

Evaluation of Roots of Empathy in Scotland 2014-15



Executive Summary



for Action for Children
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Introduction and aims

Previous research studies of Roots of Empathy from around the world have reported significant reductions in aggression and increases in prosocial behaviour. Action for Children and partners from the Early Years Taskforce commissioned an external review of these studies by the Social Research Unit at Dartington to help direct the focus of this current study.

Therefore, Action for Children commissioned a research team (Qa Research and University of Glasgow) to carry out research to examine the extent to which the Roots of Empathy intervention in Scotland works to reduce levels of aggression with 5-8 year old children and how changes in empathy mediate this relationship. Roots of Empathy is a classroom-based programme that aims to reduce levels of aggression within schoolchildren, while increasing their social and emotional competence and helping develop their empathy.

The design of the research

The research team set out to design the most rigorous and robust research method possible. In clinical settings, the gold standard is recognised to be a randomised controlled trial (RCT), but this is not normally feasible or ethical within educational settings.

So, a design known as ‘quasi-experimental’ was adopted, as is typically used in social science settings to evaluate the benefits of an intervention. The ‘strongest’ type was chosen, intentionally to show as much evidence of causation between the Roots of Empathy intervention and the measured outcomes, with the following two key features:

1. A control group of classrooms was used to act as a point of comparison to the group of Roots of Empathy (intervention) classrooms
2. Data was collected about pupils in both groups of classrooms at two time points
 - Early in the school year, before the start of Roots of Empathy = baseline
 - At the end of the school year, after the Roots of Empathy = follow-up

There are two broad types of data collection that can be used in research trials:

- **Quantitative** = gathers quantities of data that can be measured and analysed numerically, for example via structured surveys or online polls
- **Qualitative** = allows deeper exploration of themes as it gathers opinions, perceptions, motivations and barriers, for example via focus groups and in-depth interviews

This study collected two types of **quantitative** data at both time points.

1. Teachers completed questionnaires including items from standardised scales to report on pupils’ levels of two different types of empathy (affective, cognitive), aggression and prosocial behaviour
2. Researchers interviewed a smaller sample of the pupils, using a structured picture-based tool called the Kids Empathic Development Scale (KEDS), to measure three aspects of empathy (affective, cognitive and behavioural)

The study also collected complementary **qualitative** data at the follow-up stage:

1. In-depth interviews with a range of stakeholders (head teachers, local authority staff, Roots of Empathy instructors and others)
2. Focus groups or in-depth interviews with parents
3. Verbatim comments from teachers in response to open questions within the questionnaire

Numbers involved – achieved sample

For the teacher questionnaire:

- 31 class teachers completed baseline questionnaire
- 29 class teachers completed follow-up questionnaire (94% of those from baseline)
- Teachers came from 17 different schools
- Schools came from 5 local authority areas - Glasgow, Highland, South Lanarkshire, West Dunbartonshire, West Lothian
- 695 pupils covered at baseline
- 661 pupils covered at follow-up

For the pupil KEDS interview:

- 38 classes, one intervention and one control from each school visited
- Classes visited were from 19 schools
- 144 pupils were interviewed at baseline
- 112 pupils were interviewed at follow-up

For the qualitative data collected:

- 24 stakeholders were interviewed, from 25 local authorities
- 13 parents attended focus groups or were interviewed
- 31 teachers provided comments at baseline
- 29 teachers provided comments at follow-up

Significant outcomes

This study found significant results showing that the **Roots of Empathy intervention ‘worked’**. This is a strong finding, given that it can be difficult to achieve such results in social science research when there are so many different factors taking place in pupils’ lives that could have impacts on the outcomes.

The study made a new contribution to the body of evidence, in showing that empathy is a direct outcome from the Roots of Empathy intervention; and that increased empathy led to increased prosocial behaviour.

Findings from teacher questionnaire

Changes in pupils across the school year

Affective empathy is when children feel the same feelings as other people, so for example, feeling sad when another child is sad, or being happy for peers when they are happy.

- First, looking at a simple measure of percentage change across both groups, the study found a 53% improvement in the proportion of pupils who increased in affective empathy in Roots of Empathy classes compared to control classes
- When analysing for statistical significance, it was found that pupils' affective empathy significantly increased across the school year in the intervention group, while it did not change significantly in the control group.

Cognitive empathy is the extent to which children understand why other people feel the way they feel, for example, understanding the reasons why another child is crying.

- Looking at a simple measure of percentage change across both groups, the study found a 15% improvement in the proportion of pupils who increased in cognitive empathy in Roots of Empathy classes compared to control classes
- When analysing for statistical significance, it was found that there did not appear to be any changes in pupils' cognitive empathy across the school year, nor between the intervention and control groups

Aggression is the extent to which children show hostile or even violent behaviour or attitudes toward other children.

- Looking at a simple measure of percentage change across both groups, the study found a 76% improvement in the proportion of pupils who decreased in aggression in Roots of Empathy classes, compared to control classes
- When analysing for statistical significance, it was found that pupils' aggression decreased across the school year in intervention classes, while it increased across the school year in control classes.

Prosocial behaviour is the extent to which children act positive, friendly, and helpful towards their peers.

- Looking at a simple measure of percentage change across both groups, the study found a 13% improvement in the proportion of pupils who increased in prosocial behaviour in Roots of Empathy classes compared to control classes
- When analysing for statistical significance, it was found that prosocial behaviour increased across the school year in both the intervention and control samples, although it increased more in the intervention group

Changes in pupils in need across the school year

To find out whether the intervention worked equally well for those pupils who are most in need, further analysis was carried out on scores from those pupils who started out with the lowest 25% empathy scores or with the highest 25% aggression scores.

For those starting out low in affective empathy:

- These pupils had a greater increase in their affective empathy across the school year in the Roots of Empathy intervention group, than in the control group

For those starting out low in cognitive empathy:

- Unlike the overall cohort of pupils who showed no significant change in cognitive empathy, these pupils did tend to increase in cognitive empathy across the year, and with a greater increase for Roots of Empathy pupils, compared to those in the control group

For those who started out with the highest levels of aggression:

- These pupils in the Roots of Empathy group had a decrease in aggression across the school year, while those who were in the control classrooms increased in aggression

For those starting out low in prosocial behaviour:

- These pupils from both groups increased a little across the year, although for Roots of Empathy pupils this increase was larger than the increase for those in the control group

Differences by gender

Across the school year, boys in the intervention group decreased in aggression, increased in prosocial behaviour, and increased in affective empathy.

Girls in the intervention group decreased in aggression across the school year.

The results suggest that the intervention may be more effective for boys than for girls, on average, although the qualitative findings suggest that girls gained softer outcomes including improved resilience or emotional literacy.

Empathy as a factor influencing changes in prosocial behaviour

Mediation analysis showed that the impact of the intervention on prosocial behaviour occurred because of an increase in affective empathy, which then predicted an increase in prosocial behaviour.

Findings from the pupil interview

Changes in pupils across the school year

Interviewing pupils with KEDS tool was time intensive but valuable as it helped to triangulate the data (data sourced via more than one method) and provided an alternative where the pupil could interact with a researcher and speak for him- or herself.

There were two areas where the analysis of the KEDS data provided similar results to the teacher-report:

- The intervention appears to have a slight advantage in terms of increases in affective empathy compared to no change in affective empathy for the control group
- When examining those pupils who start out most in need (bottom 50% for empathy), there is indication that pupils who are lowest in cognitive empathy benefit from the intervention and increase more in cognitive empathy than pupils in the control.

Qualitative findings

Impact of the programme on pupils' empathy

Teachers noted examples of the positive effect of the programme on pupils' affective empathy and cognitive empathy:

“Before, I would have had to say, ‘Can you see so and so is upset?’ Now, they can see that for themselves.” (Teacher)

Impact of the programme on pupils' aggression

Teachers and stakeholders noted positive effects of the programme on some pupils' levels of aggression. They gave examples of the pupils' more constructive approaches to solving differences since taking part in the programme:

“...for some of the girls in particular, that could be a wee bit spoilt, selfish and get involved in disputes...it has made a big difference to them. They've taken it on board; they've taken a closer look at themselves and they've actually been behaving a little bit better with others and it's changed them.” (Teacher)

Impact of the programme on pupils' prosocial behaviour

Some teachers, stakeholders and parents had noticed that pupils were showing more caring, supportive and sharing behaviour with peers. Parents attributed this to the programme:

“...the importance of kindness and behaviour...they are very, very aware of these things and I think the programme helped 100% to achieve that.” (Parent)

Other impact on pupils

Enjoyment

Stakeholders, parents and researchers observed the pupils' enthusiasm for and enjoyment of the programme:

“My daughter was crying the day it finished...her saying ‘[baby] is not coming in anymore...she really enjoyed it.’” (Parent)

Emotional literacy

For teachers and stakeholders, their expectations had been met. They were impressed with pupils' grasp of emotional concepts and increased, correct use of emotional vocabulary:

“They have an understanding of their own learning and development and communicate feelings freely.” (Teacher)

Resilience

Stakeholders and parents gave examples of how the programme had helped some pupils to display resilience in the face of difficulties – death of a father, sibling with leukaemia, hearing impairment and difficult family circumstances:

- One parent recounted how their child improved their communication skills, despite a difficult year for the family; and that this resulted in them being able to play and be more involved with friends, with the child now feeling more confident and popular

A higher priority for emotional wellbeing

Stakeholders had noticed a shift in pupils' priorities away from materialism towards emotional wellbeing:

“They talked about [the baby] being included, as opposed to having a bike or lots of money. It was about being loved and having lots of friends.” (Stakeholder)

Knowledge sharing

Stakeholders and parents reported that pupils enjoyed sharing their knowledge about babies, health and wellbeing from the programme with their families:

“They were telling me how to do things. My daughter would play with her dolls and show me!” (Parent)

Impact on other people

On families of pupils experiencing the programme

Stakeholders noted that the programme had helped improve the home-school relationship. A parent noticed that it was easier to resolve issues of sibling rivalry at home, due to the programme.

On other pupils in the school

Stakeholders and teachers observed a ripple effect of the programme, spreading to other pupils in school – transmitted via the programme noticeboard and via contact in the playground.

On teachers in the school

Some teachers and head teachers had learnt new ways to deliver the curriculum, through the programme.

On the Roots of Empathy baby

Stakeholders and parents noted the boost to development for the baby.

Process evaluation – what makes Roots of Empathy work

Programme format

For most stakeholders, the structure of the programme worked well, with the baby visit reinforcing the classroom sessions on the same theme.

Baby visits

All groups of participants saw the baby visits as the defining and popular feature of the programme.

Individual sessions

Stakeholders appreciated sessions on crying, emotions and safety; parents commented positively on sessions about milestones and communicating.

Conclusions

The evaluation findings have a number of implications for practice regarding the Roots of Empathy intervention. These are our conclusions, based on the results of the evaluation:

Impact on pupils

- Pupils receiving the Roots of Empathy programme significantly increased their affective empathy and prosocial behaviour across the school year, compared with control pupils, not receiving the programme. Pupils receiving the programme also decreased in aggression, whilst those in control classes increased in aggression across the school year.
- The Roots of Empathy intervention tends to have its greatest impact for children with the lowest empathy and prosocial skills and who are the most aggressive. The qualitative findings suggested that the programme could bestow increased resilience on pupils who were experiencing personal, familial or health-related challenges.
- Accordingly, when administering Roots of Empathy interventions, the study findings support an approach of targeting classes, schools and local authorities where there is evidence of higher aggression, lower empathy and lower prosocial skills among children (such as a large number of detentions, behavioural problems and incidents, and/or records of emotional and behavioural difficulties, among others).
- Boys tend to benefit more than girls, although girls did also display reductions in aggression. The qualitative findings suggest that girls gained other softer outcomes including improved resilience or emotional literacy.

Sustained impact on pupils

- It is beyond the scope of this evaluation to demonstrate whether benefits gained from the programme will be retained by pupils or whether the benefits may even increase if trajectories of change (in empathy, aggression and prosocial behaviour) continue throughout pupils' development. Qualitative findings indicated the belief in many teachers, stakeholders and parents that the programme would have long-lasting benefits for the participating pupils, but only a long-term evaluation, following the sample a year or more into the future, could provide the answers.