

Typesetter Query for BEC2000011 AU Correction

Please check and confirm the authors affiliation details

REVIEW ARTICLE

A Narrative Review of the Needs of Children in Foster and Kinship Care: Informing a Research Agenda

Jacqueline Kemmis-Riggs and John McAloon* 

Discipline of Clinical Psychology, Graduate School of Health, University of Technology Sydney, Ultimo, New South Wales, Australia

*Corresponding author: John McAloon, Discipline of Clinical Psychology, Graduate School of Health, University of Technology Sydney, 100 Broadway, Ultimo, NSW 2007, Australia. Email: john.mcaloon@uts.edu.au

(Received 10 October 2019; accepted 23 August 2020)

Abstract

As a result of maltreatment, children in care can present with a range of complex needs and challenges. In addition to direct clinical care commonly provided by paediatricians, psychiatrists, and clinical psychologists, the provision of knowledge and skills to foster and kinship carers have become modes of support common in responding to these needs and challenges. A narrative review of key systematic reviews and empirical research was conducted to assess the effectiveness of existing foster carer interventions. Results indicated a range of methodological characteristics that limit our ability to develop a sound, research-driven, evidence base. As a result, we remain limited in our knowledge about which treatments are effective, for which symptoms they are effective, and for which population subgroups they are most likely to be effective. This review provides a summary of identified needs and challenges in the delivery of foster carer interventions. It provides an account of current treatment components and offers a platform for the development and progression of a programme of research in an effort to advance knowledge in the area.

Keywords: foster care; kinship care; looked after children; review

The Australian Institute of Health and Welfare (AIHW, 2018) estimated that 159,000, or 1 in 35 Australian children, received Child Protection Services (CPS) in 2017–2018. Of these, some 55,000 were in out of home care (OOHC) during this period, representing almost 1% of children aged 0–17 in Australia. The majority of children in OOHC were placed in either kinship/relative care (51%) or foster care (39%). Similar to other disparities between Indigenous and non-Indigenous outcomes in Australia, Indigenous children are substantially over-represented across this population, with Indigenous children 10 times as likely to be in OOHC than non-Indigenous children. Children in foster or kinship care have typically experienced child maltreatment, involving physical (15%), emotional (59%), sexual abuse (9%), or neglect (17%) (AIHW, 2018). International evidence confirms that these experiences that have included traumatic loss, exposure to prenatal drug and alcohol abuse, and impaired early bonding or disrupted attachment with their primary caregiver or caregiving system (Cicchetti & Valentino, 2006; Perry, 2009; Tarren-Sweeney, 2008). Complex trauma or developmental trauma are terms used to describe children's exposure to these various forms of early and multi-faceted trauma. This exposure has a vast impact on several aspects of child development, including brain and neurobiological impairment, and subsequent cognitive, behavioural, emotional, and social deficits (Van der Kolk, 2005). This review will first provide a brief overview of some of the vulnerabilities of children in care, which largely reflect the consequences of complex trauma. Second, these vulnerabilities indicate a clear need for effective evidence-based interventions to ameliorate the effects of complex trauma. Foster parenting programmes are one way of intervening to offer reparative care,

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51

and the extant evidence for foster and kinship parenting interventions will be examined. Finally, the review will identify gaps in current knowledge and provide suggestions for the development and evaluation of future foster parenting interventions.

Vulnerabilities and Needs of Foster Children

Early stressful experiences, such as maltreatment and placement in foster care, have been known to impair brain and neurobiological development. This impairment can be demonstrated in the development and functioning of two neurobiological systems in particular: in prefrontal cortical functioning and in neuroendocrine functioning. First, maltreatment and subsequent disruptions in foster care placements have been shown to negatively impact the development of areas of the prefrontal cortex associated with cognitive control and executive functioning. These include the use of working memory and the modulating potential of inhibitory control. Both have been found to be impaired in pre-school and middle school-aged foster children, when assessed using neuropsychological tests (Pears, Kim, & Fisher, 2008), neuroimaging (Bruce et al., 2013), and electrophysiological measures (Bruce, McDermott, Fisher, & Fox, 2009).

Second, differences in neuroendocrine stress-response functioning, particularly the hypothalamic–pituitary–adrenal (HPA) axis, have been found between foster and non-foster children (Dozier, Manni, et al., 2006; Fisher & Stoolmiller, 2008). The HPA axis plays an integral role in modulating the body’s response to stress and raised levels of cortisol typically indicate increased activation of the HPA axis. Among typically developing children, diurnal cortisol levels peak shortly after waking in the morning, rapidly reduce throughout the day and are very low at bedtime. However, foster children tend to show a blunted diurnal cortisol response, whereby their cortisol levels are low in the morning and stay low throughout the day (Bruce, Fisher, Pears, & Levine, 2009). Limitations in waking cortisol levels may impair children’s arousal in the morning, potentially detrimentally affecting motivation, cognition, and social behavioural functioning (Gunnar & Vazquez, 2001) while increasing vulnerability to autoimmune diseases and other stress-related illness (Heim, Ehlert, & Hellhammer, 2000). Mechanisms that underlie dysregulated cortisol patterns are not well-understood; however, some evidence suggest that the system is down-regulated to protect itself in response to a lack of sensitive and responsive care resulting from limitations in cognitive and behaviourally determined elements of attachment and early bonding (Gunnar & Vazquez, 2001; van der Vegt, van der Ende, Kirschbaum, Verhulst, & Tiemeier, 2009).

Findings from the USA, UK, and Australia concur in indicating that youth in foster and kinship care have substantially higher rates of cognitive, behavioural, and emotional problems than children in the general population (Burns et al., 2004; Ford, Vostanis, Meltzer, & Goodman, 2007; Lawrence, Carlson, & Egeland, 2006; McMillen et al., 2005; Nathanson & Tzioumi, 2007; Osborn, Delfabbro, & Barber, 2008; Sawyer, Carbone, Searle, & Robinson, 2007). These include both internalising (particularly, anxiety disorders, post-traumatic stress disorder, and depression) and externalising disorders (particularly, attention-deficit hyperactive disorder, oppositional defiant disorder, and conduct disorder). In the UK, Ford et al. (2007) compared children in care ($n = 1,453$) with deprived and non-deprived children living in private households ($n = 10,428$). Their survey data indicated that children in care were more than three times as likely to have emotional, behavioural, and neurodevelopmental concerns than children from disadvantaged households living in private homes. They were more than five times as likely to have those concerns than children considered to be non-deprived living in private homes. Consistent with these UK findings, a large study in the USA with a nationally representative sample involving more than 6,200 children involved with CPS found that 47.9% of those children aged 2–14 years had significant mental health problems (Burns et al., 2004). McMillen et al. (2005) conducted interviews with 373 17-year-olds in US foster care between 2001 and 2003. They found that 61% met criteria for at least one psychiatric disorder, according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 2000), over the course of their lifetime. Thirty-seven percent of their sample met criteria for at least one psychiatric

disorder over the past year. Prevalence rates were comparable between young people in kinship and non-kin foster families. In a similar fashion, Osborn et al. (2008) reported on a sample of 364 Australian children (mean age 12.9 years) living in OOHC. Most had a family background marked by domestic violence, physical abuse, and substance abuse. Three-quarters of these children met criteria for conduct disorder, 50% met criteria for anxiety or depression and 33% had peer-related difficulties. These rates are much higher than recent Australian figures of children in the general population, which estimate 12-month prevalence rates of mental disorders in children aged 4–17 years to be 13.9% (Lawrence et al., 2015).

A related area of vulnerability in foster children is in social/relational domains. Evidence suggests that early experience of separation from and maltreatment by primary caregivers has strong potential to affect a child's ability to depend on their foster or kinship carers (Stovall & Dozier, 1998). Indeed, findings show that many foster children display attachment and relational difficulties in subsequent foster settings (Dozier, Stovall, Albus, & Bates, 2001). This has significant implications for the ways in which foster children learn to relate and subsequently behave in other interpersonally based relationships that they are involved in. Indiscriminant friendliness or disinhibited social behaviour, characterised by a willingness to approach and relate to unfamiliar adults in a similar way that one might interact with a primary caregiver, has also been found among post-institutionalised and foster children (Bruce, Tarullo, & Gunnar, 2009). Foster children have been shown to display significantly higher rates of indiscriminant friendliness than non-foster children (Pears, Bruce, Fisher, & Kim, 2010). This pattern of behaviour can pose safety risks and has been associated with later behavioural difficulties, for instance, in peer-relational contexts (Roy, Rutter, & Pickles, 2004). Considering the implications of inhibitory control deficits identified in previous research, it is interesting to note that inhibitory control appears to mediate the positive relationship between the number of foster caregivers and indiscriminant friendliness (Pears et al., 2010). Importantly, sensitive and responsive foster and kinship parenting may influence this characteristic. Findings indicate that infants adopted from institutions or foster care that experienced more sensitive and responsive behaviour from their adoptive mothers displayed less indiscriminant friendliness (van den Dries, Juffer, van Ijzendoorn, Bakermans-Kranenburg, & Alink, 2012).

Foster Parenting Interventions

Foster and kinship parents are in a unique position to be able to offer what is effectively therapeutic care to children who have been removed from their birth families due to complex trauma. By garnering stable, safe, and considered environments in which children experience relationally appropriate care, witness the regulation of arousal and the modulation of behaviour, and experience affirmative responses to themselves, foster parents have the potential to help reduce the effects of complex trauma through the translational use of common cognitive and behaviourally based strategies. However, given the challenges of fostering children with complex needs, placements often face the real possibility of disruption or break down, both common occurrences within the child welfare system (Fisher, Mannering, Van Scoyoc, & Graham, 2013). Foster children who experience placement instability are at a much higher risk for problems in developmental, social, emotional, behavioural, and cognitive domains than children who do not experience that instability (Harden, 2004; Rubin, O'Reilly, Luan, & Localio, 2007; Ryan & Testa, 2005). While a higher number of placement changes is associated with poorer child outcomes and may inhibit development in these domains, causal links between the two are not yet well-established. In fact, Fisher (2015) suggests that higher behavioural problems and deficits in cognitive domains may contribute to as well as follow disrupted placements. Foster parent training has long been argued a necessity to enhance foster parents' ability to meet these demands and mitigate risk of placement breakdown (Fisher et al., 2013; Turner, Macdonald, & Dennis, 2007). Preliminary evidence suggests that comprehensive foster family-based interventions built on the appropriate and translational use of cognitive and behavioural components can function to

attenuate the risk for placement disturbance (Fisher, Stoolmiller, Mannering, Takahashi, & Chamberlain, 2011).

Innumerable parenting interventions have been developed over the past 40 years, and many have been evaluated in foster populations. Several systematic reviews have also been published examining the evidence of their efficacy (e.g. Craven & Lee, 2006; Dorsey et al., 2008; Goldman Fraser et al., 2013; Kerr & Cossar, 2014; Kinsey & Schlosser, 2013; Leve et al., 2012; Rork & McNeil, 2011; Turner et al., 2007). Turner et al. (2007) systematically reviewed behavioural or cognitive-behavioural interventions for foster parents that aimed to improve child problem behaviour and relationship functioning, carers' psychological well-being, family functioning, and placement stability. They reviewed six randomised or quasi-randomised trials published between 1966 and 2006 that compared group or individual therapy with wait-list controls or treatment. Somewhat alarmingly, findings indicated little support for these interventions on all outcome measures.

Dorsey et al. (2008) also reviewed foster parent interventions that had been published between 1977 and 2006, all of which were based in the USA. Their review included 30 papers incorporating a broader range of research designs than the Turner et al. (2007) review and did not specify a theoretical foundation for inclusion. Findings indicated limited empirical support for the most widely used training that most foster parents receive in the USA. Dorsey et al. concluded that interventions incorporating a focus on the development of parental skills, an opportunity to practice skills and gain feedback on skill acquisition, and target a specific age and developmental need appear to have the most promising results. In addition, all of the programmes that showed more positive results for both child and parent behaviour and skills were those that were offered to parents after the child was placed in the foster home, rather than pre-service training. Dorsey et al. suggest a two-pronged approach in response. First, foster parents need information about basic safety, risk, and legal requirements and foster parent responsibilities. Second, a skills-based approach that would utilise relational and behaviourally based knowledge to assist foster parents manage the challenging needs of foster children is required.

More recently, Kinsey and Schlosser (2013) systematically reviewed 20 foster and kinship care interventions, published between 1995 and 2009. In addition to parenting interventions, they reviewed wrap-around services and interventions solely designed for children in foster care. Methodologically strong studies evaluating parenting interventions that evidenced more positive child and parent outcomes included those that focused on building positive relationships with their child (e.g. Attachment and Biobehavioral Catch-up (ABC); Dozier, Peloso, Lewis, Laurenceau, & Levine, 2008; Dozier et al., 2009; Dozier, Peloso, et al., 2006; Sprang, 2009) and increasing parents' use of positive behavioural management methods (e.g. Keeping Foster Parents Trained and Supported (KEEP); Chamberlain, Price, Leve, et al., 2008; Chamberlain, Price, Reid, & Landsverk, 2008; Price et al., 2008). However, much like findings reported by previous reviews (e.g. Dorsey et al., 2008; Turner et al., 2007), very few other foster carer training programmes in this review were well supported. Consistent with Dorsey et al. (2008), Kinsey and Schlosser suggest that research is needed to develop more effective ways to prepare foster parents and enhance specific skills, for example, to manage challenging behaviour and respond sensitively to child need. Thus, evidence has supported the inclusion of behavioural and relational components and, by implication, enhancing carers capacity to demonstrate and model regulation.

Given the large proportion of children in OOHC who are looked after by kinship carers, there is a substantial shortage of research evaluating services specifically for this population. Lin's (2014) systematic review of kinship care services identified several financial assistance and social support programmes, but only two peer-reviewed papers examined kinship carer training programmes. These were not focused on parenting skills per se, but targeted education about technology (Strozier, McGrew, Krisman, & Smith, 2005) and nutrition and physical activity (Kicklighter et al., 2007). Results suggested that these programmes were helpful in enhancing kinship carers' ability to support their children. Nevertheless, the methodology in these studies was poor, which makes it difficult to determine firm conclusions. Many foster parent interventions include kinship carers; however,

there is little research to identify if those interventions are equally helpful for kinship carers, highlighting a further deficit in existing knowledge and an avenue for future study. 205
206

While not all of the foster parenting interventions are specifically theory-driven, many can be broadly categorised into behaviourally based and attachment-based interventions. Behaviourally based interventions have their theoretical roots in social learning theory (Bandura, 1977; Patterson, 1982). Patterson's (1982) 'coercion hypothesis' accounts for the development and maintenance of disrupted parent-child relationships. Patterson argues that both parent and child attempt to control the other using aversive strategies, developing a coercive cycle maintained by negative reinforcement. A parental command may be met with non-compliance by the child (e.g. tantrums, yelling, and crying) and, if successful in averting compliance, the child learns to repeat or increase coercive behaviours to end the parent's command, thus negatively reinforcing the child's use of non-compliance. Alternatively, the parent may increase coercive behaviours (e.g. yelling at child and corporal punishment) to gain compliance and, if successful, the parent's coercive behaviour is reinforced. In translation to care settings, this rationale may function to increase foster carers' use of positive reinforcement and non-coercive responding. Consistent and non-coercive strategies are vital to build positive and supportive family relationships (Webster-Stratton & Reid, 2012). This is extremely important in foster care, when children have been exposed to the unpredictability of complex trauma. However, children in foster and kinship care differ markedly from children for whom appropriate and secure attachment relationships have, if only relatively briefly, been developed. 207
208
209
210
211
212
213
214
215
216
217
218
219
220
221
222
223

An alternative, but not incompatible theoretical framework for understanding parent-child relationships and for guiding parenting interventions, is attachment theory (Bowlby, 1973). It posits that responsive and sensitive parenting in infancy and early childhood helps children develop mental representations that predict their parent will meet their needs and that they are thus worthy of having those needs met (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1973). Bowlby (1973) argued that infants whose parents demonstrate warmth and sensitivity in engaging and responding to them are more likely to develop secure attachment relationships and therefore seek their assistance to regulate their emotional distress. In turn, this secure base contributes to an infant's ability to develop his or her own effective emotion regulation strategies. Indeed, empirical research supports the association between sensitive and responsive parenting and the promotion of children's emotion regulation and stress-response systems (Sroufe, 2005). Conversely, maltreatment, by definition the antithesis of secure attachment, can have a detrimental effect on attachment security and result in highly disorganised relational styles (Cyr, Euser, Bakermans-Kranenburg, & Van Ijzendoorn, 2010). Early disruptions to attachment have strong potential to disrupt foster and adopted children's opportunities to develop secure subsequent attachment (van den Dries, Juffer, van Ijzendoorn, & Bakermans-Kranenburg, 2009). Evidence further suggests that the potential for children in foster or kinship care to develop secure attachment relationships may be compromised by the nature of the care arrangement. While insecure attachment and its behavioural and cognitive sequelae may be functional in the context of development, they are likely maintained or further exacerbated in the context of temporary or unstable care arrangements (Cyr et al., 2010). There is growing evidence to suggest that attachment-based interventions can positively impact foster families; however, there are only a limited number of high-quality studies that account for both risk and protective factors in this process (Kerr & Cossar, 2014). 224
225
226
227
228
229
230
231
232
233
234
235
236
237
238
239
240
241
242
243
244
245

While evidence-based interventions exist that promote foster child well-being, reviewers have identified multiple limitations of existing research (Dorsey et al., 2008; Festinger & Baker, 2013; Kerr & Cossar, 2014; Kinsey & Schlosser, 2013; Leve et al., 2012; Rork & McNeil, 2011; Turner et al., 2007). Many carer interventions have been studied in pre-post designs without comparison groups. Many do not control for pre-existing foster parent variables (e.g. parental stress, history of trauma, psychopathology, pre-existing skills, and/or social support) or child variables that are known to impact on outcomes (e.g. prior placement history, age of entry into foster care, and/or degree of behavioural or emotional problems). Likewise, much outcome data is based on parent report and does not include multiple forms of assessment, such as psychometrically sound observational methods or reports from other informants. In addition, there is little research that evaluates the longer-term outcomes of 246
247
248
249
250
251
252
253
254
255

interventions. A further limitation of the existing literature is that there is little component-based analysis of carer training programmes. This would be helpful in gaining a better understanding of which elements work better and which are less effective, and thus could contribute to refining programmes and improving outcomes. Moreover, there is evidence that both attachment and behaviourally based interventions can be effective, but as yet, few studies have compared their relative effects, highlighting a further area of a possible investigation.

Given the challenges and vulnerabilities outlined above and review of current empirically based interventions, there appears a need for foster and kinship parenting interventions that can integrate multiple elements to produce improved intervention outcomes, as very few currently exist and those that do lack empirical evaluation. For example, one foster intervention delivered in NSW, the Reparative Parenting Program (RPP), developed by the Alternate Care Clinic, an initiative between Western Sydney Local Health District and Family and Community Services (FACS), incorporates several elements from psychiatric, clinical psychological and case work approaches to address some of the issues outlined above. While it is based on attachment theory, there is no published research that has evaluated its efficacy with foster and kinship carers and no empirical research to support its rationale for including each component in the programme. Evidence suggests that foster and kinship parent training should support the development of practical skills to manage very challenging emotional and behavioural problems and build attachment relationships with foster children. Moreover, consistent with empirical evidence stemming from both attachment and social learning theories, in managing challenging situations effectively foster parents also need to manage their own emotions and behaviours, because children are constantly learning how to behave and regulate themselves through and with the assistance of their parents. Thus, parental processes of behavioural self-control, emotion regulation, and a capacity to self-reflect are integral parts of effective parenting. Additionally, education about the impact of trauma on the brain and neurobiological development and practical ways to create safe foster family environments may help foster/kinship carers understand and respond sensitively to their foster child's developing needs. Based on these premises, the development and evaluation of a programme that integrates these elements would be a valuable addition to clinical practice.

Directions for Future Research

To inform the development of programme content, several areas warrant further research. First, there is relatively little component analysis of foster interventions. In addition to existing knowledge published in previous reviews (e.g. Dorsey et al., 2008; Everson-Hock et al., 2012; Kerr & Cossar, 2014; Kinsey & Schlosser, 2013; Lin, 2014; Turner et al., 2007), a systematic understanding of the efficacy of the therapeutic programme components in foster parent interventions would be beneficial. Of interest, Kaminski, Valle, Filene, and Boyle (2008) explored this idea in their meta-analysis of parent training programmes for parents from a much wider range of populations. They evaluated the effectiveness of programme components of training programmes for parents of children aged 0–7 years. The parent training programmes reviewed aimed to reduce early behaviour problems (predominantly externalising behaviour) and promote positive parenting and child development for children. Kaminski et al. (2008) synthesised 77 studies published between 1990 and 2002, examining which characteristics of programme content and delivery method predicted larger effect sizes on parent and child behaviour measures. Programmes that included training to increase positive parent–child interactions and emotional communication skills had larger effect sizes on parenting outcomes than programmes without these components. Programmes that required parents to practice their skills while programme facilitators observed were also associated with stronger effects on parenting outcomes. Programmes that taught parents behavioural strategies (i.e. use of time out and consistent responses) and also focused on building positive relationships in non-disciplinary contexts were predictive of larger effect sizes on child externalising behaviour. However, these findings warrant caution as they were not specific to foster/kinship care or children exposed to maltreatment and only one included foster or kinship carers (i.e. Lee & Holland, 1991). Given the established knowledge of the impact of maltreatment and

differences between children exposed to maltreatment and normative samples, effective components may reasonably differ in foster interventions. Thus, a component analysis of foster interventions would enhance understanding of the relation between programme content and outcome. This would help to advance the area in terms of characteristics of content and delivery in the development and delivery of foster and kinship carer training programmes.

Second, to gain insight into the current needs of foster and kinship carers, researchers would benefit from engaging foster parents directly. This could include investigation of their current knowledge of complex trauma, both met and unmet needs, current relationally based challenges with children in their care and current benefits, barriers and limitations in service delivery and access. It could also involve interviewing carers using semi-structured measures to guide data collection and subsequent qualitative data analysis. Qualitative methodology would allow a deeper investigation of carers' needs specific to the Australian context than has been provided by previous research to date. It would also facilitate the development of programmes by Indigenous Australians for Indigenous Australians, accounting for specific characteristics of attachment, such as those to country and kin, areas that have been poorly supported and researched in Australia. Potential benefit may be derived in terms of developing a greater understanding of the needs of the population with respect to the provision of effective support and also, as a result, limiting attrition out of programmes.

Content delivery is also an important area to consider in the development of carer interventions. Drawing on research that explores creative and effective methods of content delivery to adult learners would likely maximise benefits for foster parents and their families. Alternative methods of training delivery, such as online modules and webinars, may enable provision of carer interventions for those who are otherwise unable to participate, for example, foster/kinship parents in rural and remote areas. In order to do so, research examining best practice for online delivery is necessary. Studies comparing the effectiveness of interventions using online methods with face-to-face delivery would further extend current knowledge. Additionally, research indicates benefits of providing parents opportunities to practice skills and gain feedback on skill acquisition (Dorsey et al., 2008; Kaminski et al., 2008); however, incorporating this into group training settings is sometimes challenging. To provide more of an individualised approach to group training, it may be helpful to include the use of video and/or video chat technology in family homes to allow therapist observation of parent-child behaviour and provide an avenue for feedback to occur.

As suggested, a foster parenting intervention based on sound empirical and theoretical research that integrates information about the impact of trauma on the brain and neurobiological development, with components that enhance attachment and relational skills, strategies to manage challenging behaviour and emotions and parental processes would be a valuable addition to clinical practice. Moreover, it is vital to empirically evaluate the efficacy of such a programme, using sound research methodology that aims to overcome the limitations discussed previously. The use of randomisation, control groups, multiple assessment methods, consideration of pre-existing variables, and longer-term follow-up would help to overcome some of the identified limitations. Furthermore, a comparison of the effects of individual components on parent and child outcomes in a randomised controlled trial would be a valuable addition to current knowledge, given the lack of research investigating the effectiveness of components in foster parenting interventions. Understanding the relative effectiveness of these elements is vital to refine interventions that strive to improve foster and kinship family outcomes. Considering the high prevalence of children in kinship care in Australia, an investment in knowledge held by existing kinship carers would also add substantial value in facilitating the development of efficacious support programmes.

Conclusion

There is a wealth of research highlighting the vulnerabilities and needs of foster children including impairment in the brain and neurobiological systems, and substantial behavioural, emotional, and social problems, which often result from the effects of complex trauma. Promising findings from

existing research show that foster parenting interventions can be effective in ameliorating the risks associated with this trauma; however, much more research, support and funding is needed to substantially improve outcomes for this population. Importantly, foster or kinship carer programmes developed by Indigenous Australians are desperately needed to respond to the needs of Indigenous Australian children currently in foster or kinship care. Considering that, overall, almost one percent of Australian children are currently in foster or kinship care, research to develop, evaluate and improve foster parent interventions relevant to the Australian context is sorely needed.

References

- AIHW (2018). *Child protection Australia 2016–17*. Canberra: Australian Institute of Health and Welfare.
- Ainsworth MD, Blehar MC, Waters E and Wall S (1978). *Patterns of attachment: A psychological study of the strange situation*. Hillsdale, NJ: Erlbaum.
- American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders*, 4th edn. Retrieved from: <http://dsm.psychiatryonline.org.ezproxy.une.edu.au/content.aspx?bookid=22§ionid=1890929#3088> (accessed 17 July 2013).
- Bandura A (1977). *Social learning theory*. Oxford, UK: Prentice-Hall.
- Bowlby J (1973). *Attachment and Loss: Volume II: Separation, Anxiety and Anger*. London: The Hogarth press and the Institute of Psycho-Analysis, pp. 1–429.
- Bruce J, Tarullo AR and Gunnar MR (2009). Disinhibited social behavior among internationally adopted children. *Development and Psychopathology*, **21**, 157–171.
- Bruce J, Fisher PA, Pears KC and Levine S (2009). Morning cortisol levels in preschool-aged foster children: Differential effects of maltreatment type. *Developmental Psychobiology*, **51**, 14–23.
- Bruce J, McDermott JM, Fisher PA and Fox NA (2009). Using behavioral and electrophysiological measures to assess the effects of a preventive intervention: A preliminary study with preschool-aged foster children. *Prevention Science*, **10**, 129–140.
- Bruce J, Fisher PA, Graham AM, Moore III WE, Peake SJ and Mannering AM (2013). Patterns of brain activation in foster children and nonmaltreated children during an inhibitory control task. *Development and Psychopathology*, **25**, 931–941.
- Burns BJ, Phillips SD, Wagner HR, Barth RP, Kolko DJ, Campbell Y and Landsverk J (2004). Mental health need and access to mental health services by youths involved with child welfare: A national survey. *Journal of the American Academy of Child & Adolescent Psychiatry*, **43**, 960–970.
- Chamberlain P, Price J, Reid J and Landsverk J (2008). Cascading implementation of a foster and kinship parent intervention. *Child Welfare: Journal of Policy, Practice, and Program*, **87**, 27–48.
- Chamberlain P, Price J, Leve LD, Laurent H, Landsverk JA and Reid JB (2008). Prevention of behavior problems for children in foster care: Outcomes and mediation effects. *Prevention Science*, **9**, 17–27.
- Cicchetti D and Valentino K (2006). An ecological-transactional perspective on child maltreatment: Failure of the average expectable environment and its influence on child development. In D Cicchetti, DJ Cohen, D Cicchetti, and DJ Cohen (Eds.), *Developmental psychopathology: Risk, disorder, and adaptation*, 2nd ed., vol. 3, (pp. 129–201). Hoboken, NJ: John Wiley & Sons Inc.
- Craven PA and Lee RE (2006). Therapeutic interventions for foster children: A systematic research synthesis. *Research on Social Work Practice*, **16**, 287–304.
- Cyr C, Euser EM, Bakermans-Kranenburg MJ and Van Ijzendoorn MH (2010). Attachment security and disorganization in maltreating and high-risk families: A series of meta-analyses. *Development and Psychopathology*, **22**, 87–108.
- Dorsey S, Farmer EMZ, Barth RP, Greene KM, Reid J and Landsverk J (2008). Current status and evidence base of training for foster and treatment foster parents. *Children and Youth Services Review*, **30**, 1403–1416.
- Dozier M, Stovall KC, Albus KE and Bates B (2001). Attachment for infants in foster care: The role of caregiver state of mind. *Child Development*, **72**, 1467–1477.
- Dozier M, Peloso E, Lindhiem O, Gordon MK, Manni M, Sepulveda S, ... Levine S (2006). Developing evidence-based interventions for foster children: An example of a randomized clinical trial with infants and toddlers. *Journal of Social Issues*, **62**, 767–785.
- Dozier M, Manni M, Gordon MK, Peloso E, Gunnar MR, Stovall-McClough KC, ... Levine S (2006). Foster children's diurnal production of cortisol: An exploratory study. *Child Maltreatment*, **11**, 189–197.
- Dozier M, Peloso E, Lewis E, Laurenceau JP and Levine S (2008). Effects of an attachment-based intervention on the cortisol production of infants and toddlers in foster care. *Development and Psychopathology*, **20**, 845–859.
- Dozier M, Lindhiem O, Lewis E, Bick J, Bernard K and Peloso E (2009). Effects of a foster parent training program on young children's attachment behaviors: Preliminary evidence from a randomized clinical trial. *Child & Adolescent Social Work Journal*, **26**, 321–332.
- Everson-Hock ES, Jones R, Guillaume L, Clapton J, Goyder E, Chilcott J, ... Swann C (2012). The effectiveness of training and support for carers and other professionals on the physical and emotional health and well-being of looked-after children and young people: A systematic review. *Child: Care, Health and Development*, **38**, 162–174.

- Festinger T and Baker AJL** (2013). The quality of evaluations of foster parent training: An empirical review. *Children and Youth Services Review*, **35**, 2147–2153. 409
- Fisher PA** (2015). Review: Adoption, fostering, and the needs of looked-after and adopted children. *Child and Adolescent Mental Health*, **20**, 5–12. 410
- Fisher PA and Stoolmiller M** (2008). Intervention effects on foster parents stress: Associations with child cortisol levels. *Development and Psychopathology*, **20**, 1003–1021. 412
- Fisher PA, Stoolmiller M, Mannering AM, Takahashi A and Chamberlain P** (2011). Foster placement disruptions associated with problem behavior: Mitigating a threshold effect. *Journal of Consulting and Clinical Psychology*, **79**, 481–487. 414
- Fisher PA, Mannering AM, Van Scoyoc A and Graham AM** (2013). A translational neuroscience perspective on the importance of reducing placement instability among foster children. *Child Welfare*, **92**, 9–36. 416
- Ford T, Vostanis P, Meltzer H and Goodman R** (2007). Psychiatric disorder among British children looked after by local authorities: Comparison with children living in private households. *The British Journal of Psychiatry*, **190**, 319–325. 417
- Goldman Fraser J, Lloyd S, Murphy R, Crowson M, Zolotor AJ, Coker-Schwimmer E and Viswanathan M** (2013). A comparative effectiveness review of parenting and trauma-focused interventions for children exposed to maltreatment. *Journal of Developmental and Behavioral Pediatrics*, **34**, 353–368. 419
- Gunnar MR and Vazquez DM** (2001). Low cortisol and a flattening of expected daytime rhythm: Potential indices of risk in human development. *Development and Psychopathology*, **13**, 515–538. 422
- Harden BJ** (2004). Safety and stability for foster children: A developmental perspective. *The Future of Children* **14**, 30–47. 423
- Heim C, Ehler U and Hellhammer DH** (2000). The potential role of hypocortisolism in the pathophysiology of stress-related bodily disorders. *Psychoneuroendocrinology*, **25**, 1–35. 424
- Kaminski JW, Valle LA, Filene JH and Boyle CL** (2008). A meta-analytic review of components associated with parent training program effectiveness. *Journal of Abnormal Child Psychology*, **36**, 567–589. 426
- Kerr L and Cossar J** (2014). Attachment interventions with foster and adoptive parents: A systematic review. *Child Abuse Review*, **23**, 426–439. 427
- Kicklighter JR, Whitley DM, Kelley SJ, Shipskie SM, Taube JL and Berry RC** (2007). Grandparents raising grandchildren: A response to a nutrition and physical activity intervention. *Journal of American Dietetic Association*, **107**, 1210–1213. 429
- Kinsey D and Schlosser A** (2013). Interventions in foster and kinship care: A systematic review. *Clinical Child Psychology and Psychiatry*, **18**, 429–463. 432
- Lawrence CR, Carlson EA and Egeland B** (2006). The impact of foster care on development. *Development and Psychopathology*, **18**, 57–76. 433
- Lawrence D, Johnson S, Hafekost J, Boterhoven De Haan K, Sawyer M, Ainley J and Zubrick SR** (2015). *The mental health of children and adolescents. Report on the second Australian child and adolescent survey of mental health and well-being*. Canberra: Department of Health. 435
- Lee JH and Holland TP** (1991). Evaluating the effectiveness of foster parent training. *Research on Social Work Practice*, **1**, 162–174. 437
- Leve LD, Harold GT, Chamberlain P, Landsverk JA, Fisher PA and Vostanis P** (2012). Practitioner review: Children in foster care – Vulnerabilities and evidence-based interventions that promote resilience processes. *Journal of Child Psychology and Psychiatry*, **53**, 1197–1211. 438
- Lin C-H** (2014). Evaluating services for kinship care families: A systematic review. *Children and Youth Services Review*, **36**, 32–41. 439
- McMillen JC, Zima BT, Scott Jr LD, Auslander WF, Munson MR, Ollie MT and Spitznagel EL** (2005). Prevalence of psychiatric disorders among older youths in the foster care system. *Journal of the American Academy of Child & Adolescent Psychiatry*, **44**, 88–95. 440
- Nathanson D and Tzioumi D** (2007). Health needs of Australian children living in out-of-home care. *Journal of Paediatrics and Child Health*, **43**, 695–699. 441
- Osborn AL, Delfabbro P and Barber JG** (2008). The psychosocial functioning and family background of children experiencing significant placement instability in Australian out-of-home care. *Children and Youth Services Review*, **30**, 847–860. 442
- Patterson GR** (1982). *Coercive family process*. Eugene, OR: Castalia. 443
- Pears KC, Kim HK and Fisher PA** (2008). Psychosocial and cognitive functioning of children with specific profiles of maltreatment. *Child Abuse & Neglect*, **32**, 958–971. 444
- Pears KC, Bruce J, Fisher PA and Kim HK** (2010). Indiscriminate friendliness in maltreated foster children. *Child Maltreatment*, **15**, 64–75. 445
- Perry BD** (2009). Examining child maltreatment through a neurodevelopmental lens: Clinical applications of the neurosequential model of therapeutics. *Journal of Loss and Trauma*, **14**, 240–255. 446
- Price JM, Chamberlain P, Landsverk J, Reid JB, Leve LD and Laurent H** (2008). Effects of a foster parent training intervention on placement changes of children in foster care. *Child Maltreatment*, **13**, 64–75. 447
- Rork KE and McNeil CB** (2011). Evaluation of foster parent training programs: A critical review. *Child & Family Behavior Therapy*, **33**, 139–170. 448
- 459

- Roy P, Rutter M and Pickles A** (2004). Institutional care: Associations between overactivity and lack of selectivity in social relationships. *Journal of Child Psychology and Psychiatry*, **45**, 866–873. 460
- Rubin DM, O'Reilly AL, Luan X and Localio AR** (2007). The impact of placement stability on behavioral well-being for children in foster care. *Pediatrics*, **119**, 336–344. 461
- Ryan JP and Testa MF** (2005). Child maltreatment and juvenile delinquency: Investigating the role of placement and placement instability. *Children and Youth Services Review*, **27**, 227–249. 462
- Sawyer M, Carbone J, Searle A and Robinson P** (2007). The mental health and wellbeing of children and adolescents in home-based foster care. *Medical Journal of Australia*, **186**, 181–184. 463
- Sprang G** (2009). The efficacy of a relational treatment for maltreated children and their families. *Child and Adolescent Mental Health*, **14**, 81–88. 464
- Sroufe LA** (2005). Attachment and development: A prospective, longitudinal study from birth to adulthood. *Attachment & Human Development*, **7**, 349–367. 465
- Stovall KC and Dozier M** (1998). Infants in foster care: An attachment theory perspective. *Adoption Quarterly*, **2**, 55–88. 466
- Strozier A, McGrew L, Krisman K and Smith A** (2005). Kinship care connection: A school-based intervention for kinship caregivers and the children in their care. *Children and Youth Services Review*, **27**, 1011–1029. 467
- Tarren-Sweeney M** (2008). The mental health of children in out-of-home care. *Current Opinion in Psychiatry*, **21**, 345–349. 468
- Turner W, Macdonald GM and Dennis JA** (2007). Behavioural and cognitive behavioural training interventions for assisting foster carers in the management of difficult behaviour. *Cochrane Database of Systematic Reviews* **3**, 1–77. 469
- van den Dries L, Juffer F, van Ijzendoorn MH and Bakermans-Kranenburg MJ** (2009). Fostering security? A meta-analysis of attachment in adopted children. *Children and Youth Services Review*, **31**, 410–421. 470
- van den Dries L, Juffer F, van Ijzendoorn MH, Bakermans-Kranenburg MJ and Alink LRA** (2012). Infants' responsiveness, attachment, and indiscriminate friendliness after international adoption from institutions or foster care in China: Application of Emotional Availability Scales to adoptive families. *Development and Psychopathology*, **24**, 49–64. 471
- Van der Kolk BA** (2005). Developmental trauma disorder. *Psychiatric Annals*, **35**, 401–408. 472
- van der Vegt EJM, van der Ende J, Kirschbaum C, Verhulst FC and Tiemeier H** (2009). Early neglect and abuse predict diurnal cortisol patterns in adults: A study of international adoptees. *Psychoneuroendocrinology*, **34**, 660–669. 473
- Webster-Stratton C and Reid M** (2012). *The incredible years: Evidence-based parenting and child programs for families involved in the child welfare system*. Hoboken, NJ: John Wiley & Sons. 474