Evidence for using farm care practices to improve attachment outcomes in foster children; a Systematic review

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 didn’t 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 and subject categories

Attachment; foster care; care-farming; animal assisted; at-risk children; systematic review; evidence based practice.

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 United States, 24% 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 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:

MD and AL 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 (26th July 2014), Web of Knowledge (26th July 2014), Psychinfo (8th August 2014). Each bibliographic database was systematically searched using the following search terms, or derivatives of these, depending on the databases: Foster NEAR (care* OR parent* OR child*) AND (animal* OR farm*), see table 1 for complete search strategy. AL carried out the searches. Endnote was used to automatically remove any duplicates from database searches by matching title and author.

Inclusion criteria:

Patient group – children < 18 years in foster care home setting

Intervention group – care farming setting

Primary randomized control trials collecting raw data

Exclusion criteria:

Publications that were reviews or use data collected by others.

Articles that did not meet the inclusion criteria or met the exclusion criteria, assessed firstly by their title, and secondly by their abstract, were removed by AL and verified by MD, as shown in the flow chart in Figure 1. In the event of disagreement regarding inclusion of a study, the study was read in full and resolved by consensus (MD and AL). If there was still uncertainty after this point, a third reviewer (AM) 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 15 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, 5 articles remained for abstract review. Abstracts were read and articles included into 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.

**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 programs 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 programs encourages feelings of calmness and improves self-esteem (Weston, 2010). Additionally, specific 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 provide 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 wellbeing (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 programs 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 reduce 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 suggests 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 programs 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 explore the potential for care farming initiatives, including those which involve animal-assisted programs, impact the attachment of young people ‘at-risk’ and those in foster care.

**References:**


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

<table>
<thead>
<tr>
<th>Date</th>
<th>Database</th>
<th>Search Terms</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/26/14</td>
<td>CINAHL</td>
<td>Foster NEAR (care* OR mother* OR father* OR parent* OR child*) AND (animal* OR farm*)</td>
<td>2000-2014</td>
</tr>
<tr>
<td>7/26/14</td>
<td>Web of Knowledge</td>
<td>Foster NEAR (Care* OR mother* OR father* OR parent* OR child*) AND (care farm* OR animal assist*)</td>
<td>2000-2014</td>
</tr>
<tr>
<td>8/6/14</td>
<td>PsychInfo</td>
<td>Foster ADJ (care* OR mother* OR father* OR parent* OR child*) AND (animal* OR farm*)</td>
<td>2000-Current</td>
</tr>
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Figures:

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.