Evaluation of the Roots of Empathy Programme by North Lanarkshire Psychological Service

Executive Summary
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About Roots of Empathy

Founded in Canada in 1996, Roots of Empathy (ROE) is a classroom based, social and emotional programme. It aims to promote emotional competence and development of empathy in primary school children. The programme is delivered by a trained ROE instructor and consists of nine themes which are delivered across the school year. The baby is central to the delivery of the ROE programme and is considered the ‘teacher’. The instructor guides the class to observe and raise awareness of the baby’s development, the relationship with their parent and subsequent attachment. In order to ensure all areas of the ROE curriculum are covered instructors are required to deliver certain aims within each lesson, which vary in content and quantity. The fidelity of the programme is essential to ROE to ensure that all children receive the maximum benefit from the programme.

In Autumn 2010, Action for Children, one of the UK’s largest charities, became the ‘Lead Agency’ for Roots of Empathy in Scotland and piloted the programme in partnership with North Lanarkshire Council, with funding from Scottish Government’s Community Safety Unit. This was the first time the Roots of Empathy programme was delivered on mainland Britain. Following the positive feedback from the pilot year, Action for Children Scotland secured funding through the Early Years Early Action Fund from Inspiring Scotland in 2011 to roll out Roots of Empathy to an additional 15 areas across Scotland in partnership with Local Authority colleagues.

Evaluation of the Roots of Empathy programme

ROE was introduced to schools in North Lanarkshire Council area in two Phases. In 2010, eight schools (Phase 1) were introduced to ROE and the following year nine schools (Phase 2) were introduced to the programme. The research evaluation of ROE in North Lanarkshire began in August 2011 with new classes in all schools (Phase 1 and 2) taking part (17 experimental schools, 19 classes and 17 control schools, 18 classes), with 785 participants. The programme was delivered by staff from Action for Children and North Lanarkshire Council.

At the beginning and end of the ROE programme in academic session 2011/2012 participants completed various questionnaires to assess a number of areas: empathy, prosocial behaviour, anger management/aggression, wellbeing and class climate. Pupils also participated in a group task which examined knowledge of infant development and recognition of emotions. Class teachers completed questionnaires measuring pupils’ prosocial behaviours and total difficulties as well as their perception of class climate.

Video observations were carried out in three Phase 2 schools of differing deprivation levels. Groups of four pupils were observed five times throughout the ROE programme. Empathic, prosocial and aggressive behaviours were investigated for each child.

Programme fidelity was measured through ROE instructor diaries which recorded how complete aims were for each theme. Instructors also recorded dates for each lesson and their comments on the diaries. ROE class teachers and Head Teachers were also asked for their comments on the programme and the research procedure. Social and emotional programmes which ROE and control schools were participating in throughout the school year were also recorded by class teachers as this may have had an impact on the results.
Results

Questionnaire data was initially analysed by Phase (Phase 1 & 2 together and Phase 1 and Phase 2 separately). Further analysis compared: Phase 1 vs. Phase 2 (Phase), P4 vs. P5 (primary stage), high deprivation vs. low deprivation (deprivation level), boys vs. girls (gender) and having younger children in the household vs. being a lone child. Pupil data from the group task was analysed by coding into themes and comparing specific answers. Programme fidelity was measured: in Phase 1 92% of aims were fully complete and in Phase 2 93% of aims were fully complete. Most instructors doubled up at least two lessons throughout the programme, with only two classes not having any combined lessons (Phase 1).

A positive impact was found in the following outcomes:

**Empathy:** Overall a positive impact was found for the ROE pupils who increased in cognitive empathy (distinction between oneself and another) and emotional empathy (feeling with another), as measured by pupil self reports, compared to the control pupils who decreased on these subscales. When Phases were analysed separately significant differences between ROE and control pupils were only found in Phase 2; ROE increased in cognitive and emotional empathy and sympathy compared to the control group who decreased on these subscales. Video observations (in Phase 2) also identified an increase in empathic behaviours.

![Cognitive Empathy](image)

![Emotional Empathy](image)

**Prosocial behaviour:** Overall a positive impact on teacher rated prosocial behaviours was found, with the ROE group increasing and the control group decreasing. These findings were also evident when Phases were examined individually.

**Anger Management/Aggression:** Overall a positive impact was found for ROE pupils who decreased in inhibition (turning emotion inward), as rated by pupil self report, compared to control pupils who increased. When Phases were analysed separately significant differences between ROE and control were only found in Phase 1, with ROE pupils decreasing in inhibition and emotion regulation and control pupils increasing in both subscales. Video observations (in Phase 2) identified a decrease in aggressive behaviours. A positive impact was also found for ROE pupils in total difficulties (sum of emotional symptoms, conduct problems, hyperactivity and peer problems subscales of the SDQ) as rated by teachers. Overall ROE pupils decreased in total difficulties compared to control pupils who increased. When analysed separately, only Phase 1 pupils showed a significant difference between ROE and control, with control pupils increasing significantly more in total difficulties.

![Prosocial Behaviour (Teacher Rated)](image)

![Anger Management - Inhibition](image)
Knowledge of Infant Development: Across the three questions asked it was clear ROE pupils had a greater understanding of infant development, particularly around the specific teachings from the ROE lesson aims and outcomes. Differences were also noted in the language used by the ROE group compared to the control group which highlighted a greater understanding of knowledge of infant development. Specific learning from the ROE lesson aims and outcomes was displayed in responses given by the ROE group for each question:

“What are some ways that babies can get hurt?”: lying a baby on its stomach to go to sleep, brain damage (from shaking), strangled in blind cord, baby gate, parent drinking when pregnant and smoking next to baby.

“What are some ways that babies can learn?”: if you love them it will make their brain grow, baby can learn through ROE and using senses.

“What are some ways to keep babies safe?”: don’t shake a baby, keep baby with you, protect the baby’s head, put to sleep on back, don’t drink and don’t smoke.

Recognition of Emotions: Across the two questions asked it was clear ROE pupils had a greater understanding of recognition of emotions particularly around the specific teaching from the ROE lesson aims and outcomes. Differences were also noted in the language used by the ROE group compared to the control group which highlighted a greater understanding of recognition of emotions. Specific learning from the ROE lesson aims and outcomes were displayed in responses given by the ROE group for each question:

“What are some reasons that this baby cries?”: shaking a baby, mum taking drugs/alcohol when pregnant, needs love, needs a hug, needs put to sleep and changes to routine i.e. “different schedule (milk at different times)”.

“What things can you do to help a baby who is crying?”: soothing the baby, learning the baby’s crying tones, giving the baby love, giving the baby a soft blanket (“transitional object”), routine (“using a timer to know when the baby’s feed is due”),

Further analysis was conducted to compare: Phase 1 vs. Phase 2 (Phase), P4 vs. P5 (primary stage), high deprivation vs. low deprivation (deprivation level), boys vs. girls (gender) and having younger children in the household vs. being a lone child. The following significant differences were found for the ROE group:

- N.B. no significant differences were found for the comparison of pupils with younger children in the household vs. lone children.

Phase: With regards to empathy Phase 2 pupils increased significantly more than Phase 1 pupils in cognitive empathy. They also increased in emotional empathy and sympathy compared to Phase 1 pupils who decreased. For prosocial behaviour Phase 2 pupils increased significantly more than Phase 1 pupils as rated by teachers. For anger management, Phase 2 pupils increased in emotion regulation compared to Phase 1 pupils who decreased. For total difficulties, Phase 2 pupils decreased compared to Phase 1 pupils who increased as rated by teachers.

Primary Stage: For prosocial behaviour P4 pupils increased significantly more than P5 pupils as rated by teachers.

Deprivation level: For empathy pupils in high deprivation schools increased in emotional empathy compared to pupils in low deprivation schools who decreased. For prosocial behaviour, pupils in low deprivation schools increased significantly more in self rated altruism than pupils in high deprivation schools.

Gender: For prosocial behaviour boys increased significantly more than girls as rated by teachers.

Conclusion

When implemented by Action for Children within a Scottish Local Authority context, ROE was found to have a positive impact on pupils taking part in the programme compared to pupils in the control group. Results are discussed with limitations in mind of real life setting, testing and programme implementation & delivery. Overall data showed ROE pupils to increase in empathy (cognitive & emotional) and
prosocial behaviour compared to control pupils who decreased on these outcomes. ROE pupils decreased in inhibition and total difficulties and control pupils increased on these outcomes. Video observations showed an increase in empathic behaviours and a decrease in aggressive behaviours. Clear learning from the ROE programme aims was displayed in the ROE group for knowledge of infant development and recognition of emotions. Significant results were not found for wellbeing and class climate in this study. These results are discussed in relation to the current focus on wellbeing in North Lanarkshire and the issue of not being able to have a ‘true’ control group in real world research i.e. the control group were also participating in wellbeing programmes throughout the year.

The findings established from further analysis would suggest that the ROE programme had a more positive impact on Phase 2 pupils in this study who were in the first year of running the programme. It may be that the initial enthusiasm for the programme had declined in Phase 1 schools or that the ROE programme is more promoted in the first year of running which would support our findings. An additional possibility for the impact on Phase 2 pupils could be due to their instructors having just been trained and still under supervision. There was also a difference in age of pupils in Phase 1 and 2 with Phase 1 pupils, on average, being nearly a year older than Phase 2 pupils, suggesting that age may also have been a factor contributing to the differences found between Phase 1 and 2 pupils. Conclusions can not be drawn on primary stage, deprivation level or gender.

The current study’s findings support and build on previous research of the ROE programme. To extend the current findings future research could explore potential direct links between the outcomes of empathy, prosocial behaviour and anger management/aggression; and whether knowledge of infant development and recognition of emotions are linked to these outcomes in relation to the ROE programme. Potential future research could further investigate the outcomes of empathy and class climate as findings have varied in previous research in these areas. Future research could replicate the further analysis investigated within our study to draw firmer conclusions. Finally future research could explore the effectiveness of ROE in comparison to other SEL programmes, e.g. a comparison of ROE and PAThS (another evidenced based SEL programme).