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Abstract
Experience of childhood sexual abuse (CSA) is both prevalent and under-reported in Australia as it is elsewhere in the world. The negative psychosocial and behavioural sequelae of such abuse may be severe and can often last for the lifetime of the individual if therapeutic intervention is not successful. Meta-analyses of treatment outcome evaluations suggest that Cognitive Behavioural Therapy based approaches tend to be the most successful in reducing psychological symptoms (such as PTSD, internalising and externalising disorders), however for some clients these approaches may not be appropriate or as efficacious due to variables such as cognitive maturity or ethnicity. The use of animals within therapy situations to help develop an effective therapeutic alliance is not new but methodologically strong evaluations of Animal Assisted Therapies (AAT) generally and Equine Facilitated Therapy (EFT) specifically are needed in order to provide a solid evidence base regarding for whom, and in what situations, these approaches are the most effective. The current study aimed to evaluate and compare the efficacy of an adjunct EFT program run by Phoenix House (a sexual assault referral centre in Queensland, Australia) for the reduction of depressive symptoms across three age cohorts of CSA victims (children, adolescents and adults). Participants included 15 children (aged 8-11 years), 15 adolescents (aged 12-17 years) and 14 adults (aged 19-50 years) with 10 of the 44 participants identifying as Indigenous Australians. A quasi-experimental, repeated measures design was used to evaluate changes in depressive symptoms with all participants responding on the Child Depression Index or Beck Depression Inventory (as appropriate) at three points in time. Comparisons of change scores between Time 1 (intake to service) and Time 2 (post in-clinic counselling) and Time 2 and Time 3 (post-EFT) indicated that regardless of age or ethnicity, EFT proved to result in a greater decrement in depressive scores than that seen between Times 1 and 2. Implications of this and directions for future research are discussed.

Child sexual abuse (CSA) is a serious social problem with statistics revealing that in Australian communities, it is at epidemic proportions. According to the Personal Safety Survey conducted by the Australian Bureau of Statistics (2005), it was found that 12% (956,600) of women and 4.5% (337,400) of men reported that they were sexually abused prior to age 15. In other words, a total of over 1.2 million Australian individuals reported suffering sexual abuse before the age of 15 in 2005. However, official Australian Institute of Health and Welfare (AIHW; 2012) child protection data reveals that only a small proportion of cases of CSA are formally substantiated through investigation (a total of 5,437 in 2010-2011). This considerable discrepancy between self-report and formal investigative data reveals, amongst other issues, the large levels of underreporting of CSA to authorities. It also suggests that AIHW data is not reflective of the actual number of incidents of CSA within Australian communities (Richards, 2011), and that the actual prevalence of CSA remains undetermined (Olafson, 2011).

As pointed out by Putnam (2003), sexual abuse in childhood is a complex life experience, not a diagnosis or mental health disorder. CSA can be defined as any sexual contact by an adult or significantly older person upon a child, for the purpose of sexual gratification on the part of the perpetrator (Hornor, 2010) and has been linked to psychiatric conditions, such as substance abuse, post-traumatic stress disorder (PTSD), obesity,
The relationship between CSA and depression is especially strong (Olafson, 2011) with numerous studies linking CSA to major depression from childhood and continuing through into adulthood. As major depression is seen as one of the development of depression both during childhood and having a history of CSA is a critical risk factor for the results of these studies highlight the fact that CSA at a younger age displayed more significant levels compared to substance abuse without a history of CSA, and that women who had experienced sexual abuse were significantly more susceptible to the depressogenic effects of life stressors compared to those without a history of CSA, and that women who were exposed to more severe forms of abuse, showed the greatest increase in stress sensitivity.

Unsurprisingly, the depressogenic impact of CSA can often lead to problem behaviour in terms of coping mechanisms. Lee, Lyvers and Edwards (2008) examined the relationship between CSA, substance abuse, substance abuse relapse, depression and coping style. Results showed that compared to substance abusers without a history of CSA, those who had experienced sexual abuse in childhood were more severely depressed, utilised coping styles that were less optimistic and reported a greater likelihood of using drugs to mitigate negative emotional states. It was also found that individuals who reported being exposed to CSA at a younger age displayed more significant levels of depression as compared to those who reported experiencing CSA at an older age.

Results of these studies highlight the fact that having a history of CSA is a critical risk factor for the development of depression both during childhood and beyond. As major depression is seen as one of the leading social health problems, with high levels of occurrence and demonstrated links with morbidity and mortality (Putnam, 2003), it is essential that individuals with a history of CSA who are showing depressive symptoms, receive effective treatment.

Currently, the psychological treatment of choice with the strongest evidence base for childhood trauma (e.g. CSA) is Trauma-Focused Cognitive Behavioural Therapy (TF-CBT) for children (Olafson, 2011) and Cognitive Behavioural Therapy (CBT) for both children and adults (Putnam, 2003). TF-CBT utilises psychoeducation about CSA for both the care-giving (non-abusive) parent and the child, along with strategies to reduce and cope with stress, encouragement of affect expression/modulation and expression of trauma narratives through poetry, language or art work (Olafson, 2011). However, due to feelings of betrayal associated with the experience of CSA, many children tend not to trust relationships with adults in general (Parish-Plass, 2008). Research shows that it is generally individuals known and trusted to the child who perpetrate the abuse, such as family members, relatives or neighbours (Lee, et al., 2008) and as a result, abuse perpetrated in these relationships engenders a high level of distrust of adults, which may make it difficult to establish an effective therapeutic relationship. Therapies such as CBT, which are traditionally based around discussion between the client and therapist, therefore may not prove effective (Parish-Plass, 2008), particularly in the early stages of therapy.

Cultural differences between therapist and client are also an important consideration as ethnicity may impact the severity and type of symptoms shown following CSA (Cohen, Deblinger, Mannarino, & de Arellano, 2001). However, at present there is a dearth of information available on the effects of cultural differences in the therapeutic relationship, and whether these differences affect the efficacy of therapeutic interventions (Lalor & McElvaney, 2010). In regards to Indigenous Australians, it is noted that clinicians often have difficulty engaging with Aboriginal people in a way that makes sense due to a lack of cultural knowledge, social norms, local customs and language (Westerman, 2010). Gender differences may also impact the therapeutic relationship for Indigenous Australians, as intimate discussion with those of the opposite gender is often viewed as inappropriate. Such incompatibility between therapist and client is likely to lead to ineffective engagement and assessment of the client (Westerman, 2010).

Such problems in connecting with, and engaging traumatised children in traditional talk-therapy, led early clinicians to attempt the first serious use of animals as therapy tools in the 1960s (Parish-Plass, 2008). What is now known as Animal Assisted Therapy (AAT), can be defined as the purposeful addition of an animal as part of a therapeutic treatment plan (Nimer & Lundahl, 2007). AAT has been shown to lead to...
positive outcomes for CSA survivors. For example, in a study of 157 children with substantiated CSA histories, children participated in one of three types of therapy (1) talk-therapy with no dogs; (2) dogs present for interaction only prior to therapy; and (3) inclusion of a story about each dog prior to therapy. Results showed that children in groups 2 and 3 recorded significant reductions in CSA symptoms such as depression, anxiety, anger, PTSD, sexual concerns and dissociation (Dietz, Davis & Pennings, 2012).

For children who have been traumatised by sexual abuse, it is essential that they feel safe and accepted (Dietz et al., 2012), and therapy animals can meet these needs. Animals, such as dogs and horses, offer unconditional acceptance, which can in turn, assist children to overcome their insecurities and fears (Parish-Plass, 2008), ease tension and anxieties (Reichert, 1994) and mitigate extreme behavioural issues. Interactions between child and animal allow the child the opportunity to feel in control of the animal and the situation, an experience which the child may never have felt in their family home (Parish-Plass, 2008).

Equine Facilitated Therapy (EFT) includes activities such as grooming, handling, and riding horses (Meinersmann, Bradberry, & Bright Robers, 2008), and is suggested to be of benefit to individuals of all ages (Nimer & Lundahl, 2007) and may be particularly useful with clients of an Indigenous background (e.g., Kemp, Signal, Botros, Taylor & Prentice, 2013). Horses are prey animals and as such, are extremely sensitive to changes in those around them through areas such as body language, breathing and vocalisations. If the client working with the horse is incongruent in their thoughts, feelings and behaviours, the horse will feel this and will see the client as potentially dangerous (Porter-Wenzlaff, 2007). It is not until the client is modelling calm, confident and leading qualities, that the horse will respond effectively (Burgon, 2011). One important goal of EFT is to get clients to recognise and understand the emotions they are experiencing and to focus on these, rather than trying to escape from them (Porter-Wenzlaff, 2007).

Having a large and powerful horse respond to commands in a calm and favourable manner can provide abuse victims with a sense of authority and validation (Trotter, Chandler, Goodwin-Bond, & Casey, 2008). Such feelings of control have been found to empower clients, increase problem-solving and conflict resolution abilities (Trotter et al., 2008), as well as increase self-esteem, self-confidence, and create a more positive self-image (Parish-Plass, 2008). Outcomes regarding common psychological post-abuse symptoms, such as depression, are less well quantified, although some anecdotal and/or qualitative evidence is available. For example, in a qualitative assessment of an EFT intervention, seven young people between the ages of 11-21 interacted with horses over a two year period. Key themes that emerged from this study demonstrated that the EFT was effective in building confidence and self-esteem, a sense of mastery of the situation and empathy toward the horse (Burgon, 2011). In another study, Equine-Assisted Psychotherapy (EAP) was used with 63 children who had been witness to family violence situations and had been diagnosed with disorders such as ADHD, mood disturbances (including depression), PTSD and adjustment disorder. This study tested the efficacy of EAP over approximately 19 sessions and reported that all 63 showed significant improvement in their Global Assessment of Functioning (GAF) scores from pre- to post intervention (Shultz, Remick-Barlow & Robbins, 2006).

While these studies reveal that EFT shows promising psychosocial benefits when utilised as a post-abuse therapeutic tool (particularly with children), further research is needed in order to facilitate evidence-based practice. A common criticism of AAT and EFT is that evaluations of these approaches are often not sufficiently rigorous (e.g., lacking control groups, Marino, 2012) to provide reliable evidence of efficacy. As mentioned in Kemp et al., (2013), maintaining methodological rigour while also meeting the needs of a vulnerable group is attainable but using ‘traditional’ control vs. experimental group designs is often not ethically appropriate. Similar to Tsai, Friedman and Thomas (2010), Kemp et al. (2013) outline the use of a quasi-experimental, repeated measures design where psychometric tools are administered at three times for each individual (e.g., Intake into Service, Pre-Intervention and Post-Intervention) and changes between Time 1 and Time 2 are compared to those between Time 2 and Time 3 to account for extraneous variables (e.g., maturation, time since abuse cessation) that might otherwise mask the true efficacy of the EFT. Treatment effect sizes are calculated by comparing Time 2 and Time 3 mean scores divided by the standard deviation of the Time 3 scores for the whole cohort (Cooper, Hedges & Valentine, 2009). The current paper follows this approach and presents an extension of Kemp et al. (2013) using the same EFT design. That is, while we (Kemp et al., 2013) have previously reported on the efficacy of this EFT in regards to trauma and anxiety symptoms, the current paper presents an assessment of the efficacy of EFT as a treatment for depressive symptomology and compares this efficacy across three broad age bands (children, adolescent and adult). These three age cohorts, with Indigenous and non-Indigenous participants, were assessed in order to broaden existing concentrations in the literature, which predominantly assess EFT’s with children.

It is hypothesised that, compared to data recorded at
Time 1 and 2, depressive symptoms recorded at Time 3 (post-EFT) will be significantly lower across all three age groups. As reported in Kemp et al (2013) for children and adolescents, it is expected that EFT will be equally effective with the Indigenous and non-Indigenous adult participants across all three age cohorts. It is also anticipated that the child and adolescent cohorts will show greater change from Time 2 to Time 3 (i.e., effect of EFT) than the adult cohort for whom ‘traditional’ therapy should have a greater effect (i.e., as seen in decrements in depression scores from Time 1 to Time 2).

Method

Participants
The participants were 15 children, 15 adolescents and 14 adult women who were referred to Phoenix House for treatment for sexual abuse; some were also victims of neglect and/or physical abuse. The ‘child’ group consisted of 9 females and 6 males aged eight to 11 years (M = 9.8 years, SD = 1.3), three identified as Indigenous (i.e., Aboriginal and/or Torres Strait Islander) and 9 were non-Indigenous. The 15 adolescents were all females, aged between 12 and 17 years (M = 15.5 years, SD = 0.8). Five adolescents identified as Indigenous and ten as non-Indigenous. Of the 14 adult women (aged 19 to 50 years, M = 37.0 years, SD = 8.9), two identified as Indigenous and 12 as non-Indigenous. All participants took part in an EFT program with Phoenix House between March 2010 and September 2011. Specific details of abuse were not available to the researchers. All participants agreed to take part in the EFT program as well as the research and the current guardians of the participants also signed consent forms where relevant. Ethical approval to evaluate the archival data gathered during the EFT program was granted by Central Queensland University.

Procedure
All participants were assessed at three points in time: upon intake and prior to in-clinic counselling (Time 1), prior to commencing EFT but after in-clinic counselling (Time 2) and upon completion of EFT (Time 3). After the first assessment, the participants were engaged in in-clinic individual counselling once a week for the average of 6.6 weeks (SD 10 days) for the ‘child’ group and 6.4 weeks (SD 15.7 days) for the ‘adolescent’ group. The ‘adult’ group was much more variable in the time between T1 and T2 ranging from as little as two weeks through to more than 12 months.

If the participant and/or guardian agreed to take part in an EFT group program, the participants attended for 90 minutes once per week for 9–10 weeks. The ‘Trails of Discovery’ EFT program utilised in the current study is based on the Equine Assisted Growth and Learning (EAGALA, 2012) model and experiential learning with the help of horses. The therapeutic team consists of two counsellors and four horses. All activities are ground based and incorporate learning basic horsemanship skills, such as backing up a horse, asking a horse yield their hind or front quarters, desensitizing a horse, asking a horse to circle around a person, jump over obstacles either on a loose rope or at liberty. Other activities are designed to create a metaphor between what occurs in the arena and the participant’s every-day life and again are performed at liberty. What emerges during these activities are patterns of thinking, reactions/responses to different situations and outcomes, and reactions to dynamics within the family group or within the group of participants. Each exercise is designed to address issues such as: trust, communication, boundaries, observation, body language, attitude and self-perception and all activities are dynamic, not static, to accommodate the needs of each group of participants, be it their age, developmental stage, disability, current mental health status or their cultural background. Further details of EFT activities are available from the corresponding author.

Measures
Different depression measures were used for the children compared to adolescent and adult participants in order to ensure the use of appropriate psychological tools. For the ‘child’ cohort, the Children’s Depression Inventory was utilised, while the Beck Depression Inventory was used for the adolescent and adult cohorts. Archival data with code names only were supplied to the researchers to protect the identities of the participants and their families.

Children’s Depression Inventory (CDI)
The CDI (Kovacs, 2003) was created from the Beck Depression Inventory with 21 items adjusted semantically for age appropriateness and another five items added to account for school and peer functioning. Total scores range from 0 to 54 with higher scores denoting increased depressive symptomatology. A longitudinal study by Cole and Martin (2005) found that the child self-report scale (used in the current study) measured state depressive symptoms. Test–retest reliability coefficients fall in the mid .70 s for retest intervals up to 4 weeks. According to Kovacs (2003), children recording a CDI of 13 or greater (when presenting within a clinical sample) are considered to be showing significant depressive symptomology.

Beck Depression Inventory (BDI)
The BDI measures levels of depression in adults and
adolescents. All 21 items are measured on a 4 point Likert scale and higher scores represent more severe levels of depression (Carlson, 2012). The BDI has been found to have sound predictive validity and good two week test retest reliability (r = .72; Beck et al. 1996). While scores on the CDI cannot, and of themselves, be used for a clinical diagnosis, the following cut off scores are commonly used to indicate the severity of depressive symptoms: 0-9 minimal (‘normal’), 10-18 mild, 19-29 moderate and 30-63 severe depression (Beck, Steer & Garbin, 1988).

**Results**

**Data Analysis for Child Participants**

A multivariate analysis of variance did not reveal any significant difference between gender and ethnicity within this group. A repeated-measures analysis of variance (ANOVA) was used to assess change scores between Time 1, Time 2 and Time 3, and to test the hypothesis that the EFT program was effective in decreasing depressive symptomatology in participants. The assumption of sphericity was violated, so the degrees of freedom were corrected using the Greenhouse-Geisser estimate. Results showed a significant main effect (F(1.13, 15.86) = 36.155, p=.001, effect size = .721), revealing that depressive symptoms were significantly affected by treatment. Follow-up tests of within subject contrasts suggested that there was no significant change in reported symptoms of depression between data collected at Time 1 (M = 15.73, SD = 6.72) and Time 2 (M = 15.6, SD = 8.1), (F(1, 14) = .051, ns), whilst, CDI scores from Time 3 (M = 4.33, SD = 3.37) were significantly lower than those at Time 2, (F(1,14) = 33.5, p=.001, effect size = 0.705), indicating a significant decrement in reported depressive symptoms. Worthy of particular note is the observation that the average score on the CDU for the children within this cohort scored is above the cut off for ‘clinical’ depression (i.e., CDI scores at or above 13) at Times 1 and 2 but falls well below this at Time 3 following the EFT program.

**Data Analysis for Adolescent Participants**

To test the hypothesis that the EFT program was effective in treating adolescent participants for depression, a repeated-measures ANOVA of Time 1, Time 2 and Time 3 assessments was utilised. Results revealed that treatment had a significant overall main effect (F(2, 28) = 33.042, p < .001, effect size = .736); however, no main effects were found for age or ethnicity. Importantly, tests of within subject contrasts showed that between Time 1 (M = 28.60, SD = 11.24) and Time 2 (M = 27.87, SD = 10.75) while there was a slight improvement in scores, there was no significant change in reported symptoms of depression (F(1, 14) = .185, p = .673, ns). In contrast, BDI scores from Time 3 (M = 13.07, SD = 11.89) were significantly lower than those at Time 2 (F(1,14) = 50.86, p < .001, effect size = 0.886) indicating a significant improvement in reported depressive symptoms. Again worthy of comment is the fall from an average rating of ‘moderate’ depression at both Time 1 and Time 2 to ‘mild’ depression at Time 3 (ratings as per Beck et al., 1988).

**Data Analysis for Adult Participants**

Similar to the analysis of both the child and adolescent cohorts, a repeated-measures ANOVA of the three temporal BDI measures was utilised for the adult group. The assumption of sphericity was violated, so the degrees of freedom were adjusted using the Greenhouse-Geisser test. Results showed a significant overall main effect of treatment (F(1.23, 15.97) = 77.763, p < .001, effect size = 0.911). No significant differences by ethnicity or age were observed. Tests of within subject contrasts showed that there was significant change in reported symptoms of depression between data collected at Time 1 (M = 29.08, SD = 10.02) and Time 2 (F(1, 13) = 6.00, p = .029, effect size = 0.562), as well as Time 2 and Time 3 (F(1,13) = 77.78, p < .001, effect size = 0.926). However, mean BDI scores from Time 3 (M = 8.83, SD = 6.54) were a great deal lower than those at Time 2 (M = 27.07, SD = 9.79), indicating that EFT resulted in a larger reduction of reported depressive symptoms as compared to in-clinic counselling. Although not significant, a consistent trend was noted whereby the older the women in the ‘adult’ group, the larger the change in scores from Time 2 to Time 3. Average ratings of BDI scores shifted from ‘moderate’ at Time 1 and Time 2 to ‘minimal’ at Time 3 (ratings as per Beck et al., 1988).

**Comparing Efficacy Across Groups and Ethnicity**

Presented in Table 1, for ease of comparison, are the mean values for the age-appropriate depression measures recorded at Times 1, 2 and 3 separated by ethnicity, caution does need to be taken with these due to the limited number of Indigenous participants in each cohort. Also presented are the effect sizes for the change in mean values from Time 1 to Time 2 and Time 2 to Time 3. Effect sizes for the change in symptomology from Time 1 to Time 2 were consistently lower than those seen for Time 2 to Time 3 for Indigenous and non-Indigenous participants across all three age groups. For non-Indigenous children and Indigenous adolescent’s scores on the relevant depression measures showed a slight increase from Time 1 to Time 2. All effect sizes following EFT meet the criteria for large effect, including the smallest (0.68), which was observed for adult Indigenous women. Consistently, non-Indigenous participants
scored more highly on the CDI/BDI at Times 1 and 2 (with adult, non-Indigenous, women meeting the cut off for severe depression), and more highly (i.e., greater depressive symptomology) at Time 3 with the exception of those within the child cohort.

**Discussion**

The current paper had two main aims. Firstly to assess the efficacy of EFT as an adjunct therapy for depressive symptoms presenting in survivors of CSA, and secondly, to compare the relative efficacy of this approach across differing age groups, namely children, adolescents and adults. As hypothesised, when change scores between Time 1 and Time 2 (pre-EFT) were compared to those between Time 2 and Time 3 (post-EFT), EFT proved to result in significant and marked (i.e., large effect size) decrements in CDI (children) and BDI (adolescent/adult) scores. From a clinical perspective, these decrements resulted in changes from potentially impairing depressive symptomology (i.e., warranting professional intervention with attendant elevated risks for self-harm/suicide) to ‘normal’ or minimal scores.

Extant literature regarding treatment effects for internalising symptoms (such as depression) following CSA suggests that the current treatment effect sizes are much larger than seen following TF-CBT, at least for children and adolescents (e.g., Trask, Walsh & DiLillo, 2011). The literature regarding the efficacy of treatments for adult survivors of CSA is comparatively sparse. As Trask et al. (2011), point out in their meta-analysis of treatment effects for common sequelae of CSA, it is important to compare the results of quasi-experimental approaches, as used here, with the outcomes of similar designs, as within-subject designs can lead to elevated effect sizes compared to randomised control trial type studies. In keeping with this, the current large effect sizes compare very favourably with the average 0.5 or medium effect size calculated by Trask et al. (2011) for internalising symptoms (including depression) within the within-subject reports included in the meta-analysis. Interestingly, Trask et al conclude that greater effects (from standard CBT style therapy) were seen with older children/adolescents potentially due to the heavy reliance on cognitive components that require a certain level of intellectual maturity. In contrast, participants within the child cohort in the current study evidenced the greatest average effect size following EFT, suggesting that this approach may be particularly effective in reaching younger clients. This further supports the argument that non-traditional approaches like EFT (and AAT more generally) work well with certain populations (such as young children) precisely because they do not have a linguistic and/or cognitive component in a traditional sense (e.g., Lidgerwood & Gillingham, 2012).

Similar to Kemp et al. (2013), and as reported in Trask et al.’s (2011), meta-analysis, there proved to be no systematic difference in CDI/BDI scores following EFT by participant ethnicity; that is EFT was equally effective for all. As mentioned previously there is a noticeable lack in the literature regarding the efficacy of standard CBT treatments for non-European clients (e.g., Lalor & McElvaney, 2010) with some researchers suggesting that CBT type approaches may not be appropriate for, or as effective with, Indigenous Australians (e.g., Westerman, 2010) for a number of culture-specific reasons. Although the current findings need to be treated with caution due to relatively the small number of participants identifying as Indigenous (three children, five adolescents and two adults), the

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**Table 1**

*Indigenous and Non-Indigenous Child, Adolescent and Adult Data Showing the Differences Between Mean CDI/BDI Scores from Time 1, Time 2 and Time 3.*

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Time 1</th>
<th>Time 2</th>
<th>T1-T2 Effect</th>
<th>Time 3</th>
<th>T2-T3 Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>M (SD)</em></td>
<td><em>M (SD)</em></td>
<td></td>
<td><em>M (SD)</em></td>
<td></td>
</tr>
<tr>
<td>Children</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indigenous</td>
<td>14.33 (0.67)</td>
<td>13.00 (1.00)</td>
<td>0.62</td>
<td>6.00 (1.73)</td>
<td>0.93</td>
</tr>
<tr>
<td>Non-indigenous</td>
<td>16.08 (2.17)</td>
<td>16.25 (2.60)</td>
<td>-0.04</td>
<td>3.92 (1.00)</td>
<td>0.95</td>
</tr>
<tr>
<td>Adolescent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indigenous</td>
<td>23.40 (6.10)</td>
<td>24.00 (5.79)</td>
<td>-0.05</td>
<td>10.00 (4.16)</td>
<td>0.81</td>
</tr>
<tr>
<td>Non-indigenous</td>
<td>31.20 (3.02)</td>
<td>29.80 (3.05)</td>
<td>0.22</td>
<td>14.60 (4.17)</td>
<td>0.90</td>
</tr>
<tr>
<td>Adult</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indigenous</td>
<td>19.50 (12.51)</td>
<td>18.52 (11.55)</td>
<td>0.04</td>
<td>3.54 (0.51)</td>
<td>0.68</td>
</tr>
<tr>
<td>Non-indigenous</td>
<td>30.68 (2.43)</td>
<td>28.50 (2.48)</td>
<td>0.41</td>
<td>9.72 (1.93)</td>
<td>0.97</td>
</tr>
</tbody>
</table>
fact that significant decreases in CDI/BDI scores and large effect sizes were seen (with the exception of the adult women for the latter) is encouraging. This finding in particular warrants further investigation and replication. Follow-up measures several months after EFT would allow for further analysis regarding the efficacy of EFT as an effective approach for treating depressive symptoms resulting from CSA regardless of ethnicity. In the current study, across all three age groups, non-Indigenous participants scored more highly on the CDI/BDI scales than those identifying as Indigenous, although the large standard deviation recorded for adult Indigenous participants does suggest a larger sample size is needed before definitive conclusions can be drawn. Non-Indigenous participants also showed larger relative decrements and larger effect sizes following EFT (Time 2 - Time 3). With some researchers suggesting that ethnicity may influence the severity and/or symptomatology shown subsequent to CSA (e.g., Cohen et al., 2001), this finding suggests that a broader examination of potential sequelae (i.e., beyond depression) following CSA may be important when considering the efficacy of EFT for Indigenous clients. Trask et al., (2011) also highlight the need to extend CSA treatment outcome evaluations to considerations of affective, behavioural, cognitive and interpersonal functioning including beyond the commonly assessed PTSD and externalising/internalising outcomes. Further evaluations specifically addressing the outcomes of therapeutic interventions for adult survivors of CSA are also urgently needed given both the prevalence of CSA in the wider population and the under-reporting thereof.

While the results of the current investigation are promising, several limitations need to be noted, particularly the relatively small numbers of Indigenous participants and the lack of other ethnicities in the sample. In order to truly evaluate the cross-cultural efficacy of EFT approaches, there is a need to broaden investigations and include a greater variety of cultural backgrounds. For example, some cultures the horse may prove more of an obstacle to therapy than others and this needs to be considered when planning any animal-based interventions. Similarly, the appropriateness of using particular animals with specific groups needs to also be considered to ensure the welfare of the animals used (Evans & Gray, 2012). Greater inclusion of male CSA survivors would also be beneficial as would extending the investigation to measures of broader sequelae, such as those suggested by Trask et al., (2011) and potentially human-directed empathy – deficits in which may be an additional side effect of CSA (and related experience of family violence) and area that AAT is purported to be particularly effective in addressing (e.g., Geist, 2011). Although not possible with the current data due to the archival nature of the investigation, follow-up assessment several months following completion of EFT would be useful as there is, to the knowledge of the authors, no existing EFT study looking at long-term effects and only limited CSA-specific (non-AAT) evidence of long term efficacy for standard CBT type therapy (Trask et al., 2011).

Future studies would also benefit from the inclusion of measures to assess animal wellbeing. Animal assisted therapies and interventions have considerable advantages but should not be considered without a full assessment of the appropriateness of the species used and consideration of how their own welfare will be monitored and assured throughout the therapies. There is a risk, given the success of AAT’s, that they become over-utilised and driven solely by human concerns, which is problematic not only in terms of animal welfare but also in terms of modelling appropriate attitudes towards sentient creatures which, itself, has been shown to impact on the ways human treat each other (Evans & Gray, 2012).

In summary, the current outcome evaluation outlines the efficacy of an EFT approach in ameliorating depressive symptomology (as indicated by CDI/BDI scores) across three age groups and two ethnicities. Treatment effect sizes are large and not dependent on age, gender or ethnicity, and compare favourably with those reported in the literature. EFT is a promising approach that warrants further research attention to delineate exactly for whom and in what way it can be the most effective.

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