



What Works *for*
**Children's
Social Care**

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PROMOTING THE RETENTION, MENTAL HEALTH AND WELLBEING OF CHILD AND FAMILY SOCIAL WORKERS: A SYSTEMATIC REVIEW OF WORKFORCE INTERVENTIONS

July 2020





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EXECUTIVE SUMMARY

Introduction

High quality children's social care requires well-trained, supported, motivated, and experienced staff in order to build effective relationships with families and to improve children's outcomes. Yet poor workforce retention, mental health, and wellbeing are pressing concerns within social care. Child and family social workers in particular experience poor working conditions (Ravalier & Boichat, 2018) such as high demands, limited autonomy, poor support, negative societal perceptions, and a highly emotional context. They work with children and families who have often experienced high levels of trauma and may well be reluctant to engage with a social worker. Poor working conditions can lead to high levels of burnout (Hussein, 2018), presenteeism (going to work when ill) (Ravalier & Boichat, 2018; Ravalier & Walsh, 2017), and turnover (Curtis et al., 2009).

Given the well-documented links between improving employee wellbeing and staff retention (Kim & Kao, 2014), efforts to improve the former may have domino effects on the latter. Furthermore, we anticipate that increasing social worker wellbeing, mental health or retention may also benefit children and families using services, due to improved staff performance and effective relationships with client families.

Objectives

The primary review question was:

1. What are the effects of workforce interventions on the mental health, wellbeing, and/or retention of child and family social workers?

Two further secondary review questions were asked:

2. What is the cost-effectiveness of workforce interventions aimed at improving the retention, mental health, and wellbeing of child and family social workers? And,
3. Do workforce interventions to improve the retention, mental health, and wellbeing of child and family social workers also have an impact on child and family outcomes?

Methods

A comprehensive search for published or unpublished studies, reported in any language, was conducted during July to December 2019. Searches were conducted via twelve bibliographic databases and supplementary sources comprising websites, contacts with experts, and tracing citations from previously identified documents. We searched for comparative studies that evaluated the effect of workforce interventions on quantitative outcomes of wellbeing, mental health, and/or retention of child and family social workers. If reported within these eligible studies, we also recorded quantitative effects on child and family outcomes (care prevention, satisfaction with services, and relationship with social workers) or cost effects. Study selection, data extraction and risk of bias assessments were completed by two independent reviewers. Meta-analysis was not conducted, because the studies were not sufficiently similar to each other in order to be pooled together statistically. A narrative synthesis of findings was performed, with results organised according to the level of intervention. This includes interventions aiming for change in a social worker (individual level), in their local work environment (organisational level), and in the conditions of the wider community they serve (community level). The narrative synthesis was accompanied by Harvest plots to visually



display the direction of intervention effects and the robustness of the available evidence base.

Results

Searches returned 3908 unique records, of which fifteen studies (reported in 24 papers) were eligible for inclusion in the review. Of these, nine were carried out in the UK, four in the USA, one in Spain, and one in Australia.

Eligible studies evaluated workforce interventions' effects on wellbeing and/or retention outcomes of child and family social workers, but not their impact upon common mental health conditions among staff. Wellbeing outcomes varied greatly between studies, but mostly used measures of job satisfaction, burnout, or other measures of psychological stress. With regards to our secondary review questions, only one of the included studies also explored cost-effectiveness, providing a partial economic evaluation of cost savings. None of the eligible studies evaluated effects on child and family outcomes.

Three studies evaluated individual-level interventions. Journaling of emotions (n=1) and training in resilience skills (including mindfulness) (n=2) produced mixed results for chronic burnout, compassion fatigue and other measures of psychological stress. The single randomised controlled trial (RCT) in this category did not find any positive impacts on any of the outcomes measured, however the two quasi experimental studies found positive impacts on some outcomes, and no impacts on others.

Eleven studies evaluated organisational-level interventions. The most promising results were seen among strategies to enhance supervision (n=5) and participatory organisational development – that is, interventions which involved staff teams in decision-making and problem-solving for work-related issues (n=2). In general, professional development interventions to improve supervisory skills of supervisors (n=4) improved child and family social workers' job satisfaction and intentions to leave but did not affect actual turnover. A different type of

supervision, providing enhanced supervision and professional support to NQSWs was evaluated in one UK study, but found no significant improvements on our outcomes of interest. With regard to participatory organisational development, when team members were involved from the start there were improvements to burnout, intention to leave and turnover. Inconsistent outcome measures between studies limited the syntheses of remaining organisational interventions. Three studies evaluated service delivery models. These included two evaluations of strengths-based services, and an evaluation of Social Work Practices pilots (SWPs) which established social worker-led organisations independent of local authorities. These had mixed effects on burnout or its elements, meaning there was some evidence of positive effects on some outcomes in some studies, but not on all outcomes in all studies. Training staff to lead mutual support groups (n=1) had no effect on job satisfaction, burnout or expected tenure when compared to support groups that were not led by trained staff.

Finally, one study evaluated a community-level intervention in which social services were co-located and integrated with other community services. The study reported positive results on turnover and cost-savings, but the results should be viewed with a high degree of caution given its methodological limitations.

The quality of the 15 studies was checked using critical appraisal tools. Two of the studies were randomised controlled trials and their quality was assessed using the Cochrane risk of bias tool (Higgins & Green, 2011). Both the studies were classified as having an unclear risk of bias. This means that the reports did not provide sufficient detail about how the research was conducted to be certain of their quality. The 13 remaining studies were quasi-experimental and their quality was assessed using the ROBINS critical appraisal tool (Sterne et al., 2016). None of the studies were considered to have a low risk of bias, which would have indicated their findings were comparable to a well-performed randomised trial. Four studies were considered to have a moderate risk of bias



meaning that the quality was sound for a non-randomised design, however the quality of the remaining studies was less favourable. Seven of them were judged to have a serious risk of bias suggesting that there were some important problems with the way they were carried out. The remaining two studies were considered to have a critical risk of bias, suggesting the methods were too problematic to provide useful evidence about the effects of the intervention.

Conclusion

The review considered studies of a wide range of interventions that had been published internationally over a period of 33 years. In doing so it identified 15 relevant studies, many of which were assessed as having high risk of bias and only two of which were RCTs. We conclude that there is very little high quality or consistent evidence available with respect to the effectiveness of any of the interventions. Different types of interventions each have a small evidence base and inconsistent outcomes, so it is difficult to see if one is more effective than the other.

There were tentative suggestions that interventions may be more effective when delivered at the organisational level, however the quality of the evidence means that it is difficult to be confident of this finding. This highlights the clear lack of evidence in this area and the need for more high-quality studies evaluating interventions to support social worker mental health, well-being, and retention.



1 INTRODUCTION

The urgent need to improve workforce outcomes of child and family social workers

Statement of the problem

High quality children's social care requires well-trained, supported, motivated, and experienced staff in order to build effective relationships with families and improve children's outcomes (WWCSC, 2019). Yet poor workforce retention, mental health, and wellbeing are pressing concerns within social care, representing some of the worst outcomes among comparable human service occupations. For example, the average working life of social workers is under eight years (Curtis et al., 2009), compared to 16 for a nurse and 25 for a doctor (Bowyer & Roe, 2015).

Within England, turnover rates of child and family social workers and adult social workers are comparable at 16% and 15% respectively (Education, 2019; D Griffiths et al., 2019). However, recent UK research indicates that social workers are experiencing worse working conditions (Ravalier & Boichat, 2018). Research also highlights that social workers are experiencing concerning levels of pressure in relation to workloads (McFadden et al., 2019), high levels of burnout (Hussein, 2018), and presenteeism (Ravalier & Boichat, 2018; Ravalier & Walsh, 2017). There are multiple reasons why child and family social workers are particularly vulnerable to burnout. These include high work demands, ineffective bureaucratic structures, and little opportunity for advancement. The role also occurs within an environment of rapidly changing policy and subsequent role uncertainty, pressure of negative societal perceptions, adverse media representation, a culture of blaming social workers when things go wrong, and severity of repercussions (A Griffiths et al., 2019; Hussein, 2018; Warner, 2018). Furthermore, children's social

care is a highly emotional context. Families have often experienced high levels of trauma and are more likely to be hostile to social work intervention (Hussein, 2018). This hostility may be explained by the possible consequences being so serious, namely children potentially being removed into out-of-home care. The protectionist approach of contemporary children's social care goes a long way to explaining the difficult relationships with families, who are often in fear of social workers. It may be that this approach, as well as causing trauma to service users, is also fundamentally problematic for the wellbeing of frontline staff, who were motivated to train in social work by the desire to help and instead find themselves having confrontational encounters (Forrester, Kershaw, Moss & Hughes, 2008). The suggestion of some commentators that a wholly different approach to child protection is needed, with a paradigm shift from risk management to support for parents and wider family (e.g. Featherstone, White & Morris, 2014; Bilson, Featherstone & Martin, 2017), is relevant to the wellbeing of staff as well as family members. This climate of very challenging relationships with families places child and family social workers and their supervisors at higher risk of secondary traumatisation (Dagan et al., 2016; Figley, 1995; Van Hook & Rothenberg, 2009).

The links between workforce mental health, wellbeing, and retention

The links between wellbeing and retention are well-documented specifically for child welfare workers. First, workforce retention and wellbeing share many of the same drivers, such as coping skills and quality of supervision (DePanfilis & Zlotnik, 2008; Kim & Kao, 2014; McFadden et al., 2015; Wilke et al., 2017). Secondly, evidence reviews show clear associations between retention, wellbeing, and mental health outcomes. For example, lower levels of turnover are associated with higher levels of wellbeing



(Kim & Kao, 2014) and job satisfaction (DePanfilis & Zlotnik, 2008; Wilke et al., 2017); lower mental wellbeing is associated with an intention to retire early or change career (McFadden et al., 2020); job burnout is positively associated with common mental health conditions (Lizano 2015); and, high emotional exhaustion or depersonalization are strongly linked to job exits and intentions to leave (DePanfilis & Zlotnik, 2008; Kim & Kao, 2014).

Within social work, chronic stress such as secondary trauma and burnout leads to staff turnover and sickness absence, and the resulting staffing shortfalls may perpetuate retaining workers' stress as they see their caseloads increase (Middleton & Potter, 2015; Mor Barak et al., 2001; Ravalier & Boichat, 2018). Larger responsibility may also be placed on novice staff prematurely (Bowyer & Roe, 2015; Kim & Stoner, 2008) before they have built up the greater work experience shown to protect against burnout (Hussein, 2018).

Research has considered how to support social workers to develop resilience to burnout and this has highlighted how some organizational factors are related to the development of resilience (McFadden et al. 2018; McFadden et al, 2019). The role that organisations can play in preventing workforce burnout has also been explored in more general workplace literature. This posits that efforts to improve employee mental health or wellbeing may have domino effects on staff retention (Bryson et al., 2014; NICE, 2009). We are aware of two small randomised controlled trials in this area: Proudfoot et al. (2009) found that cognitive-behavioural training improved employee subjective wellbeing and subsequent turnover, while Vuori et al. (2012) revealed reductions in both depressive symptoms and intentions to retire early following a resilience and self-efficacy resource-building intervention. Despite the limited availability of such experimental evidence, its findings are also supported by a systematic review of 55 UK case studies, whereby organisations implementing wellness programmes reported reductions in sickness absence and turnover rates (*Price Waterhouse Coopers*, 2008).

Improved workforce outcomes and benefits for service users

We anticipate that increasing social worker wellbeing, mental health, or retention may also benefit service user outcomes, due to improved staff performance and effective relationships with client families. First, links between employee wellbeing and job performance are well established within workplace research. Although there is less evidence available to confirm that increasing wellbeing directly leads to higher performance, proposed causal mechanisms include: improved cognitive abilities and problem-solving skills; more cooperative and collaborative staff; plus, employees' physical health and secure greater levels energy and effort (Bryson et al., 2014). Second, US research with child welfare workers demonstrates a clear association between turnover and impermanence experienced by children. When a child had only one worker over the 21 months' study duration, 74.5% of children achieved permanency, whereas only 17.5% of children who had two caseworkers achieved this goal within this time frame. When children had six or seven caseworkers, permanency was achieved just 0.1% of the time (Flower et al., 2005, reported in Redmond et al., 2010). Such poorer client outcomes may be explained by the way in which high turnover compromises the continuity and, in turn, the quality of relationships with service users (Bowyer & Roe, 2015), although it is also possible that there is no causal link and the association found in this study is explained by some other unmeasured organisational factor.

Defining and measuring worker retention, wellbeing and mental health

Retention

While some studies may provide retention rates of their staff, turnover is considered the most accurate indicator of stability and retention (Baginsky, 2013; Gandy et al., 2018). Turnover refers to the frequency at which staff leave and is not necessarily negative. Some have argued that turnover should be classified into three kinds: i) voluntary or desirable turnover happens



when workers who are not suited to the job or organisation choose to leave; ii) unpreventable turnover due to death, retirement or change in life roles; and, iii) undesirable turnover occurs when capable employees leave despite the organisation's wish to retain them (Lawson et al., 2005). The majority of research, however, does not examine such nuances of job exits (Wilke et al., 2017).

Intention to leave or 'turnover intention' is considered the strongest single predictor of turnover (Bowyer & Roe, 2015). Intention to leave, usually defined as 'seriously considering leaving one's current job', is measured via self-report questionnaires in which an individual states how much they agree with statements such as 'I often think about quitting my job' or 'I intend to look for a new job in the next 12 months' (Middleton & Potter, 2015). McFadden et al. (2020) explored some of these issues in the older social worker population where the concept of retirement intention was used to look at those considering retiring before pension age.

Wellbeing

There are many ways in which the wellbeing of child and family social workers could be conceptualised, and a broad range of outcomes spanning both general and job-specific wellbeing are potentially relevant for this review. Wellbeing is a dynamic, multi-faceted concept, covering different aspects of a person's subjective mental state, including: "all of the various evaluations, positive and negative, that people make of their lives, and the affective reactions of people to their experiences" (Bryson et al., 2014; OECD, 2013p10 in). Historically, two complementary approaches have been developed for comprehending and measuring wellbeing: hedonic and eudemonic (Bryson et al., 2014; Harding et al., 2019). It is generally accepted that both approaches are important components of wellbeing (Henderson & Knight, 2012) and efforts have also been made to indicate the combined presence of eudemonic and hedonic wellbeing, leading to the concept of 'flourishing' (Seligman, 2011).

Eudemonic perspectives of wellbeing consider people's judgements about the meaning and purpose of their life, i.e. the extent to which a person feels a sense of purpose or has achieved one's potential (Bryson et al. 2014). Dolan and Metcalfe (2012) describe several instruments for capturing eudemonic wellbeing. These include the Meaningful Life Measure (Morgan & Farsides, 2009) or Ryff Scales of Psychological Wellbeing (in which participants are asked to rate their level of agreement with a number of statements according to dimensions: self-acceptance, purpose in life, personal growth, positive relations with others, having close valued connections with others, environmental mastery and autonomy (Ryff & Keyes, 1995; Ryff, 1989). Hedonic approaches to wellbeing focus on everyday feelings, or 'affect' in psychology terms, that people experience. Hedonic perspectives can consider positive or negative types of feelings (e.g. happiness, enthusiasm, anger, worry) and the *adequacy* of those feelings (e.g. how satisfied a person is with aspects of their life). Houlden et al. (2018) describe a number of instruments that could be used to measure aspects of hedonia: (e.g. the Positive and Negative Affect Scale, Profile of Mood States, Satisfaction with Life Scale and Ferrans and Powers Quality of Life Index) or jointly capture hedonic and eudemonic wellbeing (e.g. the Warwick-Edinburgh Mental Wellbeing Scale).

Examining child and family social worker wellbeing should also take into account job-specific outcomes. To date, workplace research has paid most attention to hedonic aspects of workplace wellbeing, rather than eudemonia (Bartels et al., 2019). Job satisfaction is a particularly common measure which, because it asks staff to *evaluate* their feelings about work, is considered to be a good indicator of future work behaviours (Bryson et al. 2014). Occupational stress is also a very pertinent proxy for workplace wellbeing in the context of children's social care (see section 1.1). Stress refers to an individual's emotional and physiological reaction to a stressor; a situation perceived as demanding or challenging by the individual (Lloyd et al., 2002). Although the concept of stress is usually



associated with negative stimuli and outcomes, it has long been recognised that temporary stress can be perceived positively (eustress) or even improve performance (Selye, 1987). Prolonged stress however is associated with chronic anxiety, emotional problems and psychosomatic illness (Lloyd et al., 2002). Thus, indicators of chronic negative stress would represent more reliable measures of wellbeing for this systematic review, including burnout, secondary trauma and presenteeism described below.

Burnout is a serious feature of chronic stress, and describes the "experience of physical, emotional, and mental exhaustion from long-term involvement in occupational situations that are emotionally demanding" (McFadden et al., 2015). The syndrome is widely considered to comprise high degrees of emotional exhaustion and depersonalisation alongside low levels of personal accomplishment and is commonly measured using the Maslach Burnout Inventory (Bartels et al., 2019; Lloyd et al., 2002) with its use in social work populations explored by Doherty et al (2020). Emotional exhaustion describes overwhelming fatigue whereby workers feel unable to engage psychologically with the work, while depersonalisation relates to feelings of cynicism and detachment from the job. Low personal accomplishment captures employees' sense of ineffectiveness and disappointment with work accomplishments (Hussein, 2018; Lloyd et al., 2002).

Social workers are also vulnerable to types of occupational stress that occur when serving traumatised populations. Secondary trauma, compassion fatigue and vicarious trauma, are common terms in this context, which some use interchangeably and others view as distinct but overlapping constructs (Shoji et al., 2015). Compassion fatigue refers to the long-term cumulative stress resulting from the 'cost of caring' that can reduce capacity for compassion and negatively influence work performance (Middleton & Potter, 2015; Nuttman-Shwartz, 2015). In contrast, compassion satisfaction refers to the positive experiences of helping traumatised clients. Secondary trauma can be acquired

suddenly through exposure to clients' suffering of trauma, and results in psychological symptoms similar to post-traumatic stress disorder. Vicarious trauma describes profound changes to a professional's core beliefs about themselves following exposure to traumatic materials relating to their clients' experiences (Middleton & Potter, 2015). The Professional Quality of Life Scale is a validated instrument measuring compassion satisfaction, compassion fatigue, burnout, and secondary trauma (Stamm, 2010).

A further stress-related symptomology for consideration in this review is the problem of presenteeism, whereby employees continue to attend work despite being so ill that they should take sickness leave. As presenteeism is thought to impact on performance and efficiency at work, the high rates reported within children's social care could impede the quality of care provided to service users (Ravalier & Boichat, 2018).

Mental health

This review examines the effects of interventions on common mental health conditions separately from subjective wellbeing among child and family social workers. The National Institute for Health and Clinical Excellence considers common mental health conditions to be depression and anxiety disorders. These include generalized anxiety disorder, panic disorder, post-traumatic stress disorder, phobias, social anxiety disorder, and obsessive compulsive disorder (NICE, 2011). Although often utilized interchangeably, mental health and wellbeing should be perceived as distinct constructs (Harding et al., 2019) operating on two correlating but separate continuums, known as the dual factor model (Kinderman et al., 2015; Lyons et al., 2012). This model is supported by Lamers et al. (2015) who found that the presence of psychopathology was a risk factor for low levels of wellbeing, and that low wellbeing was a risk factor for psychopathological symptoms. However, it is possible for people with diagnosed mental health problems to have periods of high levels of wellbeing (Mind, 2013).



Interventions to improve retention, mental health and wellbeing of child and family social workers

Strategies to promote retention, mental health and wellbeing of child and family social workers broadly fit into two groups:

- i. in-service workforce interventions for existing child and family social workers, and
- ii. pre-service interventions to ensure the right trainees can be recruited and sufficiently educated so they thrive in their new profession.

This review will focus on in-service strategies to understand their impact on existing workers, because of the high priority issue of retention and the need to support the existing workforce. We recognise, however, that pre-service interventions are an important area warranting a separate synthesis in the future.

Our review took a broad interpretation of interventions, understanding them to be any activity, programme, policy, or practice change that disrupts the system; and we recognise that multiple interacting elements of a social workers' life operating across any socioecological level may determine their work-outcomes. This includes a social 'worker's intrapersonal context (the individual level), their local work environment (organisational level), conditions of the wider community they serve (community level), and the administrative context governing social workers and their service users (policy level).

The plethora of influences on child welfare workforce outcomes are well documented, and include coping skills, work experience, adequacy of supervision, workload size, inclusion within decision-making processes, peer support, salary, and perceptions of fairness in pay (DePanfilis & Zlotnik, 2008; Kim & Kao, 2014; McFadden et al., 2015; Wilke et al., 2017). Therefore, interventions to improve the mental health, wellbeing, and retention of social workers may be equally far-ranging. For example, they may include

resilience training, induction processes for new recruits, particular models of working, improved leadership or supervision, enhanced social work training, or strategies to address workloads via increased service funding and bureaucracy reduction. In addition, specific mental health and wellbeing interventions may cover preventative strategies but also occupational health support to help staff manage their mental health conditions while remaining in the workforce.

Why this review is needed

To our knowledge, no evidence synthesis has examined the effectiveness or cost-effectiveness of interventions to improve the retention, mental health, and wellbeing of child and family social workers, despite the urgency of the problem within children's social care. In addition, we are not aware of any syntheses that consider whether improvements in workforce outcomes of child and family social workers (or indeed any type of social worker) have domino effects on children and their families.

The few available systematic reviews with partial relevance are limited by at least one of the following: narrow parameters for outcome or interventions; lack of focus on social workers in children's care; and, out-of-date literature searches. There are some existing reviews of retention of human service workers that do include child and family social workers. Webb and Carpenter (2011) examined a range of retention strategies across teachers, nurses, or any type of social worker (including some within child protection settings). Meanwhile, Romero and Lassmann (2016) review studies of child welfare workers but focus solely on mentoring interventions and their effect on retention and job satisfaction. Two further reviews examine interventions' effect on discrete aspects of wellbeing but in social work populations outside our field of interest: Elliott et al. (2012) focus on building capacity and resilience in the dementia care workforce; while Trowbridge and Mische Lawson (2016) consider the effectiveness of mindfulness interventions on social work trainees.



Taking into account the gaps identified above, there is a pressing need to synthesise the effectiveness of interventions to improve workforce outcomes of child and family social workers. A systematic review not only enables more exhaustive identification of up-to-date relevant studies, but also examines study findings in light of their methodological conduct and risk of bias. This is important because the type of research design is not the only indicator of our confidence in a study's findings. For example, well conducted quasi-experimental studies may provide more reliable evidence than poorly conducted randomised controlled trials (RCTs).



2 OBJECTIVES

The overarching review question was: what are the effects of workforce interventions on the mental health, wellbeing and/or retention of child and family social workers?

The primary objectives were to assess:

- The effects of workforce interventions on indicators of the personal or work-related wellbeing of child and family social workers
- The effects of workforce interventions on the turnover or retention rates of child and family social workers, plus their intentions to remain or stay
- The effects of workforce interventions on common mental health conditions (depression and anxiety) of child and family social workers

Two further secondary review questions were asked:

- What is the cost-effectiveness of workforce interventions aimed at improving the retention, mental health, and wellbeing of child and family social workers?
- Do workforce interventions to improve the retention, mental health, and wellbeing of child and family social workers also have an impact on child and family outcomes?

The secondary objectives were to examine:

- The cost-effectiveness (cost offset, cost difference, benefits in monetary terms and incremental cost effectiveness ratios) of workforce interventions that aim to improve the mental health, wellbeing, or retention of child and family social workers;

- Whether workforce interventions reduce the number of children and young people in out-of-home care placements (i.e. entry or re-entry into care, reunification rates); and,
- Whether child and family social worker workforce interventions have an impact on child and family satisfaction with services and relationships with social workers.



3 METHODS

Protocol Registration

This systematic review protocol is registered on International Prospective Register of Systematic Reviews (PROSPERO), reference CRD42020165030.

Study eligibility criteria

Population and geographical region

The direct population of interest is professionally qualified child and family social workers in any geographical region. Populations that also include other child welfare staff were eligible providing the majority of participants were qualified child and family social workers. Studies that delivered interventions to an indirect population (e.g. policy makers, commissioners or families) but measured their effect on child and family social workers were also eligible.

Social workers working in fields outside of child protection (e.g. adult social care) were excluded and this was also the case if the field of social work was not specified. Mixed populations were excluded if separate results were not presented for child and family social workers. Also excluded were pre-service social worker trainees and students as well as child welfare staff who were not qualified social workers (or where qualified staff were not the majority of the study population).

Intervention and comparator

Any type of within-service intervention (i.e. activity, practice, programme or policy) that aims to disrupt current system practices and impact upon the existing workforce. The intervention's theory of change can operate within or across any socio-ecological domain. Examples include induction processes, improved leadership or supervision; work-load reduction, effective

occupational health support, increased service funding, or bureaucracy reduction strategies. Eligible comparators are usual practice or alternative intervention. Pre-service education interventions can potentially have an important effect on social workers but were considered outside of the scope of this review, which focused only on interventions for the qualified workforce.

Primary outcomes

The outcomes listed below could be measured via validated instruments, participant self-reports, or routinely collected workplace data. These were used to inform the key words used in the systematic search:

Personal and work-specific indicators of wellbeing

- Hedonic wellbeing, i.e. the everyday feelings that people experience including the type and the adequacy of those feelings. Example instruments include the Positive and Negative Affect Scale, or Profile of Mood States.
- Eudemonic wellbeing, i.e. the extent to which a person feels a sense of purpose or having achieved their potential. Example instruments include the Meaningful Life Measure, or the Warwick-Edinburgh Mental Wellbeing Scale (which captures both hedonic and eudemonic wellbeing).
- Job satisfaction
- Presenteeism and sickness absenteeism
- Stress outcomes:
 - Burnout and its component elements (emotional exhaustion, depersonalisation or personal accomplishment). Measurement tools include the Maslach



Burnout Inventory (MBI) or Oldenburg Inventory.

- Secondary trauma, compassion fatigue / satisfaction, or vicarious trauma
- Other measures of stress (occupational or otherwise)

Retention

- Intentions to leave / stay
- Rates of turnover / retention

Mental Health

- Common mental health condition symptomology (depression and anxiety disorders, in accordance with NICE (2011)).

Secondary outcomes

Any studies meeting the eligibility criteria above were further examined for the following:

- **Child and family outcomes:**
 - Out-of-home placements (the number of children and young people: entering out-of-home care; re-entering out-of-home care; and, being reunified with their families)
 - Satisfaction with services: quantitative measures, from the perspective of children and/or their families
 - Social worker-client relationships: quantitative measures of the quality of the relationship, from the perspective of children and/or their families
- **Economic data, reporting below outcomes in full or partial sibling economic evaluations:**
 - Cost-offset due to workforce interventions
 - Cost difference between workforce interventions and comparator

- Measures of benefits in monetary terms or incremental cost-effectiveness ratios (ICERs) that measure benefit in units specific to the wellbeing, mental health, and retention of child and family social workers

Study design and reporting

Quantitative comparative evaluations that compare eligible outcome(s) in intervention and control groups were included, whether interventional or natural experiment studies. Interventional studies are those in which the circumstances of the intervention implementation are under the control of the researchers, such as RCTs (randomised controlled trials). Natural experiments are studies of *'events, interventions or policies which are not under the control of researchers, but which are amenable to research which uses the variation in exposure that they generate to analyse their impact'* (Craig et al. 2012).

Specifically, RCTs and quasi-experimental designs were eligible. Where applicable, sibling qualitative or process evaluations were included alongside their eligible quantitative evaluation to capture additional descriptions of the intervention, participants, or context. Studies solely evaluating an intervention using qualitative research or non-comparative (uncontrolled) studies were excluded.

No reporting restrictions were applied on the date or language of publications. Where applicable, non-English language papers were translated and assessed for eligibility against our inclusion criteria. There was no restriction according to whether or not the publication was peer-reviewed.

Literature search strategy

Comprehensive searches for published and unpublished research were conducted during July to December 2019. Twelve bibliographic databases were searched from their inception, covering a range of disciplines as listed in the Table 1 overleaf. The search strategy was designed



in Scopus and combined three search concepts: population; outcomes; and, study design. Once finalised by testing and refined against a set of key papers, the Scopus strategy was then tailored to the remaining databases (Appendix 1). Supplementary searches were also conducted to

help identify further potential research, including grey literature and any ongoing studies. Sources included browsing websites, contacting experts, and citation tracking of included papers and potentially relevant systematic reviews.

Table 1: List of information sources

Bibliographic database searches	
Children and Young People	<ul style="list-style-type: none"> Child Development & Adolescent Studies
Social science	<ul style="list-style-type: none"> Social Policy & Practice Sociological abstracts (includes social services abstracts)
Grey literature	<ul style="list-style-type: none"> HMIC
Health and emotional wellbeing	<ul style="list-style-type: none"> CINAHL Embase ALL Medline (includes Medline in Process and Medline ePub), PsycINFO
Multi-disciplinary	<ul style="list-style-type: none"> Scopus
Economics	<ul style="list-style-type: none"> REPEC – IDEAS NHS EED Econlit
Forensic searches	
Websites	Action for Children; Barnardo's; British Association of Social Workers - Social Workers Union; Care Leavers' Association; Children's Commissioners' offices for four UK nations; Children's Society; Child Welfare Information Gateway; Department for Education; DfE - Spring Consortium Innovations Programme; DfE - Frontline; Early Intervention Foundation; Joseph Rowntree Foundation; OpenGrey; National Institute for Health and Care Excellence (NICE); REES Centre; Samaritans; Thomas Coram Foundation
Key experts	Authors of included papers were contacted to identify any further published, unpublished and ongoing studies.
Citation tracking	Forward and backward citation tracking of included studies. In addition, relevant existing systematic reviews - known to the team or identified in the literature search, were unpicked for eligible studies.



Study selection

Literature search results were exported into the reference manager software Endnote and duplications removed. Clearly irrelevant records were removed by one reviewer and checked by a second screener (HM, MM, RT, SW). Remaining records were screened within Rayyan, an online collaborative tool for reference management, and independently by two reviewers (CF, HM, MM, ML, RT SW, SR, UN). Any abstracts judged to be potentially relevant were obtained in full-text. Eligibility criteria were then applied to full-text papers sequentially. Therefore, the recorded exclusion reason represents the first criteria that the study did not meet. At both stages, disagreement between screeners were resolved by consensus or arbitration involving a third author where necessary (RT, JS, RE). The full papers of any eligible studies were also screened a second time for economic data by a health economist (AB).

Data extraction of included studies

Each included study was data extracted using an *a priori* form made up of three core components. The first section, informed by the TiDIER template (Hoffmann et al., 2014), described the intervention in terms of activities, implementation, and programme theory. The purpose was to aid reviewers' judgments about the comparability of interventions and to help readers determine applicability of interventions for their local context. The component was completed by one reviewer (MM, SW, HM), and checked by a second (RT)

The second component captured details about the study characteristics and findings, including study design, setting, sample size, population and outcome measures. The component was completed in duplicate by two independent reviewers (CF, SR). If applicable, a third component was also included to capture any economic data reported in included studies by the review team's health economist (AB).

Where multiple publications reported the same study, they were treated as one larger evaluation of the same intervention and were all included and extracted onto the same form. The paper reporting the majority of the applicable outcomes and study methods was assigned as the main paper for citing in the review results.

Study design categorisation

Studies were categorised by evaluation design and additional analytic techniques if applicable, as shown in Table 2. Study evaluation designs were classified as either RCTs or one of the six types of quasi-experimental designs, adapted from Leatherdale's (2019) schema. Interrupted time series designs had to have collected at least two data points pre- and post- intervention, whether longitudinal or repeat cross-sectional. Longitudinal time series post-test only designs required at least two data points post-intervention.

Where applicable, it was also recorded whether studies had used additional analytic techniques to reduce selection bias and improve the comparability between intervention and control groups (Craig et al., 2012; Craig et al., 2017).



Table 2: Schema for categorisation of study design

Study evaluation designs	Analytic techniques for reducing selection bias
RCT Quasi-experimental (QE): <ul style="list-style-type: none">▪ Longitudinal pre-post▪ Longitudinal Interrupted time series▪ Longitudinal time series post-test only▪ Repeat cross-sectional pre-post▪ Repeat cross sectional interrupted time series▪ Cross-sectional post-test only	Selection on observables: <ul style="list-style-type: none">▪ Matching▪ Propensity scores▪ Regression adjustment Selection on un-observables: <ul style="list-style-type: none">▪ Difference-in-differences▪ Regression discontinuity▪ Instrumental variables

Risk of bias assessments

The quality of included studies was assessed using the Cochrane eight domain-based evaluation for RCTs and quasi-RCTs (table 8.5a, Higgins & Green, 2011) which assesses the study for risks of study bias according to the following factors: how study participants were randomised into intervention and control groups; and, how blinding occurred - in other words how information about which group participants were in was kept from them and from those assessing outcomes. They also consider how missing data was handled, whether any selective reporting may have occurred, and any other sources of bias. Each domain was rated as low, unclear, or high risk of bias. For non-randomised quasi-experimental studies, the ROBINS-I tool was used (Sterne et al., 2016). This considers issues relating to the methods used in the studies that would introduce bias. These include factors that affect the selection of participants who receive an intervention, for example if the people chosen to receive an intervention differ from those in some way that is likely to effect outcomes regardless of the intervention. The tool also considers whether there may have been any misclassification in who received the intervention; whether the intervention delivered was delivered as

intended; if there is any data missing from some participants and how this may have affected findings; and, bias that occurs because of the way outcomes are measured or reported. Each parameter of trial quality was graded as low, moderate, serious, or critical risk. Studies are given an overall rating based on the highest risk score received on any domain. For example, if a study received a moderate risk of bias score for six domains, but high for two domains, the overall rating would be high. The breakdown of scores by domain is given in Appendix 3 to provide a more in-depth description of the risk of bias. Studies were appraised by two independent reviewers in duplicate and any disagreement was resolved by consensus (authors UN, DN, YW).

Our intention was to appraise any full economic evaluations against the Consolidated Health Economic Evaluation Reporting Standards guidance (Husereau et al., 2013), but none were identified.

Data analysis and synthesis

Evidence tables charted study characteristics, intervention type, and quantitative findings. Meta-analysis was judged to be inappropriate due to the substantial heterogeneity of eligible



studies in terms of evaluation design, population, geographical region, intervention type, and outcome measures used.

A narrative synthesis was performed, organised by intervention level (individual, organisational or community). When groups of similar interventions were assessed by two or more studies, findings were shown on Harvest plots, which are more suitable tools for graphically synthesising outcomes across a diverse evidence base (Ogilvie et al., 2008).

Harvest plots summarise the body of evidence for a given outcome, according to applicable studies' evaluation design, risk of bias, and direction of intervention effect. Each study is represented by a bar that is plotted along the x-axis according to the direction of effect on the outcome of interest (no effect or statistically significant effects favouring the intervention or control). Statistical significance was considered to be a p value of 0.05 or less. The height of each bar on the y-axis indicates the category of research design: RCT; and, quasi-experimental comparative study that either used techniques to improve intervention and control group comparability (CS1) or did not (CS2) (see previous Table 2). Lastly, we colour-coded each study according to their category of bias risk (high, medium, or low). These categories consolidate the two different quality assessment schemas used by the Cochrane risk of bias tool and ROBINS-I. Studies coded as high bias represented studies assessed either as 'high' risk (using Cochrane), and, serious or critical (using ROBINS). Medium risk represented studies rated as unclear or moderate (using Cochrane or ROBINS-I respectively). Robust studies were similarly classified as having low risk of bias by Cochrane and ROBINS-I as low risk.



4 RESULTS

Results of the search

Literature searches returned 3908 unique records, of which 2775 were clearly irrelevant. 1133 abstracts and 248 full-text papers were screened in duplicate according to the pre-

defined eligibility criteria. A total of 15 studies (reported in 24 papers) were included in the systemic review and 224 full text papers were excluded with reasons, as shown in Figure 1 the PRISMA flow diagram.

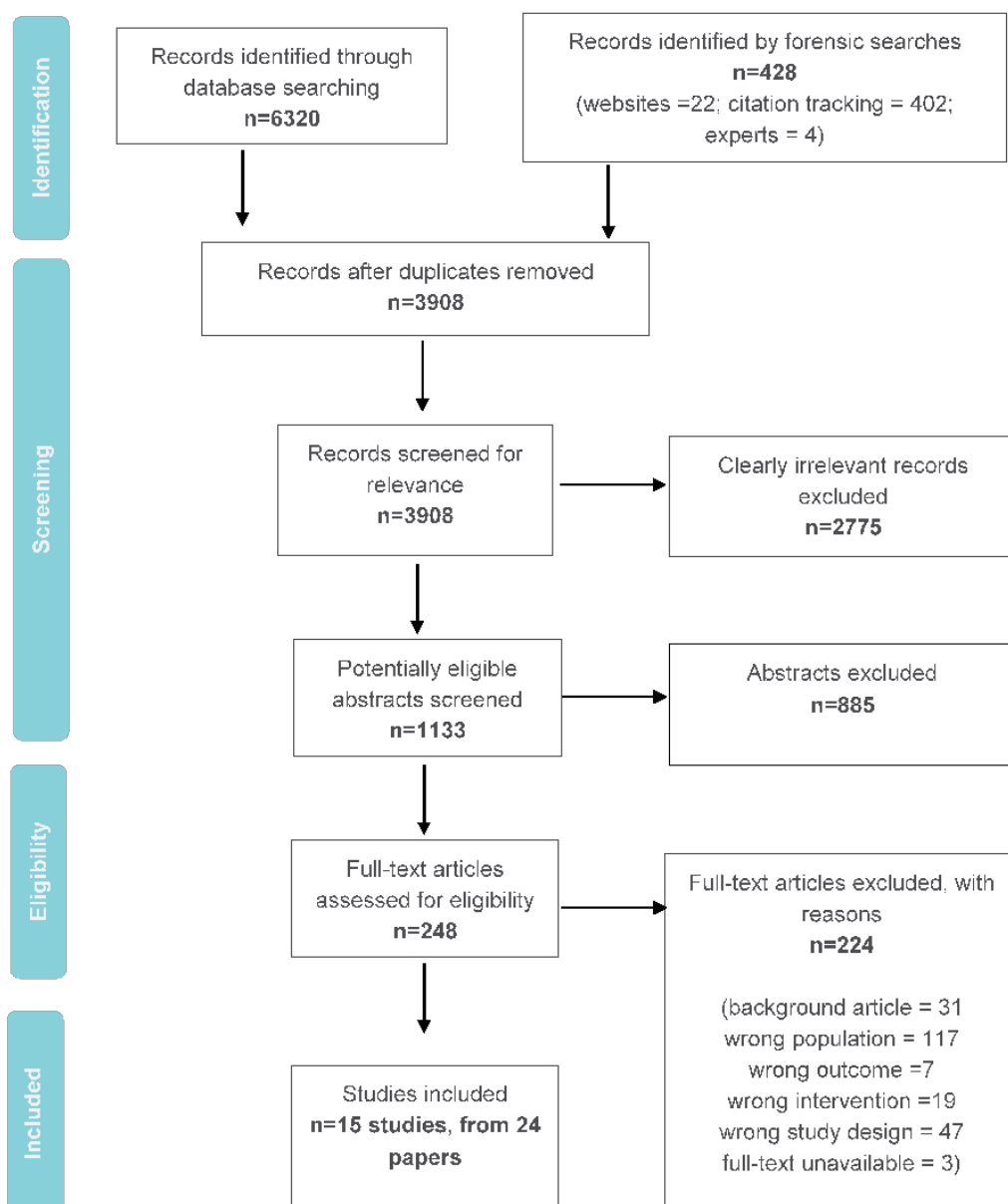


Figure 1. PRISMA flow diagram of study selection



Characteristics of included studies

A brief overview of the included studies is shown below in Table 3. For the five studies reported in multiple publications, only the main paper is referenced in the results write-up.

Where applicable, sibling papers are cited in the evidence tables reported in Appendices 4 and 5. One manuscript (Strand & Bosco-Ruggiero, 2011) reported separate evaluations of two different interventions (clinical consultation and mentoring).

Table 3: Brief overview of included studies

Key: RCT = Randomised controlled trial (**RCT**), QE = Quasi-experimental. QE studies were further categorised as those using additional analytic techniques to improve comparability between intervention and control groups (**CS1**) or those that did not (**CS2**)

Study ID (citation)	Intervention type	Risk of Bias	Research design	Study category
Individual-level				
1 (Alford et al. 2005)	Written emotional expression	Serious	QE, longitudinal pre-post	CS2
2 (Biggart et al. 2006)	Resilience training	Unclear	RCT	RCT
3 (Kinman & Grant, 2016)	Resilience training - for NQSWs	Moderate	QE, longitudinal pre-post	CS2
Organisational-level				
4 (Brown, 1984)	Peer Support	Serious	QE, longitudinal pre-post	CS2
5 (Byrne, 2006)	Service delivery - strengths based	Moderate	QE, cross-sectional post-test	CS2
6 (Carpenter et al., 2010)	Supervision - provision and training for NQSWs	Critical	QE - cross-sectional post-test	CS2
7 (Glisson et al., 2006)	Participatory organisational development	Unclear	RCT	RCT
8 (Medina & Beyebach, 2013)	Service delivery - strengths based	Moderate	QE, longitudinal pre-post	CS1
9 (Renner et al., 2009)	Supervision - skills building	Serious	QE, interrupted time series	CS2
10 (Shackelford et al., 2006)	Supervision - skills building	Moderate	QE - longitudinal pre post	CS2
11 (Stanley et al., 2012b)	Service delivery – social work practices	Serious	QE, cross-sectional post-test	CS2
12 (Strand & Bosco-Ruggiero, 2011)	Supervision - skills building (Mentoring)	Serious	QE, cross-sectional post-test	CS2
13 (Strand & Bosco-Ruggiero, 2011)	Supervision - skills building (Clinical consultation)	Serious	QE, cross-sectional post-test	CS2
14 (Strolin-Goltzman, 2010)	Participatory organisational development	Critical	QE, longitudinal pre-post	CS2 & CS1
Community-level				
15 (Barbee & Antle, 2011)	Community services co-location and integration	Serious	QE, Cross-sectional post-test	CS2



Intervention description

Studies evaluated individual-level interventions (n=3), organisational-level strategies (n=11), and one community-level programme (n=1). See the intervention table in Appendix 2 for further information.

Individual-level

All three individual level interventions aimed to build the emotional resilience of social workers. One Australian based study, Alford et al. (2005), evaluated a written emotional expression activity in which participants journaled their recent stresses and emotions over three consecutive days. Two UK studies evaluated resilience training. Biggart et al. (2016) examined a two-day emotional intelligence training to reduce burnout. Kinman and Grant (2016) provided three training days over a period of two months specifically for newly qualified children and family social workers (NQSWs) in England during their first year of practice. Workshops included meditation and mindfulness, cognitive behavioural skills, and supervision for reflective practice.

Organisational-level

Of the eleven organisational-level interventions, the majority focused on the provision and/or quality of interpersonal support from colleagues, focusing on supervision (n=5) and peer support (n=1). Remaining studies evaluated participatory organisational development approaches (n=2) and service delivery models (n=3).

With regards to the supervisory interventions, one UK study examined a multi-component programme of high-quality supervision provision, protected casework, and access to training for newly qualified social workers (NQSWs) (Carpenter et al. (2010); (Carpenter et al., 2012). The programme was delivered over the course of a year, and NQSWs' supervisors were also given the opportunity to attend supervision skills training.

The four remaining US-based interventions focused on training to improve supervisory skills.

Shackelford et al. (2006) evaluated supervisor 'learning labs' delivered in a group format to child welfare supervisors and regional directions over two years. Renner et al. (2009) evaluated 'Missouri's Strategic Plan for Supervision' which involved the design and implementation of a strategic plan for strengthening skills among public child welfare supervisors. The plan included four core areas – supervisor training, supervision support, clinical supervision, and administrative supervision. Two further supervision studies focused on more personalised 'transfer of learning' interventions working with individual supervisors via sustained intensive consultation and purposeful organisational support (Strand & Bosco-Ruggiero, 2011). Supervisors created their own professional development plans to outline desired learning objectives they hoped to achieve during the consultation process. The second transfer of learning approach evaluated was the 'Mentoring Program', where supervisor mentees were paired with manager mentors. Again, supervisor mentees designed a professional development plan to guide their activities for the year, meeting monthly with their mentors who helped develop and support attainment of their plan. Additional activities included those supported by the agency (e.g. shadowing a commissioner for the day), training, and programme-wide quarterly meetings.

One peer support intervention in the US involved the establishment of mutual help stress-management staff groups (Brown, 1984). This intervention involved training social workers from a large child protective agency to set up and coordinate the staff groups. The small groups were expected to meet for 1-1.5 hours per week to discuss their work situations over a 20-week period.

Two US-based participatory organisational development studies involved staff teams in decision-making and work-related problem-solving. Both interventions were delivered for at least one year. The Availability, Responsiveness and Continuity (ARC) intervention involved groups of caseworkers from varying case management teams using strategies to create



the organizational social contexts necessary for successful service innovation implementation. ARC agents delivered components focused around building participation, collaboration, and innovation, and were trained in working with a range of stakeholders to remove service barriers created by bureaucratic red tape, misinformation, ineffective procedures, poor communication, and mistrust. (Glisson et al., 2006). The design teams intervention brought together mixed groups of child welfare staff from all levels (including caseworker, supervisor, and management) to specifically identify causes of high staff turnover and to develop feasible solutions (Strolin-Goltzman, 2010). Again, the teams were guided by external facilitators (MSW educated workers who were trained in design teams facilitation).

The final three organisational strategies concerned service delivery models. In the UK, Stanley et al. (2012a) evaluated 'Social Work Practices' pilots (SWPs) which established social worker-led organisations independent of local authorities. This relocated statutory social work support for children and young people in out-of-home care from the public to the private or independent sector, an approach made possible by changes to legislation (the Children and Young Persons Act 2008). Meanwhile, strengths-based services were the focus of two studies. In the US, Byrne (2006) evaluated the US-based Family 'Strengths-Based Service Planning model', a more participatory family inclusive service planning tool. The intervention group comprised of direct service social workers and supervisors who had reported receiving training in the model and implemented it in their work. Similarly, (Byrne, 2006; Medina & Beyebach, 2014) evaluated an intervention in Spain whereby child protection workers received 30 hours formal training in Solution Focused Brief Therapy for families, which was delivered in two 15-hour workshops taught two months apart. They also received additional supervision (one five-hour session every month for six months), which appears to be specific to the service model although it is not clearly stated.

Community-level

Finally, one study took place within the community context (Barbee & Antle, 2011) and evaluated the Neighbourhood Place model operating in Kentucky, US. This involved co-location and integrated service delivery of social services with other agencies in a community-based setting that is convenient to the clients served. Each site included a child welfare team consisting of supervisors and child welfare workers. Co-located services provided support for mental health, housing and health, among others.

Description of study characteristics

Nine studies took place in the US, four in the UK, one in Spain, and one in Australia. Most, but not all, studies examined both wellbeing and retention outcomes (n=9). There were a total of ten studies measuring retention and thirteen studies assessing wellbeing. Wellbeing was measured with regards to job satisfaction (n=8), burnout outcomes (n=7), compassion fatigue or compassion satisfaction (n=2), other indicators of stress (n=3), and hedonic wellbeing (n=1). No studies evaluated eudemonic wellbeing, presenteeism, sickness rates, or secondary trauma. Turning to the secondary review outcomes, only one eligible study included some cost data and none quantitatively evaluated the effect of interventions on children and their families.

With the exception of two RCTs, the majority of studies were quasi-experimental studies comprising cross sectional post-test only designs (n=6), longitudinal pre-post designs (n=6), and one longitudinal interrupted time series without a concurrent control group. QE studies were further categorised on whether they were utilised additional analytic techniques to improve comparability between intervention and control groups (CS1) or not (CS2). The majority of quasi-experimental studies were categorised as CS2 studies for the harvest plots. However, one outcome reported by Strolin-Goltzman (2010) incorporated propensity score matching for the individual-level analysis of burnout and was classified as CS1. Comparison control groups were



mostly usual practice, although in Brown (1984) the control group held peer support meetings in the same way as the intervention group, but the group leader did not receive any training. Stanley et al. (2012a) also used two control groups: local authorities where no pilot projects were located (usual practice), and host local authorities where pilot projects were situated but the sample were not participating in them.

Most studies included workers from public service agencies, except Strand and Bosco-Ruggiero (2011) and Stanley et al. (2012a), who included a mix of participants from public and private agencies. Study results generally concerned child and family social workers, though some sample populations included mixed child welfare staff. Stanley et al. (2012a) presented data for all staff in their participating Social Work Practice pilot teams which included social workers, managers, administrative staff, mental health workers, and personal advisers who work with care leavers. Both Byrne (2006) and Strolin-Goltzman (2010) reported intervention effects for supervisors or managers alongside social workers. Three further studies delivered training interventions for supervisors, but measured the effect on social workers' outcomes (Renner et al., 2009; Shackelford et al., 2006; Strand & Bosco-Ruggiero, 2011). Renner et al. (2009) also provided supervisor outcomes separately.

Reporting of participant demographics was variable. Years of social work experience were generally not reported, however two studies (Carpenter et al., 2010; Kinman & Grant, 2016) specifically focused on newly qualified social workers in their first year of practice. In studies which reported age data for the sample ($n=9$), mean ages tended to be between mid-thirties and early forties. This was true for Kinman and Grant (2016) who investigated newly qualified social workers (NQSWs) in their first year of practice, however 21-30 year olds made up approximately 50% of NQSWs in Carpenter et al. (2010). Seven studies reported some details concerning participants' ethnicity. White participants made up the greatest proportion of each study (at least 75%) except for Strand and Bosco-Ruggiero

(2011) where 95% of the clinical consultation participants and approximately 50% of mentors and mentees in the mentoring programme were 'persons of colour'.

Sample size varied between studies. Eight studies had sample sizes that were less than one hundred each for the intervention and control groups (Alford et al., 2005; Barbee & Antle, 2011; Biggart et al., 2016; Brown, 1984; Kinman & Grant, 2016; Medina & Beyebach, 2014; Shackelford et al., 2006; Strolin-Goltzman, 2010). In addition, two studies had considerably larger control groups than their intervention. Stanley et al. (2012a) reported data for an intervention group consisting of 58 participants and two control groups consisting of 491 and 365 participants. While the mentoring programme evaluated by Strand and Bosco-Ruggiero (2011) included 144 in intervention 1113 in control participants.

For further methodological characteristics of included studies see the evidence tables provided in appendices 4 and 5.

Risk of bias within studies

Table 3 above presents a summary of the risk of bias evaluations. A more detailed breakdown of judgements according to bias domains of each critical appraisal tool are available in Appendix 3.

Two RCTs (Biggart et al., 2016; Glisson et al., 2006) were judged to have an unclear risk of bias, using the Cochrane eight domain-based evaluation tool (Cochrane Handbook, table 8.5.) (Higgins & Green, 2011). The thirteen non-randomised quasi-experimental studies were assessed using the ROBINS-I risk of bias tool (Sterne et al., 2016). Just four studies were judged to have a moderate risk of bias (Byrne, 2006; Kinman & Grant, 2016; Medina & Beyebach, 2014; Shackelford et al., 2006). Of the remaining studies, seven had a serious risk of bias (Alford et al., 2005; Barbee & Antle, 2011; Brown, 1984; Renner et al., 2009; Stanley et al., 2012a; Stanley et al., 2013; Strand & Bosco-Ruggiero, 2011) and two had a critical risk of bias (Carpenter et al., 2010; Strolin-Goltzman, 2010).



A common issue across studies was their limited reporting of methodological details often making it necessary to assign an unclear or 'no information' judgment to elements of study designs that were not explicitly stated (such as researcher blinding of participant-related outcomes, incomplete outcome data addressed, bias due to confounding, and bias due to selection). Furthermore, none of the studies reported power analyses before data collection or following the analysis, so it was not possible to determine whether studies had large enough sample sizes to detect significant intervention effects. Given that many of the sample sizes were small it is likely that several studies were underpowered.

Effects of individual-level interventions

Three studies, evaluating brief interventions to improve the emotional resilience of child and family social workers, measured their impact on wellbeing (see detailed results in Appendix 4). None of these interventions that targeted the individual context of social workers examined mental health or retention outcomes. Furthermore, no individual level interventions examined our secondary review effects on cost or child and family outcomes.

The Harvest plot in Figure 2 summarises the wellbeing outcomes, study type, risk of bias, and direction of effect.

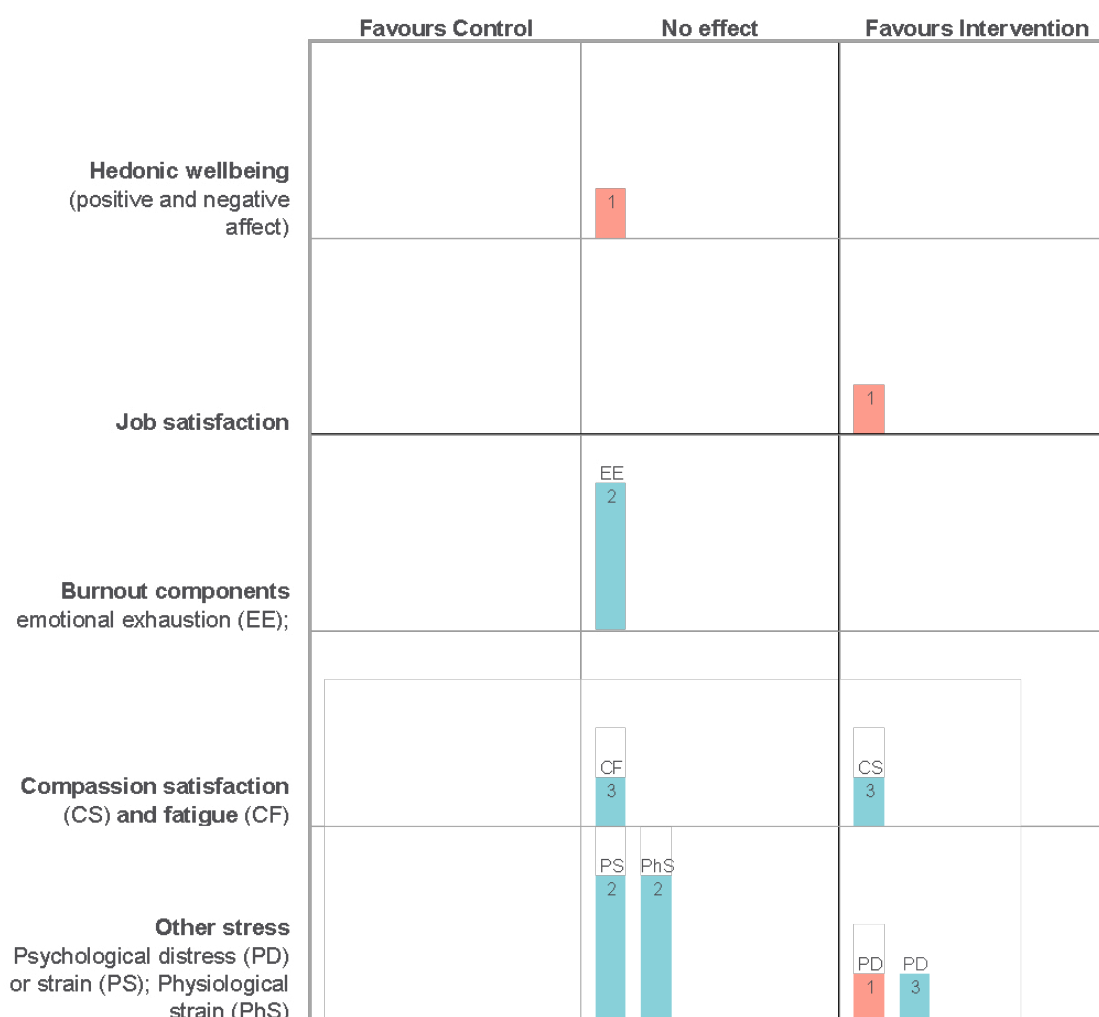


Figure 2: Effects of individual-level interventions on wellbeing

Each bar in this harvest plot represents a study with its ID number: height indicates study type (high = RCT; low = CS2); colour shows consolidated risk of bias ratings (orange = high, blue = medium).



The impact of emotional resilience training was evaluated in two UK medium bias risk studies with inconsistent findings. Biggart et al's (2016) RCT found no effect on either emotional exhaustion, psychological strain, or physiological strain at 12-months follow-up (study 2). Conversely, Kinman and Grant (2016) found more promising short-term effects of resilience training for newly qualified social workers, with moderate effects on compassion satisfaction and psychological distress (Cohen's $d = .54$ and $.42$ respectively) eight weeks after the intervention (study 3). There was not a statistically significant effect on compassion fatigue in the intervention group, but the authors noted that as the outcome is usually a concern over time, it was likely to be less relevant to newly qualified helping professions.

Just one quasi-experimental study with a serious risk of bias examined the short-term effects of journaling emotions about work (study 2). Findings indicated a medium effect on reduction in psychological distress (Cohen's $d = .74$) at two-week follow-up, but no effect of hedonic wellbeing (as measured by positive and negative affect scale). The study also identified a medium sized effect of increased job satisfaction (Cohen's $d = .58$) (Alford et al., 2005).

Secondary Review Outcomes

The studies of individual-level interventions did not provide any data to investigate the secondary review outcomes of cost-effectiveness or impact on child and family outcomes.

Effects of organisational-level interventions

Eleven studies evaluated interventions targeting the organisational context of child and family social workers. These studies only evaluated effects on wellbeing or retention, but not mental health or our secondary review effects for cost or child and family outcomes.

We identified three types of organisational strategies; interventions harnessing interpersonal support within the organisation (via supervision or peer support), participatory organisational development initiatives, and particular service

delivery models. A brief overview of the results across the range of organisational-level interventions is first presented followed by a detailed synthesis for each type of organisational intervention. Further details of the study characteristics and findings are provided in the wellbeing and retention evidence tables presented in Appendix 4 and 5 respectively.

Summary of effects across all types of organisational interventions

The Harvest plots in the Figure 3 overleaf provide a summary of the wellbeing and retention outcomes, study type, risk of bias, and direction of effect across all organisational level interventions. Unsurprisingly, given the heterogeneity between studies, effects across all types of organisational interventions were mixed and inconclusive. Most studies had a high risk of bias (7/11).

The only consistent finding across studies was that the interventions did not worsen any of our wellbeing outcomes of interest. Job satisfaction and burnout-related outcomes were the most commonly investigated wellbeing measures, with conflicting results. Intention to leave was the most common retention measure and again results varied across the six applicable studies, including within one study (Strolin-Goltzman, 2010). Two studies indicated some small deterioration in retention outcomes compared to the control, but this appeared temporary in one study (Renner et al., 2009) and it is unclear if findings were significant in this study or in Byrne (2006).

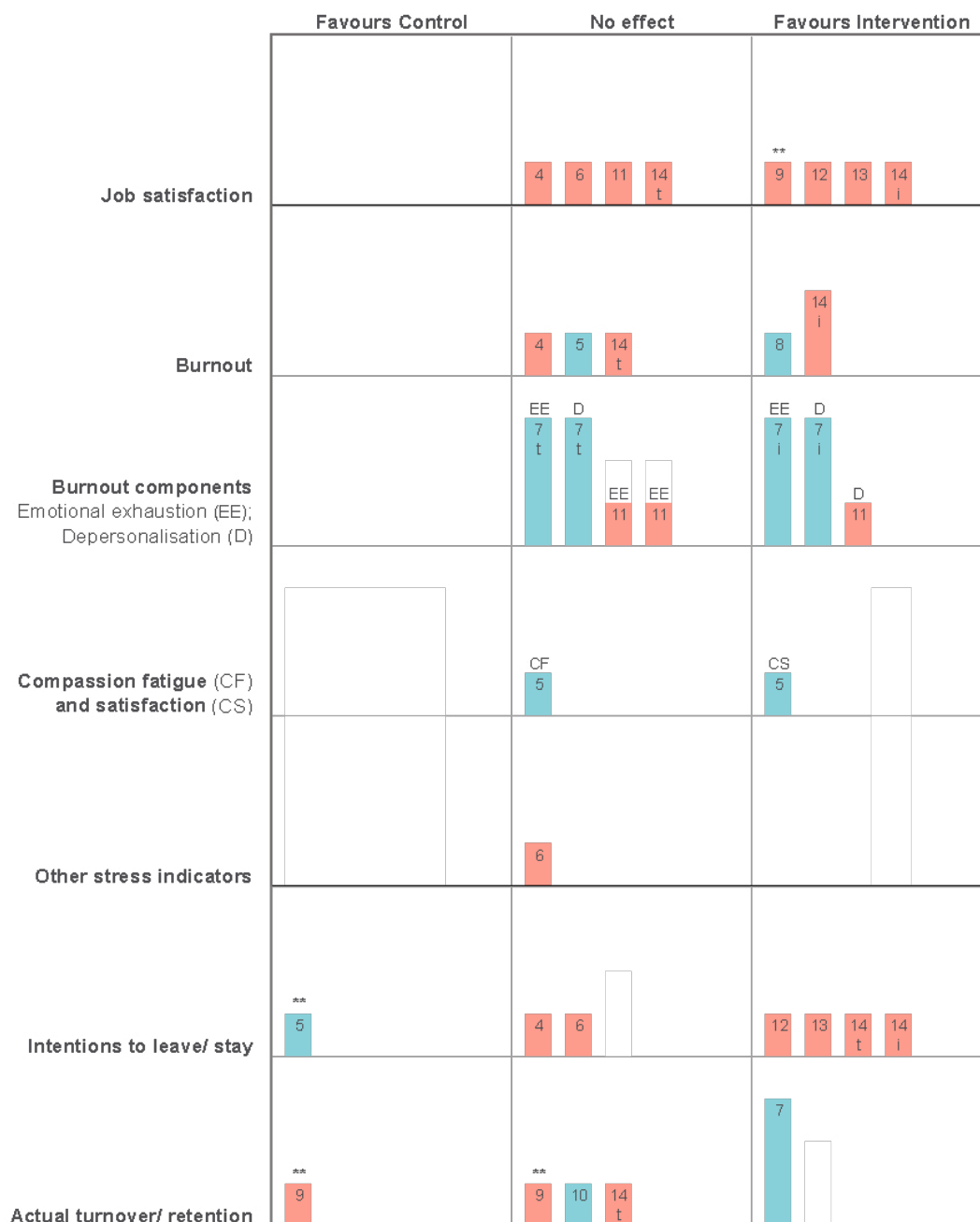


Figure 3: Effects of all organisational interventions on wellbeing and retention

Each bar in this harvest plot represents a study with its ID number: height shows study type (**high** = RCT, **mid-height** = CS1; **low** = CS2); colour shows consolidated risk of bias (**orange** = **high**, **blue** = **medium**); ** statistical significance of effect not reported. Study 7 & 14 identify findings of team ('t') and individual analyses ('i') separately.

Effects of supervision interventions

Five studies examined interventions that targeted supervision. The body of evidence was of low quality, comprising four quasi-experimental studies within the high bias grouping and one

quasi-experimental with a medium bias risk. Intervention effects were measured between nine months and three years from the start of the intervention. Results were mixed across studies, as demonstrated in Figure 4 below.

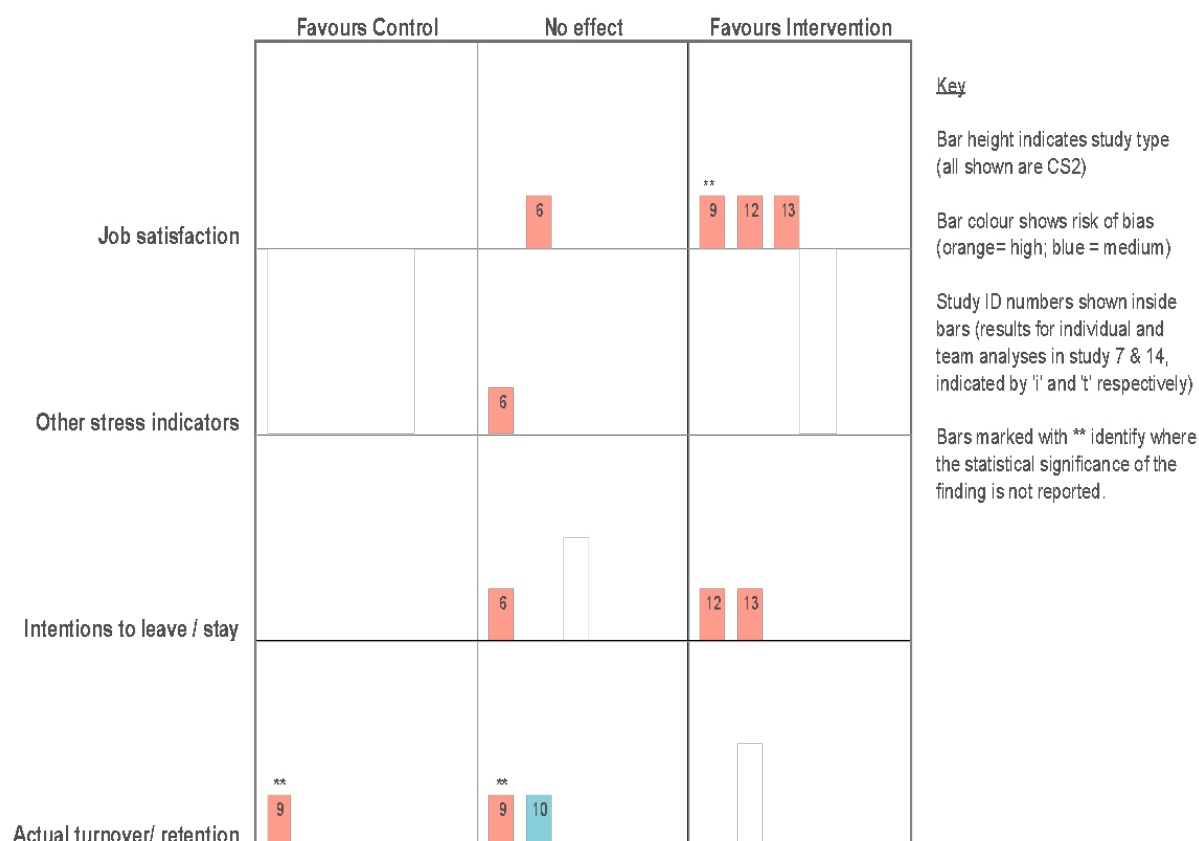


Figure 4: Effects of supervision interventions on wellbeing and retention

Each bar in this harvest plot represents a study with its ID number: height indicates study type (all shown are CS2); colour shows consolidated risk of bias ratings (orange = high, blue = medium); ** statistical significance of effect not reported.

Enhanced supervision provision and professional support for NQSWs was evaluated in one UK study by Carpenter et al. (2010) (study 6). Nine months after the programme began, there were no significant effects on intrinsic or extrinsic job satisfaction measures, stress (as measured by the general health questionnaire), or intentions to leave.

Interventions to improve supervisory skills were assessed in four remaining US studies, showing consistent improvements in job satisfaction among child and family workers where measured. Two cross-sectional post-intervention studies, reported in Strand and Bosco-Ruggiero (2011) found small but significant improvements in job satisfaction for the individualised 'transfer of learning' strategies. In the Mentoring programme

(study 12), the intervention group reported greater total satisfaction (mean score 139.8) than the control group (mean score 136.3, $p < .001$). In the Clinical Consultation programme (study 13), satisfaction was also higher in the intervention group than the control group (mean score 144.3 vs 137.6, $p < .05$). Meanwhile, one interrupted time series, measuring job satisfaction annually from 2003-2008, observed an overall rise in job satisfaction (Renner et al., 2009). Lowest mean scores were reported in 2003 (mean 2.51/5 and 2.42/5 for social workers and supervisors respectively) rising to the highest by the end of the study in 2008 (mean 2.95/5 and 3.05/5 for social workers and supervisors). A drop in satisfaction was observed in 2006, the first year the intervention was first introduced. It



is not reported whether changes were significant across time-points.

The retention outcomes of efforts to improve supervisory skills were more mixed. Measures of intentions to leave reduced in both the mentoring and clinical consultation programmes (Strand & Bosco-Ruggiero, 2011). In the clinical consultation programme evaluation, participants indicate on a 6-point scale whether they planned to leave. Following the programme, the mean score for the intervention group was 1.5 and the mean for controls was 1.7. Following the mentoring programme, 15% of the intervention group reported that they planned to leave their current job, compared to 20% of the control group. However, in the studies that looked at actual turnover or retention rates the results were less positive. The learning labs intervention for supervisors resulted in marginally lower, but statistically insignificant, turnover rates between the last ten months of the intervention (Shackelford et al., 2006) (study 10). Conversely, Renner et al. (2009) reported either no effect or fluctuating retention patterns across its six-year evaluation period, depending on type of staff (study 9). Annual retention rates were calculated using data for the total number of social worker and supervisor employees at the end of the financial year and the number of workers who remained employed for the year prior to this. Prior to the intervention, the retention rates for supervisors decreased between 2003 and 2004 but then remained relatively constant (between 89.18 and 90.64 per cent), with no notable impact of the intervention from 2006 onwards. Retention rates for workers slightly increased in the first year (from 79.69 to 82.15 per cent), which was followed by an 8 per cent decrease from 2004 to 2008. This decrease was not linear and retention increased from 75.42% in 2006 to 78.11% in 2007 before falling again to 73.95% in 2008. It is worth noting that any potential intervention effects may have been confounded by major changes the authors describe that took place in the Missouri social work context during 2006 (performance-based contracting, change in political leadership bringing in a new strategic plan), which saw

turnover across urban and midsize counties in the region.

Effects of peer support approaches

One study (Brown, 1984) looked at the effects of training staff to lead on the delivery of mutual stress management groups for other staff aimed at increasing job satisfaction. In the US-based quasi-experimental study, an active control group was used in which untrained staff also ran peer groups. After 20 weeks, there were no statistically significant effects on job satisfaction, burnout, or expected tenure on the job. Results should be viewed with caution given that the social work context today may have changed substantially since the intervention was evaluated 25 years ago, outcome data was not fully reported, and the study had a serious risk of bias.

Effects of participatory organisational development

Two studies examined interventions actively involving staff in problem-solving organisational issues. This included one RCT with an unclear risk of bias (Glisson et al., 2006) and one quasi-experimental study with a critical risk of bias evaluated (Strolin-Goltzman, 2010). Both studies took place in the US and assigned staff teams to the intervention or control. The harvest plot in figure 5 below provides an overview of the evidence and its findings.

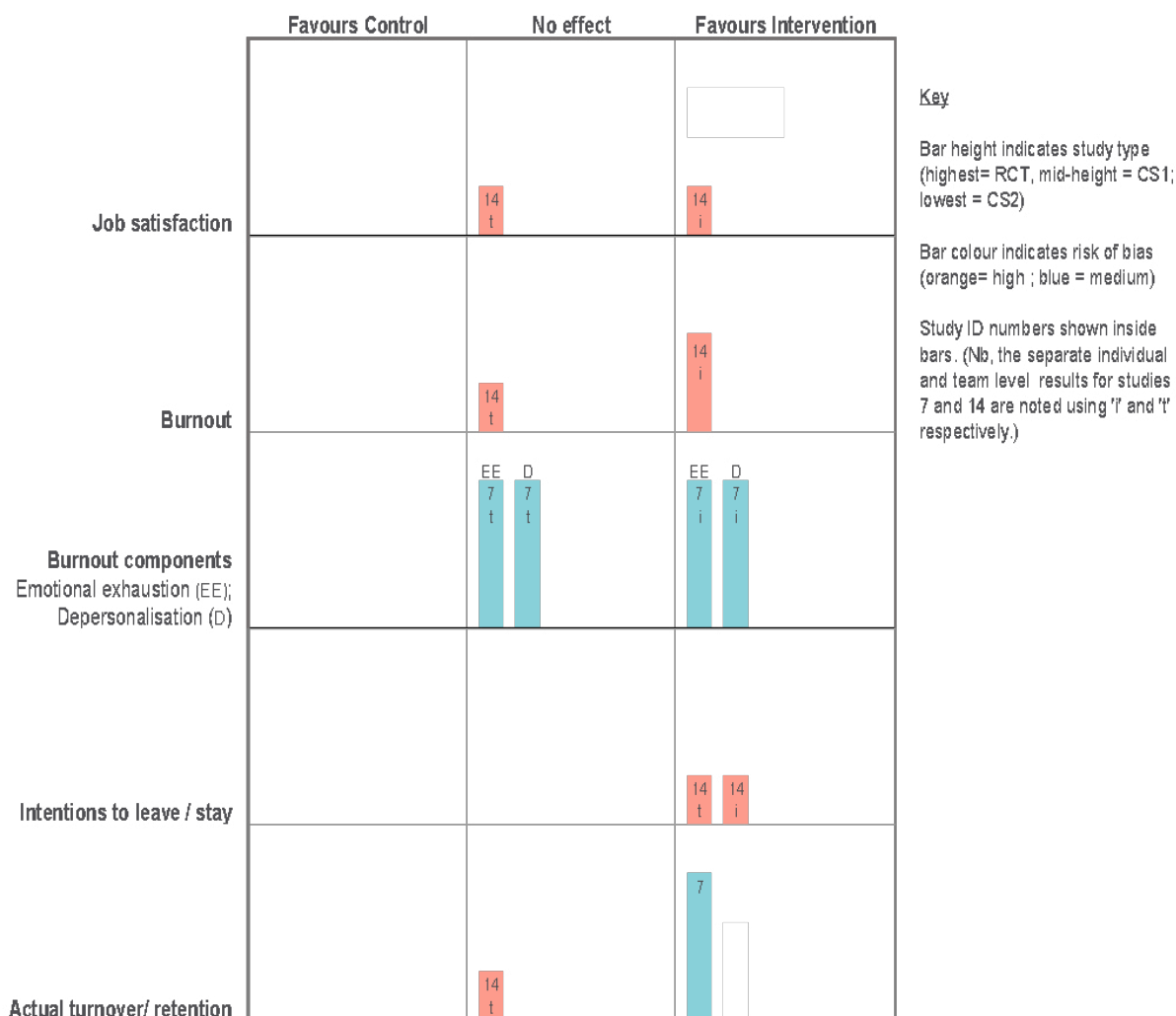


Figure 5: Effects of Participatory Organisational Development on wellbeing and retention

Each bar in this harvest plot represents a study with its ID number: height indicates study type (**high= RCT, mid-height=CS1 low = CS2**); colour shows consolidated risk of bias ratings (**orange = high, blue = medium**); Study 7 & 14 identify findings of team ('t') and individual analyses ('i') separately.

Consistent improvements to wellbeing outcomes were reported in both studies when assessed for those participants present from the start of the intervention and at follow-up. Neither study showed significant effects on wellbeing outcomes when assessed for all study participants regardless of whether they received the intervention from the start. These findings represent a composite view of the entire participating agencies/teams as a snapshot prior to the intervention and again post-intervention.

In respect of effect on wellbeing, the ARC intervention regression analysis for those social

workers who were team members at both baseline and follow-up (n=118) reported significantly less emotional exhaustion ($\beta=-3.2$, $p=.01$) and depersonalisation ($\beta=-1.56$, $p=.01$) than the control group (Glisson et al., 2006) (study 7). When the analysis was performed for all 218 subjects who were members of the sampled teams at the end of the study, small improvements were observed but they were not statistically significant. A similar pattern resulted in the Designs Team intervention evaluated by Strolin-Goltzman (2010) (study 14). At intervention follow-up (28-32 months after baseline) the individual-analysis revealed positive effects of the intervention on a



combined measure of 'job satisfaction and agency commitment' ($F=6.62(1)$, $p=.012$). The percentage of participants reporting 'I can do my job and not burnout' rose in the intervention group from 53% at baseline to 83% at follow-up ($p=.007$) whereas only a small, non-significant rise was observed in the control group. Again, wellbeing effects were not replicated in the team-level analysis, with no significant changes to burnout or job satisfaction. Comparability between these two sets of results is limited due to the same wellbeing outcomes being measured and calculated in different ways.

With regards to retention outcomes, the ARC intervention significantly reduced turnover rates when evaluating all 235 participants who joined the study at baseline. After the one-year follow-up period, 65% of the caseworkers in the control condition quit their jobs versus 39% in the intervention condition ($p < .0001$). Regression analyses indicated an even larger main effect of ARC after controlling for team random effects, location, and individual level covariates such as age, education, and gender ($\beta=-3.2$, $p=.01$). Conversely, the team analysis of the design team intervention had no significant turnover rates. Turnover (regardless of reason) increased in the control group from 28.8% to 32.1%, and the rates of the design team agencies decreased by 8.0% (from 32.8% to 24.1%). However, this statistic did not reach significance ($F=4.38$, $df=1$; $p=.063$).

Intentions to leave were only assessed for the design team intervention, with both the county and individual level analyses revealing after the intervention there were significantly lower percentages of participants who had looked for a job in the past year. (individual analysis: 68% of the control group vs 32% in the intervention group; team analysis: 69% of controls vs 53% in the intervention group).

Effects of service delivery models

Figure 6 shows results for the three quasi-experimental studies evaluating the effect of service delivery models on staff. Byrne (2006) and Medina and Beyebach (2014) examined training in and use of strengths-based services in US and Spain respectively. While Stanley et

al. (2012a) implemented five social work practice pilot (SWP) schemes in the UK.

Strength-based services had inconsistent effects on burnout between two studies. In study 8, Medina and Beyebach (2014) found that having received training in Solution Focused Brief Therapy had a small but significant effect on global burnout scores (Cohen's $d = -.46$) and when calculating it for the experimental group only, there was a medium effect (Cohen's $d = -.59$). Conversely in study 5, regression analysis by Byrne (2006) showed no significant effect on burnout ($\beta = -.045$, $p = .363$). Byrne (2006) also evaluated the effect on compassion fatigue (not significant) and compassion satisfaction (significantly higher on four of the scale items measuring compassion satisfaction when compared to the control group, $p \leq 0.05$). Furthermore, following the intervention, there was slightly lower percentage of intervention participants with intentions to stay (95.2% compared to 98.5% of the control group) though it is not reported whether this difference was significant.

The evaluation of Social Work Practices by Stanley et al. (2012a) found no significant effect on burnout components of emotional exhaustion or personal accomplishment one year after the intervention was implemented, though levels of depersonalisation were significantly lower among the intervention group ($\beta = -1.29$; $p = .006$) than either of the control groups (study 11). There was no significant effect on job satisfaction.

Secondary review outcomes

None of the studies evaluating organisational-level interventions included data on cost effectiveness. Nor did they provide information on the child and family outcome measures defined by the review (the number of children and young people: entering out-of-home care; re-entering out-of-home care; and being reunified with their families). One study (Stanley et al. (2012a), did however provide data on an alternative measure child outcome: the number of placements experienced. This is discussed in Section 5 below.

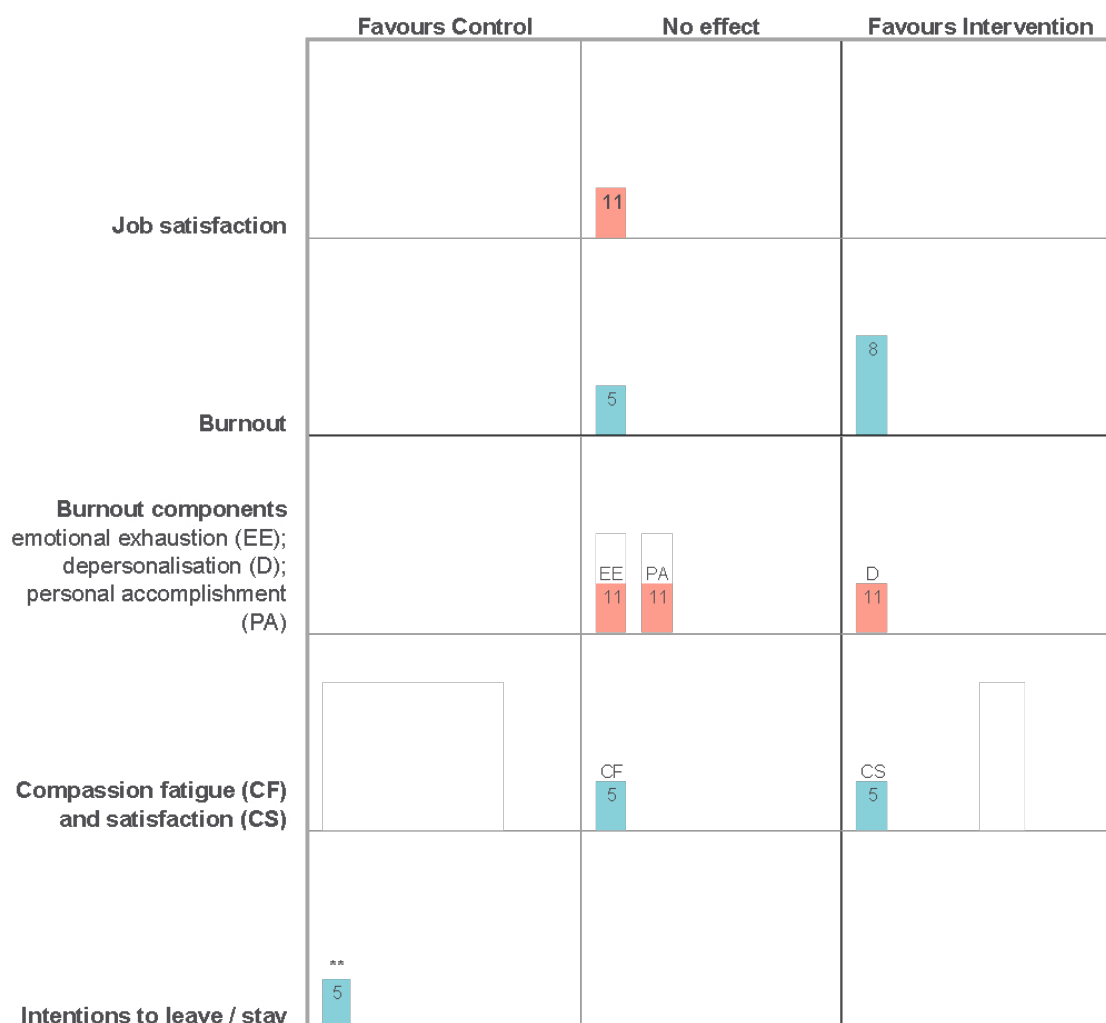


Figure 6: Effects of service delivery models on wellbeing and retention

Each bar represents a study with its ID number: height indicates study type (**mid-height = CS1, low height = CS2**); colour shows consolidated risk of bias (**orange = high, blue = medium**); ** statistical significance of effect not reported.

Effects of community-level interventions

Effects of integrated community services

Only one small study evaluated a community intervention, the US-Based Neighbourhood Place Programme involving co-location and service integration with other agencies in a community based setting (Barbee & Antle, 2011). Although the study was predominantly qualitative, a quantitative effect on turnover was included using a quasi-experimental design judged to have a serious risk of bias.

Administrative data revealed that the average turnover rate was lower in the Neighbourhood Place programme than the average rate in urban settings in Kentucky (13% versus 44%), meaning that six employees left per year rather than 23.

Secondary review outcomes

This was also the only study to include a partial economic evaluation in the form of a cost-offset analysis. For every 100 staff members, 23 leave each year compared to only six across the Neighbourhood Place sites so that \$320,000 is saved annually to the Louisville office. The price year for the cost saving is not given. The cost



saving is based solely on costs that would have been incurred to replace an employee. However, the authors did not consider the set-up and the on-going implementation costs of this type of model nor did they consider other cost savings that maybe accrued at Neighbourhood Place sites due to reduced employee travel, familiarity of employees with client areas, and the increased number of cases closed. None of these impacts were formally identified, measured, and valued even though employees refer to them in their feedback.



5 DISCUSSION

Summary of findings

This systematic review has looked at 24 papers reporting on 15 studies evaluating interventions aimed at improving the mental health, wellbeing and/or retention of child and family social workers. The studies were published between 1984 and 2017 and were carried out in the UK (n=4), USA (n=9), Spain (n=1) and Australia (n=1). Overall, the quality of the evidence in the studies was poor. Only two studies were RCTs, and these were assessed as having an unclear risk of bias. The remaining studies were quasi-experimental, and of these four were judged to have a moderate risk of bias, seven a serious risk of bias, and two a critical risk of bias. The poor quality of this evidence suggests that caution is needed in interpreting the findings.

The studies covered a wide variety of different interventions, and these were classified into three groups: interventions delivered to individual social workers, interventions delivered at the organisational level, and community-level interventions. The primary focus of the review was the effects of these interventions on mental health, wellbeing, and retention outcomes for social workers. Further secondary review questions asked what evidence there was in relation to the cost-effectiveness of interventions and the impacts that improved staff retention mental health and wellbeing have on children and family outcomes. The findings for each group of studies are summarised below.

Individual-level interventions

The findings in relation to the effects of individual-level interventions were inconclusive. The studies evaluating both journaling of emotions or training in resilience skills (including mindfulness) produced mixed results for chronic occupational stress (burnout or compassion fatigues) and

other types of stress. While none of the studies showed any negative impacts, the single RCT evaluating an individual level intervention found no statistically significant effects, and a mixture of no effects and positive effects were detected in the quasi-experimental studies.

None of the studies evaluating interventions that were aimed at the individual level considered the secondary outcome of the study, the cost-effectiveness of interventions, and the impact on children and families.

Organisational-level interventions

For organisational-level interventions, the most promising results were seen among strategies to enhance supervisory skills (n=4) and participatory organisational development (n=2). In general, interventions involving professional development of supervisors improved child and family social workers' job satisfaction and intentions to leave but did not affect actual turnover (n=4). One further UK study evaluated an additional type of supervision intervention, whereby NQSWs were provided with enhanced supervision and professional development activities, but this showed no effect on our outcomes of interest. All studies had a high risk of bias and important measures of chronic stress were not investigated, and so findings need to be interpreted with caution. With regards to participatory organisational development, when team members were involved from the start there were improvements to burnout, intentions to leave and turnover.

There was insufficient evidence to draw conclusions on the effectiveness for service delivery models or training staff to lead mutual support groups. Two moderate quality studies had either a significant positive effect or no impact upon burnout. The social work practice



model or peer support approach also had an effect on wellbeing or retention but were only examined in one study each.

None of the studies provided data that answered the secondary research questions relating to cost-effectiveness or impact on children and families, using outcome measures described in Section 3.2. However, one of the studies (Stanley et al. 2012a) did use an alternative measure of child outcomes. This is discussed below.

Community-level intervention

The one community-level intervention included in the review (Neighbourhood Place), reported positive results on turnover, but the results should be viewed with a high degree of caution given its methodological limitations. This was the only study in the review that provided partial economic evaluation and this provided indications that the intervention was potentially cost-saving.

Discussion of findings

Primary Outcomes

This review covered a wide range of interventions that contribute to promoting social worker mental health, wellbeing and retention. Given the scope of the review, the fact that only 15 studies were identified for inclusion, and that only two of these were RCTs, shows the paucity of research in this area. Coupled with the poor quality of the

studies, this makes it difficult to draw conclusions about how to effectively improve social worker wellbeing based on this evidence.

Despite the limitations of the evidence, there were signs of potential promise in terms of supervisory skills and participatory organisational development. Interesting comparisons can be made by examining the effects of workforce interventions in other human service professions. This shows some further support for the benefits of supervision, with a systematic review exploring the characteristics of successful interventions for retention of early career nurses finding that most programmes with a mentor/supervision

component reported a decrease in turnover and increase in retention rates (Brook et al., 2019).

In contrast, results for benefits of individual level interventions, notably peer support and resilience based interventions, provide more of a mixed picture. Controlled studies with social workers outside of child welfare add further evidence for the mixed effects of individual-level interventions. Neither yoga and mindfulness (Gregory, 2015) nor online stress management support groups (Meier, 2000) were found to improve burnout, compassion satisfaction, or stress. Neither did time management training have an impact upon job satisfaction (Macan, 1996). Conversely, a systematic review of physician interventions found more support for the positive effects of mindfulness and stress reduction approaches on burnout (West et al., 2016). The authors noted that organisational interventions were more effective at improving global burnout than individual interventions, but mindfulness-based and stress management-focused interventions yielded the biggest reduction in burnout components of emotional exhaustion and depersonalisation scores.

Unlike the peer support approach used with child and family social workers in this review, an RCT to improve wellbeing in medical physicians demonstrated the benefits of facilitated small group sessions (West et al., 2014). Minor decreases in emotional exhaustion and overall burnout levels were achieved, while depersonalisation scores significantly decreased by 15.5% in the intervention group compared to a 0.8% increase in the control group ($p = .004$).

As highlighted above, the evidence in relation to these issues in children's social workers is too weak to make solid conclusions, but the similarities found in studies with other professions does backup the tentative findings of this review that some interventions delivered at an organisational level may be effective at promoting worker wellbeing and encouraging retention.



Secondary Outcome: Wider effects of workforce interventions on children and their families

None of the studies measured any of the outcomes relating to the impact on children and families identified for this study. However, it is worth noting that Stanley et al. (2012a) did examine the impact of social work practices on the number of placements children experienced, finding mixed effects across the five pilot sites. Three achieved significantly lower rates of placement change for children and young people in their care than similar children and young people in the control and host sites, and two sites showed no difference.

Some studies also qualitatively explored service satisfaction. In Stanley et al. (2012a) children and young people served by the social work practice models indicated some increases in satisfaction with family contact arrangements, their placements and accommodation, but a similar experience was also reported in local authorities that acted as control groups. Furthermore, the site where children and young people were most likely to be dissatisfied with their placement was in a social work practice pilot area, indicating variation in findings across the different pilots.

Secondary Outcomes: Cost effectiveness of workforce interventions

There was no evidence on the cost-effectiveness of workforce interventions, however there are indications of potential cost-saving based on the results of one partial economic evaluation (Barbee & Antle, 2011). It is worth mentioning that a second study, Nguyen (2013) which was identified during the screening stage but did not meet our study design eligibility criteria, also indicated that workforce interventions could be cost-saving. They evaluated a training programme for child welfare staff and carried out a cost-cost offset analysis presenting their results in the form of a return on investment ratio i.e. a ratio of the costs saved as a result of the service to the cost of the service. Similarly, to Barbee and Antle (2011), the cost savings focused on the reduced staff turnover rate. For every \$1

spent on the training programme there was an overall saving of \$11.88 in staff replacement costs. Nguyen (2013) also showed this to increase to \$50.55 in savings for every \$1 spent when the overall economic impact of child maltreatment is considered. The price year for costs is not given.

Whilst Barbee and Antle (2011) and Nguyen (2013) show encouraging results for workforce interventions, they are both only partial economic evaluations and do not present the full cost-effectiveness picture that would allow decision makers to make evidence-based funding decisions on the allocation of limited resources. The review highlights the lack of and hence the need for further research in the form of full economic evaluations that identify, measure, and value all costs and outcomes to staff members directly impacted by these types of interventions and potentially the outcomes for children involved with social care services and their families.

Strengths and limitations of the review methods

This systematic review presents the first rigorous review of evidence on the effectiveness of interventions to improve child and family social worker mental health, wellbeing, and retention. The synthesis benefits from a broad scope and robust methodology.

The review benefited from adopting a broad and inclusive interpretation of what constitutes an intervention, focusing on the process of system change rather than the introduction of discrete packages of activities. It was further strengthened by using a socio-ecological framework to map the dimensions across which an intervention's mechanisms of change may operate, including interventions that focus on individual behaviour change to those that transform policy. This inclusivity was important in ensuring that social workers' wellbeing and retention were not constructed as being the sole responsibility of individual employee.

The review also adopts a pluralistic approach to research evidence, drawing on interventional



research designs and natural experiments without restricting studies to RCTs as in a traditional systematic review approach. Had such limitations been applied only two studies would have been eligible. Moreover, study design type is only one feature of reliable evidence, i.e. well conducted quasi-experimental studies can offer more useful evidence than poor quality RCTs with a high risk of bias.

Therefore, we attempted to identify more appropriate evidence for decision-makers via suitable evaluation design and examining studies' risk of bias. This required eligible studies to use a control comparison group, as an important aspect of causal inference. Without a comparison group, evaluators cannot confidently determine whether any observed changes would have occurred regardless of the intervention. Furthermore, confidence in intervention causality depends on using intervention and control groups with similar characteristics. While one of the purposes of random allocation in RCTs is to achieve such similarity, our review methods also acknowledge that non-randomised studies can also achieve this to an extent through additional analytical techniques.

Quality assurance was built into our methodology by reviewers completing study selection, data extraction, and quality assessment independently in duplicate against pre-defined criteria and *a priori* forms. In addition, the search strategy was a comprehensive attempt to identify all relevant studies from twelve international electronic databases plus multiple supplementary sources (websites, citation tracking, and contacts with experts). We also aimed to reduce bias by including, where eligible, studies that were either unpublished and/or reported in any language. This led to five grey literature reports being included either as main or sibling papers. This was particularly important for capturing UK-based research, whereby three of the four studies from England were published by the Department for Education, Centre for Research on Children, or Families of Children's Workforce Development Council (Biggart et al., 2016; Carpenter et al., 2010; Stanley et al., 2012). Two further PhD theses

were also included as either the main publication (Byrne, 2006) or sibling (Strolin-Goltzman, 2006). It is worth noting that unpublished research is very difficult to locate, so despite our rigorous attempts to locate such studies, there is still a small risk of publication bias.

One limitation of the review is our sole focus on intervention effectiveness. While conducting a mixed-methods review was not possible within the timeframe and resources available, we recognise the importance of the approach when evaluating interventions in complex systems. Synthesising the findings from qualitative and process evaluations is important in determining whether the lack of an intervention effect stems from the failure of the programme or its implementation. Qualitative or realist syntheses can also unveil *how* the intervention works, helping decision-makers understand in which contexts particular strategies are most likely to be beneficial and how approaches could be optimised or tailored to the local setting (Booth et al 2019; Burchett 2020). To go some way to alleviating this review limitation, our data extraction forms did try to capture any explicit statements about intervention fidelity or programme theory. However, this information was rarely reported in the included studies so all we could capture was any information authors offered as rationale for why they were examining the intervention or how they believed it to work (see intervention description tables in Appendix 2).

Secondly, our review focuses on qualified child and family social workers, so does not represent the full literature for broader social worker populations or child welfare staff who are not professionally qualified. As discussed in section one, this decision was informed by the unique challenges that child and family social workers can face with regards to a highly charged political environment, exposure to the trauma children and families may have experienced, severity of repercussions when things go wrong, and the hostility they may face from families fearing children will be taken away from home. We note that several studies were excluded from our review because they either analysed



interventions in social workers serving adult populations, within unspecified contexts, or a range of fields. Therefore, a future evidence synthesis for all social workers, or those types not covered by this review, may be warranted. Indeed, given the current limited evidence landscape for child and family welfare staff, recommendations for decision-makers may be strengthened by drawing upon lessons from social work settings outside of child and family work.

Strengths and limitations of available evidence

Overall, the included studies were of poor quality, no studies were judged to have a low risk of bias, and 9 of 13 thirteen quasi-experimental studies were classed as serious or critical. Together with the inconsistency of findings between studies, and similar interventions only being evaluated in a handful of studies, this limits our confidence in study findings and our ability to make firm recommendations for practice.

Research designs utilised by most studies were not well-placed to evaluate with any certainty the effects of workforce interventions on wellbeing or retention. Although all studies had a comparison group who did not receive the intervention, recommended analytical techniques to reduce selection bias and improve comparability between groups (Craig et al., 2012; Craig et al., 2017) were mostly not performed. Additionally, some studies did not provide information on whether participating individuals in the interventions and control groups were similar at the start of the intervention or did not sufficiently describe what 'usual practice' consisted of in control settings. Further still, six studies did not include pre-intervention study groups, instead cross-sectionally comparing outcomes post intervention only. It is also worth noting that Renner et al. (2009) was an interrupted time series comparing pre-intervention and post intervention trends across multiple time-points. However, they did not use a concurrent control group. Had one been used, the study could have examined whether confounding from the major

changes to the social work context occurring at the same time of the intervention dampened the supervision programmes' impact.

Other methodological limitations concern the frequently small sample sizes which may not have been sufficiently powered to detect significant effects, alongside incomplete reporting of methods and results. This includes details about how the interventions were implemented and by whom; duration of interventions and follow-up; characteristics of the control group; sample size information (particularly with regards to power calculations, drop-out and sizes of each study group); and, numerical data to accompany narrative description of study findings. Subsequently, both RCTs were judged as having an unclear risk of bias, and another eight studies as having at least one of the seven domains used to assess risk of bias recorded as 'no information'.

Studies also lacked explicit descriptions of theory to explain how their intervention was understood to work. Programme theory links the causes giving rise to the problem, intervention activities and their change mechanisms to address the causes, intervention implementation, and the resulting chain of outcomes. Such theorising can also enable decision makers or intervention developers to select more appropriate interventions for their specific context. When used to guide mixed-methods effectiveness evaluations, programme theory can also unveil whether any lack of intervention effect is actually the result of implementation failure or of applying the wrong intervention for the particular context. For example, the intervention evaluated in Biggart et al. (2016) aimed to reduce burnout by building the emotional intelligence skills of social workers, based on a previously developed programme used elsewhere. The RCT found no evidence of effect, but this is likely to be because the causes of burnout that the intervention was designed to address were not present in the context in which it was applied. Prior to the intervention, participants already had low levels of stress and were high scorers for emotional intelligence.

Turning to our review outcomes of interest, it was encouraging that most studies reporting job-



specific wellbeing used more reliable indicators of adverse chronic stress, namely global burnout or its components. In these instances, the validated Maslach Burnout Inventory tool was used, with the exception of Strolin-Goltzman (2010) and our oldest study Brown (1984), which initially tried to measure burnout using an indicator of job dissatisfaction then changed to the Maslach Burnout Inventory at post intervention but did not fully report the results. Unexpectedly, given there are pressing concerns within children's social work, compassion fatigue and secondary trauma were rarely investigated. Further still, none of our included studies examined the effect of interventions on the common mental health conditions of anxiety and depression. This is surprising given that poor mental health is one of the leading causes of work-related ill health. Together with stress, depression and anxiety accounted for 54% of working days lost in the UK during 2018/19 and rates are highest in health and public sectors (HSE, 2019).

With regard to the retention outcomes, it is notable that few studies distinguished between desirable and undesirable turnover, and whether employees who either left or had leaving intentions were exiting the profession entirely or moving to a new social work role. Some exceptions included Carpenter et al. (2010), who identified no significant change in NQSWs' leaving interventions, but noted three-quarters of these expected their next job to be in children's social work.

There was a clear lack of evidence in relation to the secondary review questions. Only one study provided a partial economic evaluation, and none of the studies provided data on the child and family outcomes identified for the review.

Recommendations for practice and policy

To make any firm recommendations from practice from the reviewed studies is not really possible because a clear picture did not emerge, as explained above. Different types of interventions each have a small evidence base and inconsistent

outcomes, so it is difficult to see if one is more effective than the other.

On the basis of the limited evidence available, organisation-level interventions seem to show more promise than individual-level interventions. This fits with a more sociological approach to improving children's services, which emphasises the importance of organisational culture as opposed to a more individualistic approach to workforce development. However, caution is needed because the evidence base is limited and the more well-developed evidence base in other people-focused professions shows more encouraging results from individually-focused staff wellbeing initiatives.

It is worth mentioning that, although there were a few exceptions, most of the reviewed interventions that improved wellbeing also improved retention, and those that had no effect on wellbeing had no effect on retention. This provides further evidence that wellbeing and retention are connected and that interventions may well be cost effective as there are potentially multiple gains to be realised.

It is important to note that none of the reviewed studies evaluated obvious organisational changes such as reduced caseloads – potentially the biggest issue for staff and service users – or improved administrative support. There may also be lessons for practice from initial qualifying training, but this was outside the scope of the review.

There was evidence of high levels of burnout and intention to leave in the studies reviewed, in keeping with other evidence reviewed in the introduction to this report. This evidence further emphasises the urgent need for improvements to the quality of working life for social workers.

Recommendations for research

This review, in considering the current state of the existing evidence base, raises a number of issues that are worth reflecting on in considering what further research is needed on workplace interventions.



Firstly, some observations can be made about the types of interventions that it would be valuable to evaluate. While the limited evidence from this review suggested that studies carried out at the organisational level may show more promise than those directed at the individual level, the level of evidence is very limited, and because of this further research on both types of intervention is needed. There is also a clear lack of evidence relating to community level approaches, and a need for more complex structural approaches.

A short, single component intervention may not have a sustained positive impact on wellbeing and, in turn, retention, if the underlying issues leading to job-related stress are not addressed. It is also important to note that the majority of studies, directed at both the individual and group levels, addressed how social workers can cope and manage their high workloads and stressful conditions rather than addressing the conditions that they work in. Therefore, there is a need to also evaluate interventions to reduce workload and bureaucracy impact on social worker wellbeing, mental health, and retention. In fact, one of the mechanisms through which the single community-level intervention explored in this review, the Neighbourhood Place Model (Barbee and Antle, 2011), was thought to have worked was by reducing bureaucracy and saving time through the colocation of services. Time management research in the broader social work arena also lends weight to the possible value of reducing social worker workloads and working hours. For example, a study in Sweden (Barck-Holst, 2020) reduced working hours of full-time social workers by 25% to see whether there were any effects on stress. Level of pay remained the same throughout the study period to control for its influence on the outcome measures. Results showed that reducing working hours had significantly positive effects on all measures during weekdays and at weekends.

Secondly, many of the studies in this review showed no effect. However, it is not possible to conclude from this that the interventions are not effective per se. These findings may, in part be due to implementation, applying the intervention in

wrong settings and poorly developed programme theory. To address this gap we need to think better about how interventions are developed and this may involve the co-production of interventions. They need to be well-designed and well-theorised. They also need to address both the causes of the problems and be feasible in the context to which they are going to be placed. Frameworks on developing interventions from the public health arena (Hawkins et al., 2017; O’Cathain et al., 2019; Wight et al., 2016) provide useful guidance and could be adapted to interventions in social care. One useful approach might be to look for best practice examples from other professions and see whether they can be adapted or made applicable to social care (Movsisyan et al., 2019).

Thirdly, as well as considering the types of interventions that might need to be evaluated there is a need to consider how those evaluations will occur. It is crucial that studies are sufficiently powered. Where sample sizes are not sufficient, interventions may appear to be ineffective when in reality they are having an impact.

Another important aspect of this is the outcomes that are used in those studies, and it is clear that there are a range of outcomes that are not being measured. These include secondary trauma or compassion fatigue, personal wellbeing such as life satisfaction, and mental health. The lack of any evidence relating to the secondary outcomes explored through this study is very apparent, however these are key issues. In understanding the value of rolling out any intervention in children’s social care there is a need to know whether it is going to be of ultimate benefit to children and family outcomes, and whether it is cost effective. In addition to this, we also need to ensure that there is more standardised measurement of outcomes across studies so that they can be better compared and pooled for systematic reviews. Methods for the evaluation of interventions in complex systems are developing rapidly, and future studies should make use of guidance to support this (Craig et al., 2006). Guidance is also available on conducting process evaluations (Moore et al., 2015), which are vital for understanding how interventions have been



implemented. There is specific guidance on carrying out certain types of evaluation, including policy evaluations (HM Treasury, 2020) and natural experiments (Craig et al. 2012).

Fourthly, studies need to be well reported so that reviewers can get a sense of what is effective and synthesise it in reviews. Several studies were not published with all the information required to enable the assessment of bias to be carried out sufficiently. These included the two RCTs considered in this review, which were assessed as having an unclear level of bias. This highlights the need for future studies to report in-depth about all aspects of the methods. Future studies also need to report the mechanisms through which interventions are thought to work. Several studies reviewed did do this, but many were mostly focused on feasibility and acceptability of the interventions rather than how they might work. Guidance on how to better report interventions is also available (Hoffmann et al., 2014)

Finally, while the need for more primary evaluation studies is very evident, there will also be the need for further synthesis of studies. This review focused only on the children's workforce, however it may be that interventions that work effectively in other parts of the social care workforce, such as adult services, could also be effective for the children's social care workforce. Therefore, a review pulling together the evidence from different parts of social care would be beneficial. This review focused on quantitative studies, however there may be much to be gleaned from reviewing the qualitative evidence, particularly in relation to implementation and programme theory. This would be likely to go beyond the sibling studies of included papers, as only a small number of studies incorporated mixed-methods. Finally, it is clear that there is growing interest in the review topic, so the review is likely to need updating in the near future.

Conclusion

It is clear that there are pressing concerns about poor workforce mental health and wellbeing in children's social care and high levels of social

worker turnover. As a result, there is an urgent need to understand what interventions might be effective in reducing these problems and supporting social worker retention. However, this review has highlighted a paucity of research in this area. As discussed, the findings could possibly be suggesting that interventions might be more effective when applied at an organisational level. Due to the lack of studies and the poor quality of both the methods used and the reporting in the existing studies, it is not possible to be certain of these effects. The relatively poor evidence base highlights the vital need for more research in this area.



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7 APPENDICES

Appendix 1: Scopus Search Strategy

1. (TITLE-ABS-KEY ("social worker*")) OR (TITLE ({social work})) OR (TITLE-ABS-KEY (("social care" OR "social work") W/3 (team* OR staff OR personnel OR employe* OR profession* OR workplace* OR "work place*" OR worksite* OR "work site*" OR practitioner* OR workforce OR worker* OR occupation*))) OR (TITLE-ABS-KEY ("social service*" W/3 (team* OR staff OR personnel OR employe* OR profession* OR workplace* OR "work place*" OR worksite* OR "work site*" OR practitioner* OR workforce OR worker* OR occupation*))) OR (TITLE-ABS-KEY ("child welfare" W/3 (team* OR staff OR personnel OR employe* OR profession* OR workplace* OR "work place*" OR worksite* OR "work site*" OR practitioner* OR workforce OR worker* OR occupation*))) OR (TITLE-ABS-KEY ("child protection" W/3 (team* OR staff OR personnel OR employe* OR profession* OR workplace* OR "work place*" OR worksite* OR "work site*" OR practitioner* OR workforce OR worker* OR occupation*))) OR (SRCTITLE ("social care" OR "social work" OR "child protection" OR "welfare service*" OR "social service*" OR "social worker*" OR "welfare system" OR "child welfare" OR "care system" OR "foster care" OR "child protective service*" OR "youth service*") AND TITLE (worker* OR team* OR staff OR personnel OR employe* OR profession* OR workplace* OR "work place*" OR worksite* OR "work site*" OR practitioner* OR workforce OR worker* OR occupation*)))
2. (TITLE-ABS-KEY (selfcare OR {self care} OR {self-care} OR {ill-being} OR {ill being} OR illbeing OR happiness OR flourishing OR eudaimonic OR eudaimonia OR eudaemonia OR eudemonia OR hedonic OR hedonia OR {life satisfaction} OR {satisfaction with life} OR mindfulness)) OR (TITLE-ABS-KEY ((wellbeing OR {well being} OR {well-being} OR {quality of life}) W/4 (worker* OR team* OR staff OR personnel OR employe* OR profession* OR workplace* OR {work place} OR {work places} OR worksite* OR "work site*" OR practitioner* OR workforce OR occupation*))) OR (TITLE-ABS-KEY (presenteeism OR "sickness absence*" OR {sick leave} OR absenteeism OR "sickness incapacity" OR "health incapacity")) OR (TITLE-ABS-KEY ("turnover rate*" OR "turnover intention*" OR "voluntary turnover" OR "inten* to leave" OR "inten* to stay" OR "retention rate" OR "leave intention*")) OR (TITLE-ABS-KEY ((retention OR turnover) W/3 (worker* OR team* OR staff OR personnel OR employe* OR profession* OR workplace* OR "work place*" OR worksite* OR "work site*" OR practitioner* OR workforce OR occupation*))) OR (TITLE-ABS-KEY ("positive and negative affect schedule" OR panas OR "Warwick-Edinburgh Mental Wellbeing" OR wemwbs OR "state trait anxiety inventory" OR "work engagement" OR "professional quality of life scale" OR proqol OR "index of clinical stress" OR "perceived stress scale")) OR (TITLE-ABS-KEY (burnout OR "secondary trauma*" OR "Compassion fatigue" OR "emotional exhaustion")) OR (TITLE-ABS-KEY ("workplace stress" OR "work place stress" OR "workload stress" OR "job stress" OR "work stress" OR "work-related stress" OR "job-related stress" OR "occupational stress" OR "role conflict" OR "work life balance" OR "work family conflict" OR "work family balance")) OR (TITLE-ABS-KEY ("job satisfaction" OR "job dissatisfaction" OR "job morale" OR "job motivation" OR "employee satisfaction")) OR (TITLE-ABS ((workplace* OR "work place*" OR worksite* OR "work site*" OR occupational OR organi?ational) W/3 (mental health))) OR (TITLE-ABS ({workers mental health} OR {workers' mental health} OR {worker's mental health} OR {employees mental health} OR {mental health functioning} OR {mental health of social workers} OR {mental



component score})) OR (TITLE-ABS-KEY ((worker* OR team* OR staff OR personnel OR employe* OR profession* OR workplace* OR "work place*" OR worksite* OR "work site*" OR practitioner* OR workforce OR occupation*) W/4 (distress OR depression OR anxiety OR resilience OR coping OR cope OR stress OR "depressive symptoms" OR morale OR motivation OR "work engagement" OR depersonalization OR "personal accomplishment")))

3. ((TITLE-ABS-KEY (effectiveness OR evaluation)) OR (TITLE-ABS (intervention OR program OR programme OR initiative OR strategy OR effectiveness OR evaluation)) OR (TITLE ({effect} OR {effects}))) OR (TITLE-ABS-KEY (trial OR "randomi?ed controlled trial" OR rct OR {cross-over design} OR {cross over design} OR {crossover design} OR {cross-over study} OR {cross over study} OR {crossover study} OR {factorial design} OR {controlled study} OR {controlled design} OR {single-blind} OR {single blind} OR {double-blind} OR {double blind} OR {triple-blind} OR {triple blind})) OR ((TITLE-ABS-KEY ({pre-test} OR pretest OR {pre test} OR {post-test} OR posttest OR {post test} OR "pre-intervention" OR "post-intervention" OR {controlled before} OR {before and after} OR {follow-up assessment})) AND (TITLE-ABS (controlled OR control OR comparison AND participants OR comparison AND group OR {usual care} OR placebo))) OR (TITLE-ABS-KEY ("quasi-experiment" OR quasiexperiment OR "quasi-experimental" OR {quasi experimental} OR {quasi experiment} OR quasiexperimental OR "quasi-randomi*" OR "quasi randomi*" OR {natural experiment} OR {naturalistic experiment} OR {time series} OR {interrupted time})) OR (TITLE-ABS-KEY ((controlled OR control OR intervention OR comparison) W/3 (group OR groups OR study OR trial OR evaluation OR cohort OR cohorts OR longitudinal OR matched OR matching OR experiment OR experimental))) OR (TITLE-ABS-KEY ("difference in difference" OR "instrumental variable*" OR "propensity score matching" OR "regression discontinuity")) OR (TITLE-ABS-KEY ((cost OR costs OR costing OR economic) W/1 (analysis OR effectiveness OR benefit OR evaluation OR utility OR savings OR measure OR measures)))
4. #1 and #2 and #3



Appendix 2: Intervention Description Tables

Study ID	Brief description	Authors' rationale for intervention	Intervention characteristics	Whether delivered as planned
Individual-level interventions				
1. Alford et al., 2005	Written emotional expression (journaling) to reduce stress reactions	<p>Underpinned by narrative and constructivist/ constructionist theoretical approaches which view meaning-finding and story making as central to the therapeutic process.</p> <p>Authors state that by expressing emotions in words, individuals change the way they think about a stressor and construct a version of the experience they can more easily understand and deal with.</p>	<p>Who received the intervention and where? Child protective services officers in Queensland, Australia.</p> <p>What? Participants received an instruction to write in a journal about their recent stresses, emotions and related thoughts and plans.</p> <p>When and how much? Participants were instructed to write in their journal for 15-20 min each day for 3 consecutive days.</p> <p>Who provided? Not reported.</p>	<p>Modifications? None reported.</p> <p>Fidelity? It is not reported whether participants followed the intervention protocol as instructed. Three out of the 34 intervention participants were lost to the study (did not complete post-intervention data collection).</p>
2. Biggart et al., 2016	Emotional intelligence training for social workers to reduce burnout rates and improve practice over time.	Informed by emotional intelligence theory, i.e. making good decisions in emotionally demanding contexts requires good emotion self-knowledge, as well as the ability to understand complex emotional situations and be empathetic to others. Emotional intelligence skills are associated with less burnout, and individuals high in emotional intelligence are less likely to appraise a situation as stressful.	<p>Who received the intervention and where? Child and family social workers recruited from 8 local authorities in England.</p> <p>What? The Anchors of Emotional Intelligence programme (from the RULER programme developed by the Centre for Emotional Intelligence), was adapted into two days training. Content topics included: What is Emotional Intelligence? Function of emotions; Identifying emotions; the Mood Meter; Using emotions in thinking; Understanding emotions; Managing emotions; Introduction of the Meta-Moment and The Blueprint; and Interpreting Emotional Intelligence Individual feedback profiles.</p> <p>When and how much? Two-day training session. It is unclear whether the programme was delivered face-to-face or online.</p> <p>Who provided? Not reported.</p>	<p>Modifications? None reported.</p> <p>Fidelity? 9% intervention group (n=8) did not attend the training.</p>



3. Kinman and Grant, 2017	Multi-modal intervention emotional resilience training for social workers in their first year of practice; to improve resilience and and well-being	<p>Training sessions were selected to enhance the characteristics that underpin emotional resilience. Resilience helps social workers manage complexities of the job more effectively, enhance decision-making capacities, adapt positively to the challenges of constantly changing work environment, as well as protect their health and wellbeing.</p> <p>Furthermore, social workers' experiences of support during their newly qualified year have strong effects on their professional confidence and their well-being.</p>	<p>Who received the intervention and where? Newly qualified children and families' social workers (1st year of qualified practice) who were supported by the Assessed and Supported Year in Employment (ASYE) Programme, from five local authorities in England (a mixture of Unitary Councils, Shire Counties and Inner City Boroughs).</p> <p>What? Training workshops included: Meditation and mindfulness; cognitive behavioural skills; supervision for reflective practice; peer coaching; goal setting and personal organisation; self-knowledge and action planning. To maximise relevance and engagement, each session used examples, case studies and exercises firmly embedded in the everyday realities of social work. The training was supported by a series of self-directed activities designed to consolidate learning.</p> <p>When and how much? Workshops delivered on three separate days over a period of two months.</p> <p>Who provided? Training was delivered by experts in the techniques utilised and by experienced practitioners who had no involvement in supporting the participants formally during their ASYE programme.</p>	<p>Modifications? Not reported.</p> <p>Fidelity? None reported.</p>
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Organisational-level

<p>4. Brown, 1984</p>	<p>Mutual help stress-management staff groups to increase job satisfaction among group members. The intervention included training child welfare workers to lead and establish the staff groups.</p>	<p>A clear programme theory is not reported. It is unclear if the intervention is specifically designed to manage stress, job satisfaction or both. The authors note evidence on the value of social support networks and small staff groups to increase feelings of caring and recognition for work performance, clarify roles, gain information for use of resources, improve decision-making, reduce feelings of isolation and improve problem-solving.</p> <p>A small group approach, with its possibilities for collective group support, problem-solving, and sharing of personal and professional resources could be useful in helping staff to manage work stress more constructively.</p>	<p>Who received the intervention and where? Social workers from a large child protective agency in New Jersey were trained to each lead and recruit a staff group. Four staff groups were established (after one leader dropped-out) from October 1981 to June 1982.</p> <p>What? The exact nature of the intervention is difficult to determine from the report. The intervention seems to comprise both the training of group leaders and the running of mutual-help small groups established by the trainers. It is unclear precisely what happened in each group but the authors state that they were focused on problem-solving and taking constructive action in relation to what was happening at work. Group leader training focused on what it would be like to lead the staff group.</p> <p>The practice framework emphasized the following areas of group leader and member collaborative activity: (i) Orientation/structuring: clarifying purposes, roles and tasks of the groups; (ii) Social/emotional: giving and receiving support and recognition, allow expression of job-related feelings, encouraging group interaction, and increase possibilities for self-awareness as professionals through feedback by others. (iii) Cognitive/conceptual: analyse practice problems, use of a problem-solving approach; (iv) Task/action: using group for constructive agency change.</p> <p>When and how much? The groups were expected to meet for 1-1/2 hours each week to discuss their work situations for a 20-week period. The number of training sessions are not specified but it appears the leaders regularly met and discussed the development of the groups.</p> <p>Who provided? The author trained the group leaders, who in turn conducted the staff groups.</p>	<p>Modifications? None reported.</p> <p>Fidelity? One group leader dropped out and their group had to discontinue (reason unspecified). Participating group leaders reported low member dropout and relatively high attendance, goal achievement, group cohesiveness and increased socialisation (data not provided).</p>
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5. Byrne, 2006

Family strengths-based service planning model for social worker resilience

Hypothesis that a less adversarial, more participatory, and more family inclusive service planning tool, impacts upon social workers' self-efficacy and overall resilience.

The conceptual model assumes a complex interplay of personal demographic and professional factors as well as workplace and organisational contextual factors. It is believed that a more positive and family participatory assessment of family domains can reduce stress levels on the child welfare worker and enhance measures of professional self-efficacy, compassion satisfaction, and resilience.

Who received the intervention and where? Direct service social workers and service supervisors who reported receiving training in SBSP and implemented the model in their work. Workers were from 5 offices in the Northeast Regions of the Massachusetts Department of Social Services.

What? This study evaluates a Family strength-based service planning (SBSP) model that was already in practice. The intervention group included workers who had been trained in and use the SBSP model, which was a recent pilot project within the Massachusetts Department of Social Services (DSS). It is not reported how the specific training and service plan was implemented with the intervention group, however the author provides a description of SBSP approaches. The plan begins by identifying the extent of the family situation but also builds on the families' areas of strength and success, using a planning worksheet. Goals are identified in action terms by and for both the family and social worker, with each service plan being co-constructed.

When and how much? Not reported.

Who provided? Not clearly reported. DSS sponsored the family-strengths-based service planning training. Of the SBSP group, 39% reported receiving supervisory support, 7% with peer unit supervision, and an additional 30.5% reported continuing support through both their supervisors and unit.

Modifications? None reported.

Fidelity? 136 participants reported participating in the SBSP training, of which 126 (84.8%) also implemented use of the service plan in their ongoing work. Over two-thirds reported using the new format often or very often.



<p>6. Carpenter et al., 2010</p> <p>(sibling papers: Carpenter 2011, Carpenter 2012)</p>	<p>New Qualified Social Worker (NQSW) pilot programme, which provides comprehensive professional support (training and regular supervision) to NSQWs.</p>	<p>Programme theory not explicitly presented.</p> <p>The programme was launched as a response to a growing concern that the transition from social work student to post qualified practice was, in many instances, problematic for both agencies and individual practitioners. It is designed to ensure that NQSWs receive consistent, high quality support and that those supervising them are confident in their skills to provide support.</p>	<p>Who received the intervention and where? Newly qualified social workers (from 89 organisations consisting of 87 local authorities and two voluntary and community sector organisations) from England.</p> <p>What? Children's Workforce Development Council (CWDC) work with employers to deliver a comprehensive programme of support for NSQWs. Provides high quality supervision; access to training and a protected workload; a comprehensive induction schedule through their first year of employment; easy-to-use guidance materials; and a professional development plan designed to increase confidence and maximise capability. It is a process through which NQSWs develop their skills, knowledge and understanding over the course of a year in order to meet a set of 11 'outcome statements'. NQSWs are expected to compile a portfolio showing progress towards these outcome statements and are supported by their supervisor, who may also be their line manager, and a local programme coordinator. NSQW participants are entitled to 10% of their time being ring fenced for training activities and collating portfolio evidence; access to additional funds to support their development; two-weekly supervision meetings as a minimum (reducing after three months as appropriate) and involvement in the early professional development pilot to support second and third years post qualification.</p> <p>When and how much? Delivered over the course of a year.</p> <p>Who provided? CDWC provided: funding to employers; training, support and advice to those individuals nominated to co-ordinate the programme in their organisation; guidance material for all NQSWs and their supervisors; and training for those supervising NQSWs. Each participating employer was required to appoint a programme coordinator. These received training from CWDC to oversee the implementation in their organisation. Programme coordinators liaised with the support advisors commissioned by CWDC to assist employers in programme delivery. NQSWs supervisors (who could be their line manager) delivered the supervision sessions, who had the opportunity to attend training in supervision skills.</p>	<p>Modifications? None reported.</p> <p>Fidelity? During the course of the year, 22% of NQSWs initially registered were withdrawn from the programme. Considerable variation in programme retention rates between local authorities. Implementing the programme in organisations was a considerable challenge especially in the first year.</p>
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7. Glisson et al., 2006

Availability, Responsiveness, and Continuity (ARC) organisational intervention, delivered to caseworker teams. The intervention is designed to improve the work environments of children's service systems and reduce caseworker turnover.

Authors describe that previous studies indicate that work characteristics such as culture and climate affect employee turnover, service quality and outcomes; that future efforts to improve children's service systems should focus on creating positive organisational climates; and interventions must focus on small groups or teams within an organisation to be successful, because resistance to change and innovation in an organisation forms at small group levels.

The intervention is informed by general systems theory, diffusion of innovations theory, sociotechnical systems theory, traditional models of organizational development and inter-organisational domain development.

Who received the intervention and where? Caseworkers from 13 case management teams (5 urban and 8 rural) that provide welfare and juvenile justice systems were assigned to receive the ARC intervention condition. South-eastern state (Tennessee) USA.

What? ARC change agents held regular team meetings with caseworkers to implement twelve intervention components in three stages, briefly summarised below.

Collaboration: 1) support the organisational leadership use of the ARC model. 2) cultivate personal relationships (e.g. with administrators, service providers, opinion leaders). 3) Access or develop networks among stakeholders.

Participation: 4) Build teamwork within work units to facilitate participation, information sharing and support. 5) provide information and training to support improvement efforts. 6) Establish a feedback system to provide performance information to work teams and management. 7) Implement participatory decision-making within teams for input into problem-solving efforts that address the way services are delivered. 8) Resolve conflicts at the interpersonal, intra- and inter-organisational levels.

Innovation: 9) develop goal setting procedures to define performance goals. 10) Use continuous quality improvement techniques for changing policies and practices to support the work of frontline service providers. 11) Redesign job characteristics to eliminate service barriers. 12) Ensure self-regulation and stabilisation of change effort via information and training.

When and how much? Intervention for 1 year, in 2-hour weekly case management team meetings in 5-6 week blocks. In addition, four workshops, each 1 or 2 full days in length, were held with the regional directors and leaders of the ARC teams. Quarterly meetings held with the regional directors to review progress and discuss the recommendations provided by the ARC intervention teams for administrative and policy changes. Finally, meetings were held with key opinion leaders and stakeholders in the community to describe the efforts of the ARC intervention.

Who provided? Five ARC change agents (doctoral and masters-level social workers, psychologists, and counsellors), each working with two or three teams. Agents followed the ARC Facilitators guide. Prior to implementing the intervention, the agents were trained in the ARC model by the University of Tennessee Children's Mental Health Services Research Centre 20 hours per week for 6 months. Additional training was provided in between the intervention delivery blocks.

Modifications? None reported.

Fidelity? Not reported.



<p>8. Medina & Beyebach, 2014</p>	<p>Service training in solution focused brief therapy (SFBT) plus additional supervision</p>	<p>SFBT seeks to initiate and maintain conversations with service users about their strengths and resources. It is expected that the adoption of more cooperative and strengths-based (and less deficit-oriented) professional beliefs and practices on the part of child-protection workers will promote more cooperative partnerships with service users and a focus on families' resources and strengths, protecting workers from burnout.</p> <p>Who received the intervention and where? 152 child protection workers from 34 teams in Tenerife, Spain.</p> <p>What? Formal training in SFBT plus a supervision period. SFBT training which consisted of the basic-solution-focused principles and intervention techniques (Miracle Question, scaling questions, exceptions and pre-treatment changes questions, safety questions, compliments and solution-focused homework tasks) by showing videotapes of actual therapy sessions, exercising the techniques in role-plays and having group discussions. After the training, participants received an additional 30 hours of supervision which was also solution-focused: each session started by reviewing positive changes, stories of success and highlighting families and workers resources. Stuck cases were discussed in the group in a variety of solution-focused formats. It is unclear if the supervision was provided in an individual or group format.</p> <p>When and how much? 30 hours of training SFBT (two 15-hour workshops that were taught two months apart) plus 30 hours of supervision (one five-hour session every month) over six months.</p> <p>Who provided? SFBT training was provided by author (Mark Beyebach)</p>	<p>Modifications? None reported.</p> <p>Fidelity? Between baseline and 6 months follow-up, drop out ranged from 15% (n=11) in the intervention group to 26% (n=21) in the control group. The authors state this was not due to drop out, rather local authorities reduced the number of contracts due to the current financial crisis in Spain.</p>
<p>9. Renner et al., 2009</p>	<p>'Missouri's Strategic Plan for Supervision' to strengthen and support child welfare supervisor skills. The plan was designed primarily through a supervisor self-directed strategic process and aimed to improve retention of front-line workers.</p>	<p>An explicit programme theory is not clearly presented. Targeted supervision skills, organisation structure and commitment, and job satisfaction because they influence retention.</p> <p>Who received the intervention and where? Public child welfare supervisors from Missouri Children's Division.</p> <p>What? Co-designed strategic systematic plan to strengthen supervisory skills and provide additional support to supervisors. Developed by a work group using a participatory design process of (1) defining child welfare supervision; (2) articulating what supervisors need to enhance workers' skills and retain workers; (3) enhancing clinical and administrative supervision training; and (4) delineating resources needed to achieve desired goals. Work group meetings were then held to complete the plan. Plan addressed four core areas—supervisor training, supervisor support, clinical supervision, and management and administrative supervision. During the first year, the group began implementation of the plan, promoted an enhanced basic supervisor and clinical supervision training, participated in creating a supervisory case review tool and a time study and planned a biannual supervisory training conference.</p> <p>When and how much? Implementing the plan began in 2006, but it is not reported how long activities lasted for.</p> <p>Who provided? The National Resource Center for Organizational Improvement (NRCOI) and Missouri Children's Division supervisors. The division director promised full support to the work group and was available to hear recommendations following each meeting.</p>	<p>Modifications? None reported.</p> <p>Fidelity? It is not reported how well the strategic plan was implemented, or the proportion of supervisors who actually received supervision training and support.</p>



10. Shackelford et al., 2006	<p>'Mississippi Structured Clinical Casework Supervision Demonstration Project' - Supervisor learning labs aimed at improving clinical casework supervision.</p>	<p>No explicit programme theory presented, particularly with regards to why the intervention might improve turnover rates.</p> <p>The intervention was one that supervisors could adjust to fit their own unit's needs. The labs were designed to promote creation of an organisational culture in the child welfare agency in which support, learning, clinical supervision, teamwork, professional best practice and consultation were the norm.</p>	<p>Who received the intervention, and where? Child welfare supervisors and regional directors who were required to join as an equal participant from four rural regions of Mississippi. Two intervention groups formed, one of 10 counties (10 supervisors with one regional director) and one of 11 counties (9 supervisors with one regional director).</p> <p>What? Learning lab model was designed by the supervisors involved in the project to improve clinical casework supervision in their district. Learning labs were delivered in a group format, enabling peer-to-peer support and promoting participant interdependence, encouraging them to rely on each other for expertise and experience. The labs were needs based and allowed the participating supervisors to determine their own knowledge and skills needs. The supervisors shaped the curriculum which consisted of 12 modules. Case scenarios were offered by the participants in the projects as real situations in which they were struggling with their supervisory role. A solution-based focus was maintained, and supervisors were challenged to apply the solutions in their own units.</p> <p>When and how much? Twelve modules, which included 19 days of learning labs were conducted within each region separately over a 2-year period. Two one and one-half-day joint conferences were also held with both regions at the end of each project year.</p> <p>Who provided? Lab leaders (not defined).</p>	<p>Modifications? None reported.</p> <p>Fidelity? Supervisory changes within the agency presented a problem in the implementation of the programme as some retired, others resigned or changed areas. Even though the group members changed there was continuous and full participation of the supervisors.</p>
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11, Stanley et al., 2012a

(sibling papers: Stanley et al., 2012b; Stanley et al., 2013; Hussein et al., 2013)

Social Work Practices (SWPs) pilot - smaller social work-led organisations independent of local authorities. The aim was to improve the morale and retention of social workers and bring decision-making closer to front-line practice.

Supporters argue SWPs would free social workers from the restrictions imposed by local authority procedures and the demands of crisis work and high caseloads in order to have more hands-on time for building relationships and focus their efforts and energies on looked after children.

Key drivers giving rise to the pilots were: creating less bureaucratic organisations; more responsive to the needs of children and young people; improving retention of staff through the higher morale generated by staff involvement in smaller, 'flatter' (non-hierarchical) organizations; increasing the consistency and continuity experienced by children and young people in out-of-home care; and, subsequent to the change of government in the UK, an aim of reducing the size of the public sector by relocating services to independent or private providers.

Who received the intervention and where? Social workers in local authorities in England.

What? Social worker-led organisations, independent of local authorities. Relocating statutory social work support for children and young people in out-of-home care from the public to the private or independent sector.

Each SWP differed substantially, as shown below.

SWP A: An in-house SWP which has remained within the local authority as a separate and discrete unit. Cohort of 180 young people aged 14-21.; *SWP B:* A professional practice run as a private company by an organisation that already delivered social care training. Cohort of 80 children and young people aged 8-17 with high levels of need.; *SWP C:* A voluntary organisation already providing the local authority's care leaving service. Taking on the attributes of an SWP was a gradual process for an already established service. Cohort of 582 young people aged 16-24 at start-up (increased to 727 by Nov 2011).; *SWP D:* An SWP run by a voluntary organisation with a long history of providing services for local authorities. The SWP was a new venture for this organisation and staff were recruited specifically to this service. Cohort of 120 children and young people aged 0-17.; *SWP F:* A professional practice run as a social enterprise established by a group of social work practitioners who formerly worked for the host local authority and who moved out to form the SWP, taking with them responsibility for many of the children with whom they already worked. Cohort of 148 children and young people aged 8 and above.

When and how much? The pilots were established between 2009 and 2012. Six pilots were originally identified by the Department for Children, Schools and Families (DCSF) and five started up in 2009-10. By March 2012, four of the original six SWP pilots were functioning as independent SWPs.

Who provided? The UK Government (DCSF). SWPs entailed the transfer of statutory powers away from the local authorities to the independent sector. This required legislation to be enacted and the Children and Young Persons Act 2008 enabled local authorities participating in the pilots to transfer responsibilities for children in out-of-home care to social work providers who were not local authorities. The stipulation was that the functions transferred would be undertaken by or supervised by registered social workers. A five-year period for SWPs to be piloted and evaluated was specified.

Modifications? None reported.

Fidelity? Establishing the SWPs took longer than anticipated – difficult to identify providers who were able to meet criteria. One of the original six failed to start up as the local authority was diverted by an Ofsted (regulatory) report that required it to refocus on its core functions and which resulted in major restructuring of children's social care services in that authority. Implementation of the SWP model was uneven with significant variation between sites and substantial dilution of the model in practice. Some of the key features of the original model such as autonomy from the local authority, devolution of budgets to front-line staff, a flattened hierarchy and a round-the clock service for children were implemented only partially.



12. Strand and Bosco-Ruggiero, 2011

(sibling paper: Strand and Bosco-Ruggiero, 2010)

Mentoring programme for supervisors

Framed within the context of transfer of learning, a blend of objectivist and constructivist perspectives.

The intervention was designed to address organisational culture. By enrolling upper and mid-managers as mentors, the agency hoped to send a message to staff regarding the importance of supporting future leaders.

The goals of the programme were to: increase organisational commitment; build leadership capacity; increase retention; enhance the ability to navigate and negotiate within the agency and the community; and increase opportunities for career and personal development. While promotion to a new job was not a goal of the program, readying mentees to take advantage of opportunities for a job change should they emerge was an implicit objective.

Who received the intervention and where? Mentor-mentee pairs made up of staff managers as mentors and direct line staff as mentees. Took place within a mid-size state public child welfare agency in the United States.

What? Programme elements included a day-long orientation programme to establish the goals and parameters of the program. Mentees developed a professional development plan during the first month of the program. Mentors gave mentees feedback on progress and shared information about professional opportunities via monthly meetings or emails. The programme featured regular monthly contact between the mentor and mentee; agency supported activities (i.e. shadow a commissioner for a day), individual planned activities; program-wide quarterly meetings; trainings; and an end-of-the-year programme designed to bring closure and facilitate on-going, contact between the dyads where desired.

When and how much? The mentor-mentee pairs were expected to have a face-to-face meeting within the first month of the relationship and monthly contact the rest of the year. Intervention programme delivered over four years from 2006.

Who provided? Public child welfare agency training division. Training academy staff, field office staff, and outside consultants provided admin and evaluation. The human resources department of the agency reviewed all programme applications, and a selection committee, a sub-committee of the mentoring committee, selected and matched mentees and mentors.

Modifications?

Programme changes in 2007 – All mentees were involved in the shadowing and mock interview process, since these activities had been so successful the previous year. Closer monitoring of pairs by team leaders was initiated for the 2007 cohort by hiring outside consultants as team leaders. The 2007 team leaders established monthly contact with each pair and filed quarterly reports with the director of the mentoring program. Changes allowed the evaluation team to track implementation of the programme more closely.

Fidelity? Process evaluation conducted to assess whether different components of the programme were being implemented (e.g. development plans completed, regular meetings attended)



13. Strand and Bosco-Ruggiero, 2011

(sibling papers: Strand and Badger, 2005; Strand and Badger, 2007)

Clinical Consulting Program; Clinical Consultation for Child Welfare Supervisors Program

Framed within the context of transfer of learning training intervention. Transfer of learning is framed as a blend of objectivist and constructivist perspectives.

A strength-based model guided the program's philosophy. A consultation model, rather than a training model, was adopted because of its potential to focus on and enhance an individual supervisor's own identified needs and established competencies, over time.

Who received the intervention? Child welfare supervisors from field offices of the social work/public agency partnership in New York. Participants drawn from preventive services, foster care, court-ordered supervision units, family preservation, and preventive units across the different agencies.

What? The programme provides consultation to child welfare supervisors to assist them with their roles as educators, mentors and coaches to casework staff. Supervisors create their own professional development plans, which outline desired learning objectives.

Face-to-face meetings with the faculty member took place with groups of seven to nine supervisors. Participants established goals for themselves, which they addressed over the project. Participants shared examples from their own practices relevant to each session focus, including a sample of a process recording from a supervisor-supervisee session. Groups used handouts based on the literature. Groups focussed on how good casework practice could be enhanced through the supervisory relationship.

When and how much? The main paper, Strand and Bosco-Ruggiero 2011, states six sessions were held over six months. But cited sibling papers describing the intervention indicate ten sessions were held.

Who provided? Administration for Children's Services (ACS) held overall responsibility for providing the training. They collaborated with New York City Social Work Education Consortium and 6 schools of social work in New York. A faculty member from a school of social work in the New York metropolitan area delivered sessions. Faculty were experienced practitioners, who taught social work practice or clinical courses.

Where? Mid-size state public child welfare agency in the United States with approximately 4000 staff members, located in a dozen regional offices around the state.

Modifications?

Curriculum revisions at the end of the pilot year (year 1) – refocused on clients with mental health issues (typically schizophrenia, bipolar disorder and major depressive disorder). Substance abuse session refined to focus on both mental health and substance abuse. In Year Two, supervisors were asked to log the number of times they had met with in planned individualised sessions with supervisees before they attended the consultation. They were also provided with a standardised form to record process from individual sessions with supervisees.

Fidelity? Not reported.



14. Strolin-Goltzman, 2010 (Sibling papers: Strolin-Goltzman, 2006; Strolin-Goltzman et al., 2009)	Design and Improvement Teams– whereby groups of employees work together to solve the organisational issues driving turnover in the organisation.	<p>Mechanisms for organisational learning and improvement founded on the principles of action theory and organisational learning theory.</p> <p>Uses specific solution-focused activities to move participating child welfare agencies from ‘Model 1’ toward “Model II” learning organisations. (which encourages questioning and minimal defensiveness). Allows resolution of difficult problems by immediately working toward the identification and treatment of the problem.</p>	<p>Who received the intervention, and where? Public child welfare agency staff selected from all levels (caseworker, supervisor, management) and units (CPS, foster care, prevention, adoption, etc.). 12 counties in rural and suburban regions of a North-eastern state completed a Workforce Retention Survey to identify problems, in 2002. The DT intervention was then implemented in 5 of the 12 counties in 2003. Three regions in upstate New York completed the intervention.</p> <p>What? The teams begin by identifying the problems that employees perceive to be the causes of turnover within their agency through informal focus groups and an agency wide survey called the Workforce Retention Survey. The DT then prioritise the issues by feasibility and importance. Each of the teams follow a specific solution-focused logic model that guides them toward developing solutions to the identified causes of turnover in their organisation. There are 7 structured steps of the logic model: (1) Clearly identifying the problem and/or need; (2) Assessing causes of problem; (3) Evaluating its effects on retention and workforce stability; (4) Pondering the ideal situation; (5) Discussing solutions already in place; (6) Developing new feasible solutions; (7) Identifying specific action steps that team members had to complete prior to the next meeting.</p> <p>DT sessions began with a brief debriefing (approximately 10 minutes) of the events since the last meeting.</p> <p>When and how much? The DT intervention was implemented in 2003. The DTs met for 2 hours, twice a month for the first year. After one year of intervention, external facilitation of the teams was phased out with the expectation that the DTs would be sustained independently for two years.</p> <p>Who provided? Two external facilitators employed by a local university. All of the facilitators are MSW educated group workers who completed a two day initial training on DT facilitation.</p>	<p>Modifications? None reported.</p> <p>Fidelity? To ensure intervention fidelity, facilitators participated in ongoing meetings with project director to debrief DT progress and challenges. Of the 5 counties that initiated the intervention, 3 completed the intervention and have sustained Design Teams institutionalised into their agencies.</p>
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Community-level interventions

15. Barbee and Antle, 2011	<p>Neighbourhood Place (NP) Model.</p> <p>Co-location and integrated service delivery of social services with other agencies in a community-based setting that is convenient to the clients served.</p>	<p>Thought to reduce job stress by: i) maintains a common philosophy of care and streamlines paperwork and processes; ii) enhances access for clients iii) improves knowledge of and collaboration with service providers; iv) helps workers gain familiarity with clients, their neighbourhoods and circumstances; v) cuts travel time down and eases client acceptance of other service provider help.</p> <p>Presume reports of enhanced success with families, collaboration and lower stress contribute to positive feelings about the job and staff retention.</p>	<p>Who received the intervention and where? 17 neighbourhood place (NP) child welfare staff members in 8 NP sites in Louisville, Kentucky. NP child welfare workers operated as state employees governed by state-wide governance structure and standards of practice.</p> <p>What? Each site included a child welfare team consisting of a supervisor and between 5 and 8 child welfare workers. Co-located services included comprehensive mental health agency, health departments, mental health workers affiliated with public schools, workers who manage Medicaid, Food Stamps, and TANF payments as well as workers who can aid clients with housing and workforce development training. All of the partner agencies contributed by donating space for offices, time of leaders and staff in working together to develop coordination and collaboration tools and new protocols for assessing, engaging and referring clients and other in-kind resources.</p> <p>When and how much? The authors state that NP models have operated in the city for 18 years, however it is not clear if this duration applies to the specific study sites.</p> <p>Who provided? Partner agencies.</p>	<p>Modifications? None reported.</p> <p>Fidelity? Not reported.</p>
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Appendix 3: Risk of Bias Assessments

Study ID of RCTs	Overall risk of bias	Cochrane tool - Domain of Bias					
		Adequate sequence generation	Allocation concealment	Blinding/ patient-related outcomes	Incomplete outcome data addressed?	Free of selecting reporting	Free of other bias
2. Biggart et al., 2016	Unclear	Low risk	Low risk	Low risk	Unclear risk	Low Risk	Unclear Risk
7. Glisson et al., 2006	Unclear	Low risk	Low risk	Unclear risk	Low risk	Low risk	Low risk



Study ID of non-randomised quasi-experimental studies	Overall Risk of Bias	ROBINS-I tool - Domain of Bias						
		Confounding	Selection	Misclassification	Contamination	Missing Data	Outcome Assessment	Selective Reporting
1. Alford et al., 2005	Serious	No information	Serious	Low	Moderate	Moderate	Moderate	Moderate
3. Kinman & Grant, 2017	Moderate	Moderate	Low	Low	No information	Moderate	Moderate	Moderate
4. Brown, 1984	Serious	Moderate	Serious	Low	Low	No information	Moderate	Moderate
5. Byrne, 2006	Moderate	Moderate	Moderate	Low	Moderate	Low	Moderate	Moderate
6. Carpenter et al., 2009	Critical	Moderate	No information	Low	Moderate	Critical	Moderate	Moderate
8. Medina & Beyebach, 2014	Moderate	Moderate	Low	Low	No information	No information	Moderate	Moderate
9. Renner et al., 2009	Serious	Serious	Moderate	Low	Moderate	Serious	Moderate	Moderate
10. Shackelford et al., 2006	Moderate	Moderate	Moderate	Low	Moderate	Moderate	Moderate	Moderate
11. Stanley et al., 2012a	Serious	Serious	Moderate	Low	Serious	No information	Serious	Moderate
12. Strand & Bosco-Ruggiero, 2010	Serious	Moderate	No information	Moderate	Moderate	Serious	Serious	Moderate
13. Strand & Bosco-Ruggiero, 2010	Serious	Serious	Serious	Moderate	Low	Serious	Moderate	Moderate
14. Strolin-Goltzman, 2010	Critical	Serious	Serious	Moderate	Serious	Critical	Moderate	Moderate
15. Barbee & Antle, 2011	Serious	Moderate	Serious	Low	Low	Low	Serious	Serious



Appendix 4: Evidence Tables for Wellbeing

Study ID	Study design	Brief study characteristics	Wellbeing measures	Effects on wellbeing
Individual-level interventions				
1. Alford et al., 2005	QE -longitudinal pre-post Risk of bias: Serious	Intervention: Written emotional expression (journal writing) Comparison: Usual practice Population: Child protective services officers in Queensland, Australia. Sample size: Intervention: n=31; (after 3 dropouts); Control: n= 30 (after 1 dropout)	Positive and Negative Affect via PANAS Job satisfaction via Job In General Scale (whereby higher values indicate greater satisfaction). Psychological distress using GHQ Measures taken at (T1) and 2 weeks post intervention (T2)	PANAS Positive Affect, mean (SD) Intervention: T1, = 29.71 (8.17); T2 = 32.35 (8.32); Control: T1 = 31.53 (7.56); T2 = 31.4 (9.66); p value not significant PANAS Negative Affect, mean (SD) Intervention: T1 = 17 (5.51); T2 = 15.29 (5.6); Control: T1 = 17.57 (6.95); T2 =16.77 (7.8); p value not significant Job satisfaction, mean (SD) Intervention: T1 = 42.97 (6.3); T2 = 45.26 (6.31); Control: T1 = 41.6 (8.4); T2 = 39.97 (10.83); p=.002. Cohen's <i>d</i> =.58 Psychological distress via GHQ-12, mean (SD) Intervention: T1 = 12.03 (4.31); T2 = 8.1 (4.3); Control: T1 =12.3 (6.8); T2 =12.1 (5.71); p=.003. Cohen's <i>d</i> =.74



2. Biggart, 2016

RCT

Risk of bias:
Unclear

Intervention: Emotional intelligence training

Comparison: Waitlist group of usual practice but then received intervention in between timepoints 5 and 6.

Population: Child and family social workers from local authorities in England, UK.

Sample size: Intervention: n=91; Control: n=73

Emotional Exhaustion via MBI, Psychological Strain via GHQ12 and Physiological Strain - somatic complaints domain via Brief Symptoms Inventory

6 time-points of data collection (T1-6): every 6-8 weeks across a 12-month period. Intervention group received the training between T2 and T3, control (waitlist group) received training between T5 and T6.

There were no statistically significant effects of training on psychological strain, physiological strain or Emotional Exhaustion.

Emotional Exhaustion, mean (SD)

Intervention: T1 = 2.5 (1.31); T2 = 2.41 (1.33); T3 = 2.38 (1.17); T4 = 2.55 (1.23); T5 = 2.46 (1.32); T6 = 2.62 (1.3).

Control: T1 = 2.34 (1.03); T2 = 2.42 (1); T3 = 2.22 (1.09); T4 = 2.54 (1.24); T5 = 2.31 (1.24); T6 = 2.35 (1.08)

Psychological Strain, mean (SD)

Intervention: T1 = 1.08 (.48); T2 = 1.05 (.46); T3 = .95 (.5); T4 = 1.04 (.45); T5 = 1.04 (.40); T6 = 1.17 (.55).

Control: T1 = 1.01 (.38); T2 = 1.01 (.37); T3 = .96 (.41); T4 = .98 (.38); T5 = .95 (.41); T6 = .96 (.39)

Physiological Strain, mean (SD)

Intervention: T1 = 1.48 (.52); T2 = 1.59 (.66); T3 = 1.45 (.56); T4 = 1.49 (.55); T5 = 1.43 (.48); T6 = 1.46 (.51).

Control: T1 = 1.47 (.53); T2 = 1.45 (.53); T3 = 1.49 (.56); T4 = 1.46 (.57); T5 = 1.5 (.63); T6 = 1.44 (.48)



<p>3. Kinman, 2017</p> <p>QE -Longitudinal pre-post</p> <p>Risk of bias: Moderate</p>	<p>Intervention: Multi-modal emotional resilience training.</p> <p>Comparison: A waitlist protocol was utilised - (control) attended training sessions after the initial data collection was completed.</p> <p>Population: Newly qualified children and family social workers (1st year of qualified practice) in England, UK.</p> <p>Sample size: Intervention: n=25; Control: n=31</p>	<p>Compassion satisfaction and fatigue via Professional Quality of Life Scale (10 items for each measure). Response options range from 1 'never' to 5 = 'very often'</p> <p>Psychological distress, via ten-item Perceived Stress Scale. Response options range from 0 'Never' to 4 'very often'. Cohen effect sizes were also calculated to indicate the practical significance (values of 0.20 are considered small, 0.50 as medium and 0.80 as large).</p> <p>Measures taken 2 weeks before the first training session (T1) and 8 weeks after the final session (T2)</p>	<p>Compassion satisfaction, mean (SD)</p> <p>Intervention: T1 = 3.18 (.52); T2 = 3.68 (.44); Control: T1 = 3.14 (.45); Post: 2.91 (.68). Effect size 0.54</p> <p>For the study group, the intervention appeared to be beneficial in that levels compassion satisfaction increased ($p < 0.01$), Moderate sized effect.</p> <p>Compassion fatigue, mean (SD)</p> <p>Intervention: T1 =2.51; T2 =2.62 (.61); p value not significant; Control: T1 = 2.72 (.65); T2= 3.24 (.73);. Effect size =.42 (small effect)</p> <p>No significant differences were found in levels of compassion fatigue measured before and after the intervention. The deterioration in the control group will have influenced the small effect size. Note – the findings table do not report the control group change as statistically significant, but the findings narrative does.</p> <p>Psychological distress, mean (SD)</p> <p>Intervention: T1 = 3.09 (.51); T2 = 2.65 (.39); Control: T1= 2.93 (.65); T2= 3.28 (.87). Effect size =.42 (moderate effect)</p> <p>Statistically significant reductions in psychological distress was reduced in the intervention group ($p < 0.01$), and increased in the control group ($p < 0.05$).</p>
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Organisational-level interventions

<p>4. Brown, 1984</p> <p>QE, Longitudinal pre-post</p> <p>Risk of bias: Serious</p>	<p>Intervention: Mutual help stress management staff groups led by trained member of staff</p> <p>Comparison: One stress management staff group led by a group leader who did not receive any training (whereas the intervention group leaders did)</p> <p>Population: Social workers in a large child protective agency in New Jersey, US</p> <p>Sample size: Intervention: n=42 (divided into 4 groups); Control: n=41</p>	<p>Job satisfaction via standardized Job Descriptive Index. However, the author intended this measure to represent burnout, which they claimed was operationalised by job dissatisfaction.</p> <p>Burnout via MBI was measured at post-intervention only, following development of the tool.</p> <p>Pre-intervention baseline (T1) 20 weeks post intervention (T2)</p>	<p>Job satisfaction</p> <p>There were no significant differences on any of the 5 subscales measuring job satisfaction. However, the experimental group did demonstrate a slight increase in satisfaction with co-workers and supervisors during this time. The control group showed a slight increase in the work dimension scale.</p> <p>Burnout (MBI)</p> <p>Data not fully reported. The author states that after the groups met for a 20-week period 'no statistically significant differences were found'. While we assume this statement also applies to the results of the Maslach Burnout Inventory, it is not made explicitly clear.</p>
<p>5. Byrne, 2006</p> <p>QE, Cross-sectional post-test only</p> <p>Risk of bias: Moderate</p>	<p>Intervention: Family strengths-based service plan (SBSP) pilot project</p> <p>Comparison: Traditional family service plan (TSP)</p> <p>Population: Child welfare social workers in Massachusetts, US.</p> <p>Sample size: Intervention: n=126; Control: n=341</p>	<p>Compassion satisfaction and fatigue and burnout via ProQoL</p> <p>Post-intervention (Late 2004/ early 2005 but how long after intervention this was is not reported)</p>	<p>Compassion Satisfaction, mean (SD)</p> <p>The intervention group scored significantly higher on four of the scale items associated with compassion satisfaction, all p-values $p \leq 0.05$.</p> <p>Intervention: Question 1 3.51 (.69); Q2 3.6 (.88); Q3 3.4 (.99); Q4 3.9 (.92); Control: Q1 3.46: (.76); Q2 3.41 (.89); Q3 3.11 (.89); Q4 3.7 (1.11)</p> <p>Compassion Fatigue</p> <p>Intervention and control group scores not reported for fatigue and burnout. Regression with SBSP plan beta= -0.357, p=.664</p> <p>Burnout</p> <p>Intervention and control group scores not reported for fatigue and burnout. Regression with SBSP plan: beta= -.616, p=.363</p>



<p>6. Carpenter, 2010</p> <p>Sibling papers: (Carpenter et al., 2012; Carpenter et al., 2011)</p>	<p>QE,Cross-sectional post-test only</p> <p>Risk of bias: Critical</p>	<p>Intervention: NQSW pilot programme of professional training and supervision</p> <p>Comparison: Usual practice</p> <p>Population: Newly qualified social workers in England, UK.</p> <p>Sample size: Intervention (early): n=178; Intervention (late): n=96; Control (early): n=28; Control (late): n=19</p>	<p>Intrinsic and extrinsic job satisfaction measured via online survey using "standardised self-report measures"</p> <p>Stress via GHQ 12 post intervention only, 9 months after beginning of intervention</p>	<p>Intrinsic job satisfaction, mean (SD)</p> <p>Intervention: 27.4 (4.71) ; Control: 27.0 (4.01); not statistically significant.</p> <p>Extrinsic job satisfaction</p> <p>Intervention: 31.5 (5.50); Control: 31.7 (5.68); difference was not statistically significant.</p> <p>Stress (via GHQ)</p> <p>78 (42.9%) of intervention participants and 19 (40.4%) of control participants scored 4 or more (above the clinical threshold for stress). Group differences were not statistically significant.</p>
<p>7. Glisson, 2006</p>	<p>RCT</p> <p>Risk of bias: Unclear</p>	<p>Intervention: Availability, Responsiveness, and Continuity (ARC) organizational intervention</p> <p>Comparison: Usual practice</p> <p>Population: Case management teams that provide child welfare and juvenile justice services in Tennessee, USA. Data relates to caseworkers in children's service systems.</p> <p>Sample size: Five urban and 8 rural teams in each intervention and control group. Sample sizes varied depending on analysis - Individual analysis total n=118, team analysis, total n=218.</p>	<p>Emotional Exhaustion and depersonalisation both measured using scales from the Organizational Climate Survey within 1-year follow-up period after intervention)</p> <p>Two analyses were conducted – individual level (for those present for the entire study duration) and team analysis (staff in sampled teams at the end of the study, i.e. some had joined teams after the intervention began)</p>	<p>Emotional exhaustion and depersonalisation</p> <p><u>Individual analysis:</u></p> <p>The regression analysis for caseworkers who were team members at baseline and follow-up (n=118) showed that intervention caseworkers reported less emotional exhaustion ($\beta=-1.56$, $p=.01$) and depersonalization ($\beta=-3.2$, $p=.01$), than caseworkers in the control teams, after controlling for baseline measures of climate, the individual level covariates, and team random effects.</p> <p><u>Team analysis</u></p> <p>Effects were lower but not statistically significant, when the analysis was performed for all subjects who were members of the sampled teams at the end of the study (emotional exhaustion $\beta=-.60$.52 $p=.260$) and depersonalization ($\beta=-.47$, $p=.637$).</p>



<p>8. Medina 2013</p> <p>QE, longitudinal pre-post</p> <p>Risk of bias: Moderate</p>	<p>Intervention: Service training in Solution Focused Brief Therapy (SFBT) and additional Supervision (not specific to SFBT)</p> <p>Comparison: Usual practice</p> <p>Population: Child protection workers in Tenerife, Spain</p> <p>Sample size: Intervention: n=73; Control: n=79 (at baseline)</p>	<p>Burnout via Maslach's Burnout Inventory (MBI).</p> <p>Measured at baseline (T1) and 6 months later post intervention (T2).</p>	<p>Burnout</p> <p>Significant small effect size for the SBFT training on global burnout was $r = -0.22$ (Cohen's $d = -0.46$). Further examination revealed that the variables with the highest predictive power on burnout at follow-up included: the scores of initial burnout ($\beta = .846$; $t=11.29$; $p=.000$) which had a positive effect, so that higher initial burnout scores were associated with higher burnout scores at follow-up.</p>
<p>9. Renner et al., 2009</p> <p>QE, longitudinal interrupted time series</p> <p>Risk of bias: Serious</p>	<p>Intervention: Missouri's Strategic Plan for Supervision</p> <p>Comparison: n/a</p> <p>Population: Public child welfare supervisors received the intervention. Effect on both supervisors and child welfare workers reported in Missouri, US.</p> <p>Sample size: Workers – T1: n=755; T2: n=802; T3: n=1036; T4: n=838; T5: n=905; T6: n=870; Supervisors – T1: n=123; T2: n=142; T3: n=186; T4: n=159; T5: n=144; T6: n=164</p>	<p>Job satisfaction via survey of Organizational Excellence. Higher scores indicate greater job satisfaction</p> <p>Measured at six annual timepoints (T1-T6) 2003 to 2008.</p>	<p>Job satisfaction, mean (SD)</p> <p>Workers: T1 - 2.51 (1.13); T2 - 2.79; T3 - 2.95; T4 - 2.74; T5 - 2.87; T6 - 2.95 (1.09)</p> <p>Supervisors: T1 - 2.42 (1.09); T2 - 2.82; T3 - 2.99; T4 - 2.82; T5 - 3.02; T6 - 3.05 (1.04)</p> <p>*Not tested for significant differences between timepoints</p>



<p>11. Stanley et al., (2012b)</p> <p>(Sibling papers: Hussein et al., 2013; Stanley et al., 2012a; Stanley et al., 2013)</p>	<p>QE, cross-sectional post-test only</p> <p>Risk of bias: Serious</p>	<p>Intervention: Five Social Work Practice (SWP) pilots</p> <p>Comparisons: Two groups control 1: practice as usual and control 2: host local authority sites not participating in SWP pilots</p> <p>Population: The staffing structure of the SWPs varied considerably because of the different sizes and remits of the pilots and included social workers, managers, administrative staff, mental health workers and personal advisers who work with care leavers (but are not SW qualified)</p> <p>Sample size: Intervention: n= 58; Comparison group: n=365; Host LA group: n=491</p>	<p>Job satisfaction, mean (SD)</p> <p>Intervention: T2: 5.15 (1.27); Control 1: T2: 4.78 (1.19); Control 2: T2: 4.73 (1.24). No statistically significant differences between groups</p> <p>Emotional Exhaustion, mean (SD)</p> <p>Intervention Group: T2: 20.05 (10.2); Control 1: T1: 24.25 (9.7); T2: 22.47 (8.93); Control 2: T1: 23.31 (10.66); T2: 22.58 (9.99). No significant differences between groups.</p> <p>Levels of Emotional Exhaustion for all groups of participants and over time were within the "average" levels of burnout (the middle range for social services is 17-27).</p> <p>Depersonalisation, mean (SD)</p> <p>Intervention: T2: 5.6 (4.45); Control 1: T1: 7.22 (4.42); T2: 7.16 (4.19); Control 2: T1: 6.83 (4.48); T2: 6.66 (4.1)</p> <p>Mixed-effect models confirm that SWP participants had significantly lower depersonalisation scores $p=.006$; SWP group had significantly lower scores at 5.6.</p> <p>Personal Accomplishment, mean (SD)</p> <p>Intervention: T2: 32.8 (6.23); Control 1: T1: 30.76 (5.49); T2: 31.04 (5.68); Control 2: T1: 30.84 (6.23); T2: 31.6 (5.4)</p> <p>Differences not significant between groups. All scores are the "middle" range of social services norm (30-36).</p>
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<p>12. Strand & Boscio-Ruggiero, 2011</p> <p>(Sibling paper: Strand and Boscio-Ruggiero 2009)</p>	<p>QE, Cross sectional post-test only</p> <p>Risk of bias: Serious</p>	<p>Intervention: Mentoring Programme</p> <p>Comparison: Usual practice</p> <p>Population: The programme involved managers as mentors and supervisors and some direct line staff as mentees in a child welfare agency. Data relates to child welfare agency workers.</p> <p>Sample size: Intervention: n=144; Control: n=1113</p>	<p>Job satisfaction via standardized multidimensional instrument originally developed for the human service sector.</p> <p>Post-intervention data collected after the one-year intervention period.</p>	<p>Total Job satisfaction*</p> <p>Intervention: 139.8; Control: 136.3; $p \leq 0.001$</p> <p>*Assume scores are means, but it is not specified.</p>
<p>13. Strand & Boscio-Ruggiero, 2011</p> <p>(Sibling papers: Strand and Badger 2005; 2007)</p>	<p>Cross sectional post-test only</p> <p>CS2</p> <p>Risk of Bias: Serious</p>	<p>Intervention: Clinical Consultation Programme</p> <p>Comparison: Usual practice</p> <p>Population: Supervisors in child welfare agencies from both the public and private sectors in New York City. Data relates to child welfare agency workers.</p> <p>Sample size: Intervention: n=29; Control: n=146</p>	<p>Job satisfaction via standardized multidimensional instrument originally developed for the human service sector.</p> <p>Post-intervention data collected after the one-year intervention period</p>	<p>Total Job satisfaction, mean*</p> <p>Intervention: 144.3; Control: 137.6; $p \leq 0.05$</p> <p>*Assume data reported as mean score but not specifically stated.</p>



14. Strolin-Goltzman, 2010

(Sibling papers: Strolin-Goltzman et al, 2009; Strolin-Goltzman, 2006)

Longitudinal pre-post QE

and

Longitudinal pre-post QE plus propensity score matching [Strolin-Goltzman, 2006]

Risk of Bias: Critical

Intervention: Design Team Intervention

Control: Usual practice

Population: Public child welfare staff from all 12 county agencies across levels (caseworker, supervisor, management) and units (CPS, foster care, prevention, adoption, etc.). Five county agencies received the intervention.

Sample size: Varied depending on the type of analysis, as described below

Team-level (county agencies) analysis

Intervention and Control collectively: Workers from 12 county agencies (275 responded in 2002 and 251 at pre and post intervention measures respectively. The same people may not have completed the survey at pre- and post-test, and therefore, the data represent a composite view of the entire agency as a snapshot prior to the intervention and again post-intervention. Of the 275 that completed the surveys at pre-test only 82 same participants completed the survey again at wave 2 resulting in a response rate of approximately 30% completed the surveys at pre- and post-test (see individual analysis).

Individual analysis

Strolin-Goltzman (2006) and Strolin-Goltzman (2010) reported results for the same individuals who completed both pre and post intervention measurements. This assesses individual level perceptions of change rather than only providing a snapshot of the agency over time. Three of the 5 counties were represented by the responding intervention participants. Sample sizes varied slightly between the papers.

Strolin-Goltzman (2010): Total n=82 (19 in intervention, 63 in control). ; Strolin-Goltzman (2006): Total n =80 (36 in intervention, 46 in control).

Outcomes measured in 2002 pre-intervention (T1) and 28-32 months later (T2 – post intervention). All outcomes were measured via The Workforce Retention Survey. The way in which outcomes were reported varied between sibling papers and analyses.

Individual analysis

One item, "I can do my job and not burnout," % participants.

Job satisfaction and agency commitment' [Strolin-Goltzman, 2010]. Job satisfaction was combined with organizational commitment to include items that assess whether the participant is committed to the agency and satisfied with the job. Author cites evidence to show both measures are highly correlated. The variable consists of the mean score of 4 items such as "I recommend working at this agency" and "All in all I am satisfied with my job".

County agency level analysis

Burnout [Strolin-Goltzman, 2006] appears to be measured differently to the county analysis. Measured by *items* such as "I can do my job and not burn out." Results reported as mean score.

Job satisfaction was not combined with agency commitment as in the individual analysis below. Survey items included "All in all I am satisfied with my job".

Individual analysis

Burnout, % participants [Strolin-Goltzman, 2006]

Intervention: T1: 53%; T2: 83%; $p = .007$; Control: T1: 67%; T2: 72%; $p = .804$. There was a significant positive change for the intervention group but not for the comparison group. Further, 25% more participants in the intervention group compared to comparison group changed from feeling that they could not do their jobs without burning out, to having a perception that their jobs were manageable without burning out.

'Job satisfaction and agency commitment' mean (SD) [Strolin-Goltzman, 2010]

Intervention: T1: 3.1 (.81); T2: 3.6 (.63); Control Group: T1: 3.2 (.67); T2: 3.1 (.63). A significant interaction between wave and treatment condition was found ($F=6.62(1)$; $p = .012$) suggesting there was a significantly greater improvement in job satisfaction from T1 to T2 for the treatment group than for the comparison group.

Team (county agencies) analysis [Strolin-Goltzman et al., 2009]

Job satisfaction, mean (SD)

Intervention: T1: 2.9; T2: 3.4; Control Group: T1: 3.1; T2: 3.3

Burnout, mean (SD)

Intervention: T1: 2.6; T2: 3.2; Control: T1: 2.8; T2: 3.0

Job satisfaction and burnout were not statistically significant.



Appendix 5: Evidence Tables for Retention

Study ID	Study Design	Brief study characteristics	Retention measures	Effects on retention
Organisational interventions				
4. Brown, 1984	Longitudinal pre-post QE [CS2] Risk of bias: Serious	Intervention: Mutual help stress management staff groups led by trained member of staff Comparison: Stress management staff group held by group leader who did not receive any training Population: Social workers from a large child protective agency in New Jersey, US. Sample size: Intervention: n=42 (divided into 4 groups); Control: n=41	Expected tenure on the job via job description index at baseline (T1) and after 20 weeks of intervention being delivered (T2)	Expected tenure on the job (JDI) Authors stated pre and post intervention measures for 'any outcome' were not statistically significant, but did not report numerical data
5. Byrne, 2006	Cross-sectional post-test only Risk of bias: Moderate	Intervention: Family strengths-based service planning model (SBSP) Comparison: Traditional family service plan (TSP) Population: Child welfare social workers in Massachusetts US. Sample size: Intervention: n=126; Control: n=341	Survey item 'intention to remain employed in the current department in the coming year' Data collected Post-intervention (Late 2004/early 2005 but how long after intervention this was is not reported)	Intention to stay Intervention: 95.2% stay; 4.8% leave; Control: 98.5% Stay; 1.2% Leave
6. Carpenter et al., 2010 Sibling papers: (Carpenter et al., 2012; Carpenter et al., 2011)	Cross-sectional post-test only QE Risk of bias: Critical	Intervention: NQSW pilot programme of professional training and supervision Comparison: Usual practice Population: Newly qualified social workers in England, UK. Sample size: Intervention (early): n=178; Intervention (late): n=96; Control (early): n=28; Control (late): n=19 (Total: n=47)	Likelihood to look for a new job within the next twelve months (percentages) T2 (9 months after start of programme)	Likelihood to look for a new job (post intervention): Intervention: 17% very and 30% fairly likely. Control: 21% very and; 23% fairly likely



7. Glisson et al., 2006	RCT	Intervention: Availability, Responsiveness, and Continuity (ARC) organizational intervention		Turnover, % caseworkers Intervention: T1: 50.2%; T2: 39%. Control: T2: 65%; At time 2, this difference was significant, $p < 0.001$ between the experimental and control groups. Hierarchical linear model estimates of the impact of ARC on team turnover rates indicated an even larger main effect of ARC after controlling for team random effects, location, and individual level covariates such as age, education, and gender ($\beta = -1.319$, $p = .008$)
	Risk of bias: Unclear	Comparison: Usual practice Population: Caseworkers from child welfare and juvenile justice services in Tennessee, USA. Sample size: All participants who were present at baseline: $n = 235$ (interventional and control group sizes not reported)	Turnover calculated as percentage of caseworkers who quit their jobs. Measured at within 1 year of baseline before intervention (T1); within 1-year follow-up period post intervention (T2)	
9. Renner et al., 2009	Longitudinal interrupted time series	Intervention: Missouri's Strategic Plan for Supervision Comparison: n/a Population: Public child welfare supervisors received the intervention. Effect on both supervisors and child welfare workers reported in Missouri, US. Sample size: Intervention (Workers): T1: $n = 755$; T2: $n = 802$; T3: $n = 1036$; T4: $n = 838$; T5: $n = 905$; T6: $n = 870$ Intervention (Supervisors): T1: $n = 123$; T2: $n = 142$; T3: $n = 186$; T4: $n = 159$; T5: $n = 144$; T6: $n = 164$	Annual retention rates from 2003 to 2008 were calculated using the total number of employees per job classification at the end of the fiscal year (denominator) and the number of employees who were remained employed throughout the prior year (numerator). The intervention was implemented in 2006.	Annual retention rates, % employees Child Welfare Workers: 2003 - 79.69%; 2004 - 82.15%; 2005 - 80.55%; 2006 - 75.42%; 2007 - 78.11%; 2008 - 73.95% Supervisors: 2003 - 89.05%; 2004 - 86.63%; 2005 - 90.64%; 2006 - 89.18%; 2007 - 89.87%; 2008 - 89.58% For supervisors, retention slightly decreased from 2003 to 2004 and after an increase in 2005, has held relatively constant at 90% through 2008; however, this trend did not hold for workers. Retention rates for workers minimally increased from 2003 to 2004 and then decreased by nearly 7% between 2004 and 2006. The authors describe major changes in Missouri social work context in 2006, (performance based contracting, change in political leadership bringing in a new strategic plan) which saw turnover across urban and midsize counties in the region.
	Risk of bias: Serious			



<p>10. Shackelford, 2006</p>	<p>Longitudinal pre-post</p> <p>Risk of bias: Moderate</p>	<p>Intervention: Supervisor learning labs</p> <p>Comparison: Usual practice</p> <p>Population: Child welfare supervisors received intervention, outcomes were for social workers, in Mississippi, US.</p> <p>Sample size: Not reported</p>	<p>Turnover calculated using cox regression survival analysis to examine turnover rates between intervention and control groups.</p> <p>Analysis covered staff leaving in 2002 (pre-intervention) and those leaving in 2005 (final year of intervention).</p>	<p>Turnover</p> <p>Cumulative survival rates between Jan and Oct 2005 (last 10 months of intervention) were "slightly lower" in intervention groups but influence of intervention not statistically significant in analysis. Numerical data not reported</p>
<p>12. Strand & Boscio-Ruggiero, 2011</p> <p>(Sibling paper: Strand and Boscio-Ruggiero 2009)</p>	<p>Cross sectional post -test only</p> <p>Risk of bias: Serious</p>	<p>Intervention: Mentoring Programme</p> <p>Comparison: Usual practice</p> <p>Population: Managers as mentors and supervisors or some direct line staff as mentees in a child welfare agency. Data relates to child welfare agency workers.</p> <p>Sample size: Intervention: n=144; Control: n=1113</p>	<p>Question relating to plan to leave in 2008 survey (one year after the intervention).</p>	<p>Plan to leave</p> <p>Intervention- 15%; Control – 20%; mean? p < 0.001</p>
<p>13. Strand & Boscio-Ruggiero, 2011</p> <p>(Sibling papers: Strand and Badger 2005; 2007)</p>	<p>Cross sectional post -test only</p> <p>Risk of bias: Serious</p>	<p>Intervention: Clinical Consulting Programme</p> <p>Comparison: Usual practice</p> <p>Population: Data relates to outcomes of child welfare agency workers, in New York, US. Intervention delivered to supervisors.</p> <p>Sample size: Intervention: n=29; Control: n=146</p>	<p>Question relating to intention to plan to leave. 2008 survey (one year after the intervention).</p>	<p>Plan to leave (mean score out of 6)</p> <p>Intervention 1.5 Control 1.7;</p> <p>Mean p < 0.001 across all three questions relating to job questions asked (plan to leave, prefer to leave, have looked for a job)</p>



14. Strolin-Goltzman et al., 2010

(Sibling papers: Strolin-Goltzman et al., 2009; Strolin-Goltzman, 2006)

Longitudinal pre-post QE [CS2]

Risk of Bias: Critical

Intervention: Design and Improvement Teams

Control: Usual practice

Population: Public child welfare agency staff from all levels (caseworker, supervisor, management) and units (CPS, foster care, prevention, adoption, etc.). Sample sizes varied depending on the type of analysis as shown below:

County agency level analysis

Intervention and Control collectively: Workers from 12 county agencies (275 responded in 2002 and 251 at pre and post intervention measures respectively). The same people may not have completed the survey at pre- and post-test, and therefore, the data represent a composite view of the entire agency as a snapshot prior to the intervention and again post-intervention. See table 4 for further info.

Individual analysis

The same individuals who completed both pre and post intervention measurements. n=82 (19 in intervention, 63 in control). See table 4 for further info.

Outcomes measured in 2002 pre-intervention (T1) and 28-32 months later (T2 – post intervention). Reporting of outcomes varied between sibling papers and analyses.

Intention to leave measured using Workforce Retention Survey via question 'Have you looked for another job in the past year?'. County agency analysis reports data as %, individual analysis reported as mean.

Turnover data reported as percentage of individuals who end their employment with the agency.

County agency level analysis

Intention to leave %.

Intervention: T1 = 78.2%, T2 = 52.8%; Control: T1 = 71%, T2 = 69.4%. A decrease in mean intent to leave significantly differed within and between groups ($F = 6.30$, $df = 1$; $p = .031$).

Actual Turnover, % i

Intervention: T1 = 32.8% T2 = 24.1%; Control: T1 = 28.8% T2 = 32.1%. While the turnover rates of comparison agencies increased by 3.3%, the rates of the DT agencies decreased—signifying an improvement. However, this statistic did not reach significance ($F = 4.38$, $df = 1$; $p = .063$).

Individual level analysis

Intentions to leave, mean (SD)

Intervention: T1 = 0.58 (.51); T2 = 0.32 (.48); Control: T1 = 0.62 (.48); T2 = 0.68 (.47)

At wave two, the comparison group's mean score had increased to 0.68 while the DT's decreased by 26% to 0.32 ($F = 4.23$ (1); $p = .04$).

Community-level interventions

15. Barbee & Antle, 2011

Cross-sectional post-test only

Risk of bias: Serious

Intervention: Neighbourhood Place (NP) model

Comparison: Members of child welfare teams not involved in an NP programme at a different location to the NP group.

Population: Child welfare staff in Kentucky, US.

Sample size: Intervention: n=17; Control: n=17

City and state-wide turnover rate calculated from admin data.

Unclear what timeframe data is calculated for.

Turnover rate

Intervention: 13% turnover rate; control: The normal turnover rate in urban settings in Kentucky is 44%.


Thus 6 NP employees leave each year rather than 23 in urban Kentucky settings.



What Works *for*
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