Evidence for Using Farm Care Practices to Improve Attachment Outcomes in Foster Children: A Systematic Review

Martin J. Downes^{1*}, Ali Lakhani², Annick Maujean³,
Kym Macfarlane², and Elizabeth Kendall²

¹Centre for Applied Health Economics, Griffith University, Queensland, Australia

²School of Human Services and Social Work, Griffith University, Queensland, Australia

³CONROD, Griffith University, Queensland, Australia

*Correspondence to Martin J. Downes, Centre for Applied Health Economics, School of Medicine, Logan campus, Griffith University, University Drive, Meadowbrook, QLD 4131, Australia. E-mail: m.downes@epinet.net

Abstract

Anecdotal evidence suggests that care farming practices have the potential to provide positive outcomes for young people in foster-care and residential care environments. A systematic review (searching; CINAHL, Web of Knowledge, PsychInfo) was conducted to explore how participation in care farming initiatives impacts attachment in children in foster-care and what aspects of care farming initiatives provides positive attachment outcomes. The systematic review did not identify any research publication in care farming and foster-care. Therefore, it is imperative that practitioners realise that the evidence is lacking when using these types of interventions and keep a close account of the benefit and harms that may be encountered during the interaction processes.

Keywords: Attachment, foster-care, care farming, animal-assisted, at-risk children, systematic review, evidence-based practice

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Introduction

Children and adolescents who are in any type of substitute care are likely to have suffered traumatic experiences and are at risk of suffering further mental health problems in later life (Balluerka *et al.*, 2014). Parent–child

interaction and visits are used to help support relationships and develop reunification (Haight *et al.*, 2003). The application of attachment theory is important to these high-risk situations when considering reunification. The manner in which these interactions are carried out becomes particularly vital to how the parent–child relationship develops and one the psychological development of the child (Haight *et al.*, 2003).

However, Estep (2008) highlights that the main weakness of traditional methods of reunification is their inflexibility. Pre-set rules and regulations do not always allow for a smooth process of reunification and although traditional foster-care interventions have proven successful for some children in the child welfare system, not all children respond well to traditional methods of reunification (Estep, 2008). Many methods of improving reunification such as kinship care (Delfabbro *et al.*, 2015) and sibling care (Rast and Rast, 2014) have demonstrated some success. However, adolescents who are in foster-care may well have a history of experiences with negative attachment (Balluerka *et al.*, 2014) and so a focus on attachment in relation to reunification becomes extremely crucial.

It has been suggested that care farming practices, including animal-assisted therapies, may provide positive attachment outcomes for those who have experienced abuse and neglect (Evans and Gray, 2012; Parish-Plass, 2008) and are ‘at risk’ of entering the child protection system. Anecdotal evidence suggests that such practices have the potential to provide positive outcomes for young people in foster-care and residential care environments (Risley-Curtiss *et al.*, 2010). Of a recent survey of child protection practitioners in the USA, 24 per cent suggested that they had used care farming activities, specifically animal interventions with the young people they work with (Risley-Curtiss *et al.*, 2010).

Despite the use of such practices within foster-care settings, it is not possible to make a claim on the potential benefits, as the research in this area has yet to be synthesised. It is important to conduct a review of the literature in this area, as it will provide a better evidence base for such work and inform practice. The aim of this systematic review was to explore how participation in care farming initiatives impacts attachment in children in foster-care and secondarily to evaluate what aspects of care farming initiatives provides positive attachment outcomes.

Methods

M.D. and A.L. designed the methods for searching the literature. Relevant studies were identified using the following online bibliographic databases available through Griffith University Library (date search completed in brackets): CINAHL (26 July 2014), Web of Knowledge (26 July 2014) and Psycinfo (8 August 2014). Each bibliographic database was systematically searched using the following search terms, or derivatives of these, depending

Table 1 Search strategy used in each database, in a systematic review of care farming and foster-care.

Date	Database	Search terms	Limits
26 July 2014	CINAHL	Foster NEAR (care* OR mother* OR father* OR parent* OR child*) AND (animal* OR farm*)	2000–14
26 July 2014	Web of Knowledge	Foster NEAR (Care* OR mother* OR father* OR parent* OR child*) AND (care farm* OR animal assist*)	2000–14
6 August 2014	PsychInfo	Foster ADJ (care* OR mother* OR father* OR parent* OR child*) AND (animal* OR farm*)	2000–current

on the databases: Foster NEAR (care* OR parent* OR child*) AND (animal* OR farm*); see Table 1 for the complete search strategy. A.L. carried out the searches. Endnote was used to automatically remove any duplicates from database searches by matching title and author.

The inclusion criteria:

- Patient group—children <18 years in foster-care home setting;
- Intervention group—care farming setting;
- Primary randomised control trials collecting raw data.

Exclusion criterion:

- Publications that were reviews or use data collected by others.

Articles that did not meet the inclusion criteria or met the exclusion criterion, assessed first by their title and second by their abstract, were removed by A.L. and verified by M.D., as shown in the flow chart in Figure 1. In the event of disagreement regarding inclusion of a study, it was read in full and resolved by consensus (M.D. and A.L.). If there was still uncertainty after this point, a third reviewer (A.M.) assessed the study independently and a decision was made by consensus or majority vote.

Results

The search provided 694 articles for review and, after removing fifteen duplicates, left 679 articles for inclusion into the title assessment stage. The titles of all articles were read and articles were removed if they did not specify young people as the target group in a care farming or animal-assisted therapy initiative. Following this stage, five articles remained for abstract review. Abstracts were read and articles included in a final stage of full article review provided that they focused on the use of care farming initiatives with young people in foster-care. After the abstract round, zero articles met the search criteria and, as a result, no articles were given full review.

Figure 1. Flow diagram showing the total number of records identified and the number of records filtered at each stage of the selection process from the literature search of a systematic review on care-farming in foster care.

Discussion

A systematic review which aimed to explore the use of care farming initiatives for attachment outcomes with young people in foster-care provided zero articles for review. As a result, it is impossible to draw a conclusion on how such programmes may impact attachment in such groups.

Nevertheless, a body of research is beginning to explore the health outcomes that care farming initiatives, specifically initiatives that involve human animal interaction, can provide for a variety of young people including those who are differently abled (Holm *et al.*, 2014; Lanning *et al.*, 2014; O’Haire *et al.*, 2014; Ward *et al.*, 2013), sexually abused (Dietz *et al.*, 2012; Kemp *et al.*, 2014) and characterised as ‘at risk’ (Maujean *et al.*, 2013; Terpin, 2004; Weston, 2010). Specific to young people characterised as ‘at risk’, participants have identified that their participation in animal-assisted programmes encourages feelings of calmness and improves self-esteem (Weston, 2010). Additionally, specifically to young people who have experienced sexual abuse, their participation has contributed to a reduction in

short-term symptoms of depression and trauma (Dietz *et al.*, 2012; Kemp *et al.*, 2014).

It has been suggested that participation in animal-assisted therapies has the potential to encourage positive attachment outcomes for young people who have experienced abuse (Evans and Gray, 2012; Parish-Plass, 2008) and encourage interconnectivity amongst those undergoing therapy (Hawkins, 2012). Animal-assisted interventions have been highlighted as particularly well suited to providing attachment outcomes, as the underlying concepts of both attachment and animal-assisted interventions align (Bachi, 2013). Specifically, both practices involve the ideas of fostering and participating in a safe space, affect mirroring and using non-verbal communication (Bachi, 2013). To date, limited research has explored the potential for care farming initiatives to provide attachment outcomes. Preliminary research suggests forms of secure attachment may be encouraged by the use of animal activities (Bachi *et al.*, 2012; Balluerka *et al.*, 2014).

Although the mechanisms of care farming remain unknown, care farming utilises multiple resources and modalities to support personal development and build on the existing strengths of participants in a safe non-threatening space (Schreuder *et al.*, 2014). Some research has suggested that participation in outdoor environments may contribute to general well-being (Balluerka *et al.*, 2014). However, intentional engagement with nature or animals may be a catalyst that encourages positive views of oneself (Sempik, 2008), build trusting relationships, effectively communicate feelings and recognise one's agency in society (Schreuder *et al.*, 2014). These programmes may also improve capacity for attachment (Balluerka *et al.*, 2014).

At least four competing, or potentially complementary, hypotheses could explain the impact of care farming interventions on young people, but the relative utility of each mechanism has yet to be examined. The Restorative Hypothesis (H1) is the most commonly offered mechanism, based on the notion that simple exposure to natural environments reduces the fatigue associated with stress and trauma (Kuo, 2013). Triebenbacher (1998) suggests that humans are naturally attracted to other living organisms and passively benefit from contact of this kind. These benefits are often physiological, including a reduction in stress and mental fatigue, and a greater sense of happiness (van den Berg *et al.*, 2010). Although pilot data confirmed improvements in mood (Kendall and Maujean, 2015; Maujean *et al.*, 2013), it also pointed to three other potential hypotheses, each with some support in the literature. The Social Support or Leisure Hypothesis (H2) suggests that people enjoy engaging with nature, leading to positive social interactions with others who are enjoying the same space (Burgon, 2011). The Social Cognition Hypothesis (H3) suggests that interactions with nature impart particular social cognitive skills (e.g. improved understanding, empathy and communication skills as well as greater confidence and self-efficacy) that enable young people to interact more positively with their human world (Fisher, 2013). Finally, the Attachment Hypothesis

(H4) suggests that the safe and positive bond that develops between nature and humans restores the capacity to attach to key people in the young person's life (Berget *et al.*, 2008). Bachi *et al.* (2012) concluded that animal-based interventions offer the additional opportunity to restore disrupted attachment through the human–animal bond. Attachment theory suggests that the process of healing negative childhood experiences requires trust of the 'other' (Bachi *et al.*, 2012). Trust promotes capacity for secure attachment which is, in turn, integral to resilience (Sroufe, 2005). Little research has explored this hypothesis, although some data suggest that secure attachment is more likely among those exposed to animals (Balluerka *et al.*, 2014).

Conclusion

Given the minimal research in care farming and foster-care, it is not possible to make conclusions on the effectiveness of such programmes in providing positive attachment outcomes. It is imperative that practitioners realise this when using these types of interventions and keep a close account of the benefit and harms that may be encountered during the interaction processes. It is important that future research explores the potential for care farming initiatives, including those which involve animal-assisted programmes, and their impact the attachment of young people 'at risk' and those in foster-care.

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