewed, initiatives were found to improve case planning, decision-making rationale and the articulation of strategic responses (Alon & Berg-Warman, 2013; Cambridge *et al*., 2011; Cambridge & Parkes, 2004a; Dyer *et al*., 2005; Heath *et al*., 2005; Istenes *et al*., 2007; Teaster *et al*., 2003; Twomey *et al*., 2010). In addition, specialist input from professionals, such as geriatricians, psychologists and social workers, was identified as enhancing case management (Morris, 2010; Mosqueda *et al*., 2004), yet accessibility of response services' documentation can present a problem in legal cases due to its copious nature and the challenges in meeting requirements for court evidence.

A collaborative approach and shared case management are also seen as important with legal and policing services (Blakely & Dolon, 2001). However, having a multi-disciplinary and multiagency management approach requires appropriate funding, leadership, cost effective systems, determined and standardised co-ordination and an emphasis on collaborative working rather than siloed case intervention (Cambridge *et al*., 2011; Nakanishi *et al*., 2013; Swanson Ernst & Smith, 2012; Teaster & Wangmo, 2010). In addition, the use of inquiries through SCRs highlights the potential of multi-agency, organisational learning in managing and resolving cases as well as the advantages of having independent chairs of such reviews (Manthorpe & Martineau, 2012). However, Manthorpe and Martineau (2012) argue that standardisation should be promoted though SCR trigger thresholds and supportive legislation and that lessons learned from individual cases should be shared on a national rather than local level.

Financial abuse was also seen to require a particular focus through specialist MDTs (Malks *et al*., 2002; Velasco, 2000), specialist legal intervention and educational initiatives such as DMM programmes (Heisler, 2000; Kaye & Darling, 2000; Sacks *et al*., 2012) and increasing older people's awareness of telemarketing scams (Aziz *et al*., 2000). As financial abuse is a common form of abuse and can be more challenging to identify (Phelan, 2014), response systems require further development, with reference to addressing societal and cultural values and in terms of specific forensic investigations which can illuminate such abuses.

Within the descriptive studies, the most prominent focus of interventions was within the meso- and exo-systems. Just 9 papers were found which considered the microsystem of relations between the older person and their environment within an immediate setting, such as their family home, their residential care home, their family relations, social network or community group. Although this represents the most relevant setting for older people, there was a low focus in this ecological level. Similarly, the macro systems perspective was under-represented in the literature with just four descriptive papers identified. This demonstrates a lack of a total systems approach to elder abuse, which can have a ripple effect on how societies structure their responses to and interventions in the maltreatment of older people.

4.3 Experimental interventions

The review indicated a scarcity of research papers which empirically evaluated interventions targeting the micro-system level, i.e. the older person. Five papers were reviewed (Acierno *et al*., 2004; Filinson, 1993; Wilber, 1991) and overall the level of evidence found to support any particular intervention at the micro-system level was weak. Overall, the strongest evidence for efficacy was found for a psychological and social support intervention targeting at-risk older people (Mariam *et al*., 2013) and an educational intervention aimed at educating older people who experienced criminal victimisation (Acierno *et al*., 2004).

The majority of the research papers retrieved, which empirically evaluated interventions using an experimental design, related to the meso-system level and most targeted the relations between micro-system settings which contain the older person. Two papers empirically evaluated interventions targeting support groups for older people (Bowland *et al*., 2012; Brownell & Heiser, 2006) and, of these, the paper by Bowland *et al*., (2012) offered the strongest evidence to support the efficacy of a spiritual therapeutic group intervention with older women survivors of interpersonal violence (Bowland *et al*., 2012). The quality of the evidence which evaluated interventions targeting perpetrators was weak (Campbell Reay & Browne, 2002; Scogin *et al*., 1989). Three papers reported interventions for informal caregivers (Drossel *et al*., 2011; Hébert *et al*., 2003; Phillips, 2008) and, of these, the strongest evidence for efficacy was found for a psycho-educative programme targeting caregivers of people with dementia (Hébert *et al*., 2003) and a psycho-educative nursing intervention aimed at reducing caregivers' experiences of depression, anger and confusion and verbal aggression perpetrated by elderly men (Phillips, 2008). The quality of the evidence in two studies which evaluated interventions targeting first responders was weak (Nusbaum *et al*., 2007; Seamon *et al*., 1997). Six meso-system level studies evaluated interventions which targeted nurses or nursing assistants (Braun *et al*., 1997; Désy & Prohaska, 2008; Goodridge & Johnston, 1997; Hsieh *et al*., 2009; Pillemer & Hudson, 1993; Teresi *et al*., 2013). Of these, just one study was found to have good quality evidence of effectiveness; this was an intervention to reduce resident-to-resident mistreatment through staff awareness raising and training (Teresi *et al*., 2013).

The evidence to support interventions which targeted physicians (Cooper *et al*., 2012; Famakinwa & Fabiny, 2008; Jogerst & Ely, 1997; Shefet *et al*., 2007; Uva & Guttman, 1996) was found to be weak. Similarly, papers reporting the outcomes of interventions which targeted multidisciplinary healthcare providers (McCauley *et al*., 2003; Mills *et al*., 2012; Richardson *et al*., 2002, 2004; Sugita & Garrett, 2012; Vinton, 1993) was also weak. However, the strongest evidence for efficacy of an intervention targeting multidisciplinary healthcare providers was found for a short educational course on managing elder abuse, which reported a significant positive effect on healthcare providers' knowledge and management of abusive scenarios (Richardson *et al*., 2002, 2004).

The review of literature uncovered a scarcity of research papers which empirically evaluated interventions targeting the exo-system level, although the level of evidence found to support the interventions was reasonably high. Three papers were reviewed (Davis & Medina-Ariza, 2001; Davis *et al*., 2001; Jogerst *et al*., 2004; Navarro *et al*., 2013) and, of these, the strongest evidence for intervention efficacy was found for a public education programme combined with home visitation, an intervention which was found to increase the likelihood of reporting elder abuse (Davis & Medina-Ariza, 2001; Davis *et al*., 2001).

Finally, there was a scarcity of published evidence concerning interventions targeting the macro-system level, with just one intervention study found (Leedahl & Ferraro, 2007). The study reported an education intervention aimed at changing public attitudes to and perceptions of elder abuse as a topic for media reporting; however, the quality of the evidence was poor due to poor overall design.

5 Conclusion and Recommendations

5.1 Introduction

Elder abuse has become widely recognised and accepted as a global societal issue with implications for practice in the fields of health and social care as well as impacting upon the legal and financial sectors, in terms of governance and legislative protection for older people. Demographic indicators, which predict a growing ageing population, underscore the importance of this area of social protection for continuing research to inform service delivery and practice. This review is timely in light of the growing body of research reports and studies in the area of elder abuse and mistreatment. The review consolidates the existing evidence for service delivery and interventions in the practice of protecting older people from abuse and mistreatment. Furthermore, it indicates priority areas for future research and the development of practice.

This review presents a somewhat unique examination of published literature on interventions in and responses to elder abuse by using Bronfenbrenner's (1979) ecological system theory to locate interventions within the levels of the micro-, meso-, exo- and macro-systems. Bronfenbrenner (1979) argued that human development is a product of an individual's experience and location within different contextual systems, ranging from the immediate environment to the more remote cultural and societal level values such as socioeconomic status, identity and heritage. Using this approach enabled a comprehensive review of interventions and responses, which transcended individual case management approaches to include the wider context of societal structures such as legislation, policy, practices, values and beliefs.

The review included a total of 104 papers, representing 98 individual interventions. Of the 104 papers, 37 were identified as experimental studies, while 67 were identified as descriptive studies or reports of programmes or initiatives aimed at responding to elder abuse. The papers discussed a range of preventative and intervention approaches in elder abuse. However, most of the papers reviewed focused on meso-level interventions, with a total of 52 interventions presented. Within this system, many of these papers focused on educational programmes for professional staff – mainly healthcare professionals – to increase their knowledge, awareness and appropriate responses to elder abuse. While the literature in this area is illuminating, the imbalance within both meso-system and the wider ecological system itself demonstrates a lack of a comprehensive development of interventions that ultimately impact on preventing and ameliorating elder abuse.

While some studies demonstrate success in intervention approaches, there is a paucity of good quality evaluations, in terms of robust design, adequate outcome measurement and clear transferability of the intervention. A general finding from the literature is that interventions in elder abuse require an individualised, tailored approach, which should identify the particular features of the alleged abuse and respond with specific and targeted interventions. However, methodological approaches used in testing the effectiveness of targeted interventions have been challenging due to the complexity of elder abuse and its associated issues, such as self-determination, health challenges, victim and/or perpetrator dependencies, family and cultural values, lack of standard understandings, as well as structural, policy and legislative gaps. Within the descriptive studies, interventions ranged from simple descriptions of interventions to evaluative evidence of their effectiveness. In describing interventions, some authors argued for policy, practice or legislative reform. Overall the evidence of the efficacy of interventions that were non-experimental in design was limited.

This review points to the need to develop a more systems-level approach when responding to elder maltreatment, with the need for a greater focus on interventions within the micro and macro systems. In addition, innovative designs are warranted in order to generate empirical evidence across the myriad of ecological systems within which the older person exists. Moreover, interventions need to be designed in ways that include the older victim, who is the key stakeholder in the problem and in its ultimate solution.

Most intervention and evaluative studies are service level and evaluate case outcomes, educational programmes or multi-disciplinary collaborations. Within a person-centred approach, study designs should measure person-centred primary outcomes, thereby going beyond the more simple service evaluation and review approach. Studies which incorporate an empowerment approach have focused on developing individual resilience, but there is limited published evidence, which evaluates how the older person experiences such interventions and whether such interventions are acceptable or desirable. There is also limited research which empirically tests or evaluates interventions aimed at the perpetrator; such studies could

examine perpetrator motivation as well as perpetrator-level outcomes. Finally, in acknowledging the diversity and complexity of elder abuse, studies to empirically test and evaluate interventions with a more specific focus are warranted. For example, interventions relating to gender, cognitive impairment, functional impairment, and cultural acceptability are required to permit the development of pragmatic responses and to highlight the specific nuances that need to be addressed within legislation, policy and practice.

5.2 Limitations

The study had a number of limitations, including the fact that the search strategy and review included only literature in the English language. While the review included interventions from several countries, there was a considerable volume of published evaluative and empirical evidence from individual interventions and responses in the United States and the UK. While this illuminates understanding of the evidence from developed Western countries, the effectiveness evidence, where it exists, may reflect nuanced and idiosyncratic systems and approaches and, therefore, may not be culturally appropriate for other societies or other jurisdictions.

5.3 Recommendations

The following recommendations are suggested based on the evidence from the review. Further research is required to:

- Develop more flexible and innovative approaches to evaluating elder abuse responses and interventions, which capture the uniqueness of each case of elder abuse, while concurrently allowing for a case standardisation review.
- Include the voice of the older person in determining intervention success, to incorporate evidence of older people's satisfaction with the intervention design, its practical application and its outcomes.
- Develop, test and/or evaluate specific interventions with a focus on gender, culture, ethnicity and cognitive and functional status.
- Develop, test and/or evaluate specific interventions aimed at the perpetrator of elder abuse.
- Evaluate the context of elder abuse within macro-systems, so that the potential of the structural context of interventions in elder abuse is realised.
- Develop and test interventions for elder abuse in long term care facilities for older people, including interventions that target resident-on-resident abuse.

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Notes

NCPOP
National Centre for the Protection of Older People

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive