

Roots of Empathy

RESEARCH SYMPOSIUM

Toronto, Canada

MAY 9-10, 2018

PROCEEDINGS



Roots of Empathy
Racines de l'empathie

www.rootsofempathy.org

Introduction

The 2018 Roots of Empathy Research Symposium – our seventh – was another successful, inspiring and engaging gathering of renowned international scientists. One of the goals of Roots of Empathy is to expand and share research about the landscape of childhood. This symposium allowed researchers from around the world to gather in Ontario for two days of knowledge transfer to introduce their work to each other and begin research collaborations. This year we hosted researchers from the Netherlands, Iceland, Poland, United States, Switzerland, Canada and Finland.

Dr. Brian Goldman of Toronto, author of *The Power of Kindness: Why Empathy is Essential in Everyday Life*, opened the symposium with his captivating story of empathy in medicine and his personal journey to becoming a better doctor. Graham Allen, former UK MP, Dr. Christian Keysers, Dr. Inga Dóra Sigfúsdóttir, Dr. Andrew Meltzoff, Dr. Ryszard Praszkiel, Dr. David Lätsch, Elina Marjamäki and Mary Gordon shared research and insights on the neuroscience of empathy and social development, the origins of empathy as shown in the early connectedness between infants and adults, and interventions that have resulted in positive outcomes for children and youth.

Each presentation was followed by a robust question and answer period with the audience and it was clear the presentations were thought provoking and needed.

Roots of Empathy values the lens of research as the organization continues to provide empathy-based programming to children on three continents. We would like to thank the Ontario Ministry of Education for supporting the 2018 Roots of Empathy Research Symposium.



Mary Gordon
Founder/President



Scott Rutherford
Chair, Board of Directors

Research on attachment relationship

ANDY MELTZOFF, PhD

Co-Director

University of Washington Institute for Learning & Brain Sciences

Social learning in infants and children is the work of building relationships. My earlier research focused on the element of imitation and this new work focuses on learning through touch and the early basis for social learning and empathy.



Andy Meltzoff

Building the brain of the child

From birth to 5 years old is the time with the brain's greatest growth and learning. During this time, the brain builds itself through social interaction and learning encounters.

The brain structure of a child can be studied through MRI, however you cannot study awake, alert, babies using MRI and so we needed to move beyond this. MEG (magnetoencephalography) can be used for brain function studies with awake, interacting babies.

The power of learning from imitation

We are born neurally immature and most brain wiring happens post-natally. The theory of social learning holds that children learn by watching and imitation; we are role models for our children. Much earlier research in 1977 found that newborns show imitative learning as early as 42 minutes old. Developmental science further determined that imitation in the form of "like me" is the foundation for social cognition.

Several studies using EEG have confirmed the brain's role in imitation and mapping the connection between self and other in babies. Using a mismatch/match experiment, it was shown that a baby's brain recognizes when their partner imitates them versus a mismatch, when they do not. Babies as young as 14 months demonstrate this ability. In other words, when bodies are in synch, the brain knows!

The role of learning from touch

Touch is a mode of communication and we know that infants have a hunger for skin to skin contact. There has been little research on how touch affects the brain. Our research sought to find a neural representation of touch, how a body connects self to others. Using MEG in babies, we were the first in the world to explore what happens in the somatosensory cortex, the touch centre of the brain, in response to touch. Different areas in the brain light up when the baby's hand versus foot is touched.¹ In the second part of this experiment, the baby watched another person's foot being touched and the foot area in the baby's somatosensory cortex lit up. In other words, the baby's processing of seeing another person touched is also through their somatosensory cortex. Nothing could be a closer self-other connection than this and this is the beginning of the neurobiology of imitation. The baby sees another body move and maps it on to their own so they can imitate it. We believe this is a foundational basis for the roots of empathy.

Institute for Learning and Brain Sciences

I-LABS Training Modules

- Online learning modules with audio and video
– <http://modules.ilabs.uw.edu/outreach-modules/>
- 19 modules that explore child development topics in-depth
- Freely accessible without registering
- Available in Spanish, Somali and Vietnamese

Roots of perspective taking

Perspective taking, beginning with the following of someone else's gaze, has importance for social learning and understanding. The infant's social brain wants to follow where the adult is looking.

Emotional eavesdropping is when the infant watches social interaction between parents, siblings, people in their world and they can learn from this in order to act according to perceived emotional consequences. In an experiment with a third person, "the emoter", the infant watches how the adult responds to an action, in this case pushing a buzzer, where the emoter reacts negatively, by saying "that's annoying" to themselves, and behaves subsequently based on that interaction. This is a strong example of social learning and role modeling where the baby reasons based on the interaction and is learning as an observer of a social interaction between others. This is the beginning of self-regulation, where the infant as young as 13-months old begins to attribute emotional traits and personality to others based on emotional signals from an adult.

This is evidence that the baby's brain can regulate based on emotions they see, even when those emotions aren't directed at them.

Imitation can also be at the roots of prejudice. Children at four and five years old, can "catch" bias from adults as demonstrated in an experiment with adults actively shunning people in different coloured shirts. Children who watch this then mimic the adults and do the same. We are role models for our children and they watch both our positive and negative signals and group people based on our actions.

Similarly, physical synchrony can be used to connect the self to the other. In an experiment with three groups of children swinging on swings, children who had been swung in synchrony prior to performing the task were better able to cooperate together on the task.² Children in the in-sync group cooperated better compared to those children who had not had a synchrony experience together prior to the task. Music is another potential way to connect people to one another.

The dissemination of this and other research around child development can be found at the University of Washington's Institute for Learning and Brain Sciences where the I-LABS training modules are freely available online. These 19 modules of 10 - 15 minutes in length each focus on a unique topic in child development including brain development, emotions, self-regulation and attachment.

Our goal is to share this information widely with parents, educators and policy makers to hopefully inform development of practical programs that impact children like Roots of Empathy, doing good out in the real world.

1 2018 paper citation

2 2017 paper, need reference



Andy Meltzoff, Mary Gordon and Christian Keyzers



An engaged audience focuses on Andy Meltzoff's presentation

Early intervention: the UK story

GRAHAM ALLEN

*Founder of the UK Early Intervention Foundation
and MP for Nottingham North, one of the
UK's most deprived areas 1987-2017*

The early intervention strategy in the UK is based on an understanding of the intergenerational impacts of inequity and that early intervention is key. As an MP in Nottingham North, I bore witness to the recurrence of the same story playing out generation after generation. Without early intervention not only will the cycle continue but the costs will increase; early intervention is less costly than late intervention.

The aim of early intervention is to build a social and emotional bedrock in every baby, child and young person. There are three basic principles to the early intervention strategy: Assess, Advise, Advocate.



Graham Allen

“The baby you help today will one day be the parent”.

In the UK this began with 21 Early Intervention centres and has since grown. Programs range from health to education to policing. The Early Intervention Foundation website provides both an overview of the program and its many facets and is a place to seek resources. The holistic approach of the programs are important to note and speak to the critical work of the Early Intervention Foundation to build relationships across disciplines and across party lines.

A challenge I faced during my time as MP and advocating for early intervention programs was that of cost and convincing policy makers on both sides of the aisle to buy into the plan. Building a case for early intervention that resonated with policy makers regardless of their political affiliations was key. This can be done both by sharing individual stories to make it more personal in order to garner emotional buy-in and by monetizing the program benefit to achieve fiscal buy-in. The fiscal advantages are clear; it costs far less to intervene early than late. In plain language, “do you want to build a three dollar wire fence at the top of the cliff or have gold plated ambulances at the bottom?”

*“...there is an urgency to continue to advocate for early intervention
for the health of all babies and children...”*

An example shared from the UK experience was of the Nurse Partnership Program, a program designed to connect young mothers to nurses. This program was implemented for the same cost as incarcerating three teens; and with the Nurse Partnership Program, 250 families were helped.

The inequity that children experience is felt throughout their lives and into subsequent generations. Early intervention is designed to pre-empt the problem rather than waiting for a problem to occur and trying to fix it. With the increasing awareness and recognition of the impact of adverse childhood experiences and their lifelong impact, there is an urgency to continue to advocate for early intervention for the health of all babies and children, regardless of political affiliation. A cultural shift may be required to fully embrace a prevention model but early intervention certainly offers a means in which to tackle that.

The empathic brain: from vicarious activations to empathic action

CHRISTIAN KEYSERS, PhD

Co-Founder & Co-Director of the Social Brain Lab

Netherlands Institute for Neuroscience

Professor of Social Neuroscience,

Faculty of Social and Behavioural Sciences

University of Amsterdam



Christian Keyzers

The Social Brain Lab is interested in how and why we are affected by others. Our research started with monkeys, uncovering mirror neurons that were active whether the monkey was acting or observing the action. This told us we use our bodies as a mirror for what others do. By mapping others' experiences on our own, we embody the experience. The question then became do humans have a similar system?

By mapping people's brains while they act and see others act, we see there is overlap in certain brain regions that are similar to those in the monkey: we do recruit our own actions while we see those of others. Further studies showed this holds true for touch as well: we also recruit our own tactile sensations while we witness the sensations of others.

What about emotions? Emotions are tricky to induce in a lab, but we found that puffing a distasteful smell into people's nose was a powerful way to induce an emotion (disgust) while measuring what brain regions are involved in your own disgust. We then showed movies of other people looking disgusted and found that viewers reactivate the very brain region that was involved in feeling their own disgust.

There is no single brain area devoted to empathy. Instead, when we view actions, we empathize with them using parts of the brain involved in actions. When we witness emotions, we empathize via a different brain region – that involved in our own emotions. But what do we really mean by empathy? Empathy is a tree of phenomena. At its roots, we have emotional contagion – we get distressed around distressed people. We think this is the root, where empathy gets its sap. Empathy proper is a more sophisticated phenomenon, where you are aware that you are feeling something for someone else. This is a level of cognitive mapping that animals may not have. With sympathy, you get warm feelings that you want to help. With prosocial behaviour, you actually do help.

In an animal model of behaviour we can examine emotional contagion and prosocial behavior, and answer some difficult questions: does activating brain regions involved in your own emotions really make you feel the emotions of others? Does it motivate you to help? Do we have mirror neurons for emotions? In our model, a witness and demonstrator rat are arranged face to face. The demonstrator is administered a frightening (but not painful) shock. If the witness has previously experienced the shock then it exhibits a large fear response – as if it had received the shock itself. If it is naïve, it exhibits no response. The witness's response in turn feeds back on the demonstrator's own response: a calm witness calms the demonstrator, and fearful witness amplifies

FIGURE 1: Emotional Contagion



Atsak et al., PlosOne, 2011; Carrillo et al., PlosOne, 2015

the demonstrators anxiety. Why does this happen? It may possibly have implications for survival, to collect information about danger from others. Another possibility is that rats are social animals and care for each other. Possibly both reasons may apply.

This has implications for learning to share the actions and emotions of others. Empathy is a result of experience. Newborns' connections between seeing and moving are randomly wired but fundamentally "what fires together, wires together." When baby sees herself move, she can connect the neurons that make her see a grasp with those that made her grasp. Later, when baby sees someone else grasp, these connections make it activate the neurons that would make herself grasp. She can now embody and mirror the actions of others. Plasticity of connections is seen in adults as well, although less so than in infants.

Reduced empathy can be seen in psychopathy. If slapped, psychopaths and controls activate their pain regions similarly. When watching someone else in pain, however, psychopath recruit their own pain brain regions much less than controls. However, if we asked the psychopaths to try and empathize with the people in the video, they could suddenly activate their own pain circuits as well as controls – They do not lack the ability for empathy, they just use that ability less spontaneously

This shows us: there are at least two dimensions to empathy – the ability and the propensity for empathy. To nudge people to become more empathic you may thus have to work on two levels. For some people, you may have to teach them how to be empathic. For others, you may have to teach them to use their empathy more often. But keep in mind: when you empathize, you feel what you would feel in the stead of the other, based on your own experiences. This may or may not be what the other person is experiencing.

In summary, research into the mechanisms behind empathy tell us that it is part gift, part responsibility, and part decision.

Improving lives based on evidence

INGA DÓRA SIGFÚSDÓTTIR, PhD

*Scientific Director of the Icelandic Centre for
Social Research and Analysis*

Professor of Psychology

Reykjavik University and Columbia University

In 1997, Icelandic teenagers reported a high prevalence of high-risk behaviours; over 40% of teens reported having been drunk in the past 30 days and nearly one in four smoked on a daily basis. More concerning, rates of substance use had been steadily increasing for the past 10 years. Recognizing a need to intervene and change this upward trajectory, Iceland adopted policy interventions that were evidence-based and took a community approach.

Needing to understand the teenagers, a large database was established to quantify patterns of teen consumption of alcohol and accidents and injuries related to alcohol use. Our current database spans 1997-2017 and data has been collected on children 10-13, 14-16 and 16-20 years old.

What were the findings?

Using the database, we found:

- In 1995, Iceland ranked fifth in the world for the percentage of students in the tenth grade who had been drunk 10 times or more in the past 12 months (21%) and second in the world, behind the UK, in the percentage of students who had accidents or injuries related to alcohol use
- There was a strong connection between increased amount of time spent with parents being correlated to a decrease in the percentage of girls in the ninth and tenth grade who had gotten drunk in the past 30 days



Inga Dóra Sigfúsdóttir

- There was a strong connection between smoking and participation in sports with the percentage of teens who smoked daily decreasing in teens who practice sports

What were the policy changes and interventions?

The focus in Iceland was on primary prevention, meaning to prevent the development of substance use before it starts. It is important to postpone the timing of a teen's first drink.

This is critical as people who report starting to drink alcohol before 15 years of age are four times more likely to be alcoholic at some point in their lives. Based on the research findings, policy focused on four areas. (Figure 1)

The four areas of policy intervention based on research were family factors, peer group, unstructured activities and organized youth work. The family factors that were identified as important were the role of parents to provide emotional support, caring and warmth, along with monitoring and the amount of time spent with their teen. The influence of a teen's peer group was important as having friends who use drugs increases the risk of substance use. Organized youth work, in the form of sports, art, clubs or extracurriculars at school was associated with less substance use. For unstructured activities, when parents know their teen's friends and the parents of their friends, this lowers the risk of substance use.

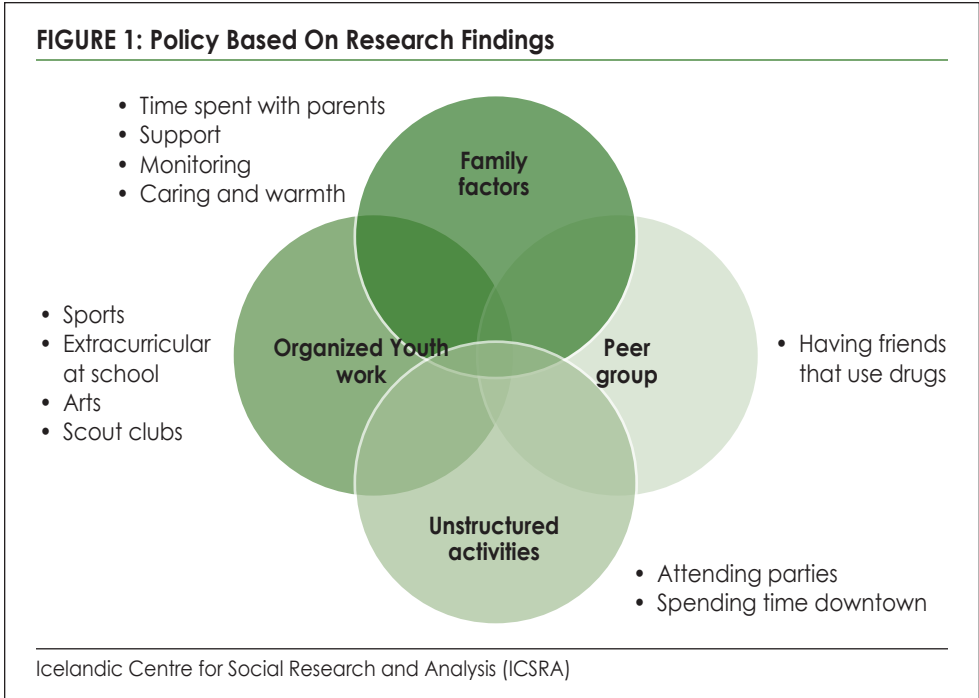
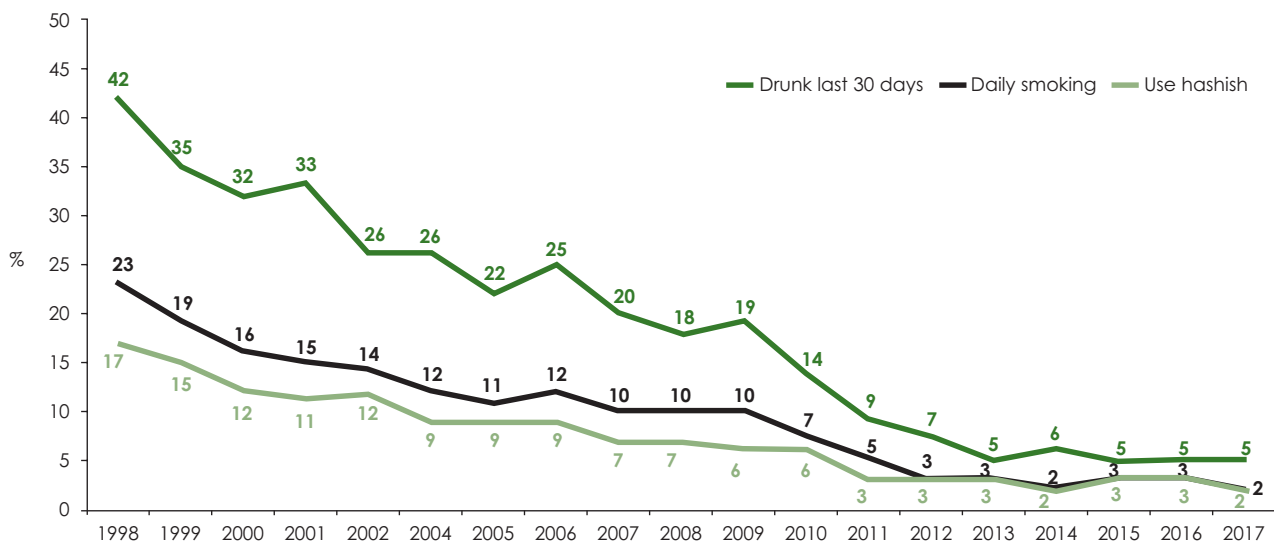


FIGURE 2: Positive Development Over 20 Years



Icelandic Centre for Social Research and Analysis (ICSRA)

Examples of policy-based initiatives that were undertaken in Iceland include:

- Neighbourhood level: Parental watch program
- Community level: Rolled out a pre-paid leisure time card to enable teens to participate in formal, structured youth activities
- National level: Change included media campaigns aimed at discouraging teen alcohol use and smoking

In 2007, a highly publicized annual ‘Prevention Day’ was launched by the President of Iceland with three critical goals:

- Spending one hour per day with family
- Participation in some organized sports or youth activities
- Waiting to drink until 18 years old or older

What has changed?

Parents and teens are spending more time together, with 53% of teens in ninth and tenth grade reporting they often/almost always spend time with their parents during weekdays. The rate of parental monitoring also increased as did participation in organized activities.

These changes translated into dramatic changes in teen behaviour over a 20 year period. (Figure 2)

This quiet revolution in Iceland that has dramatically changed teen behaviour can pave the way for interventions for youth in Europe and around the world. The principles of this set of interventions can work in different countries and societies. All children want to be healthy and happy and all parents love their children; if we start there, then it is an easy fit for the principles of these interventions to work in different countries and societies around the globe.

Serendipity, empathy, and dance

RYSZARD PRASZKIER, PhD

Researcher Emeritus

Centre for Complex Systems & New Technologies

University of Warsaw

Professor

International Institute for Social & European Studies

Hungary

Ashoka: Innovators for the Public



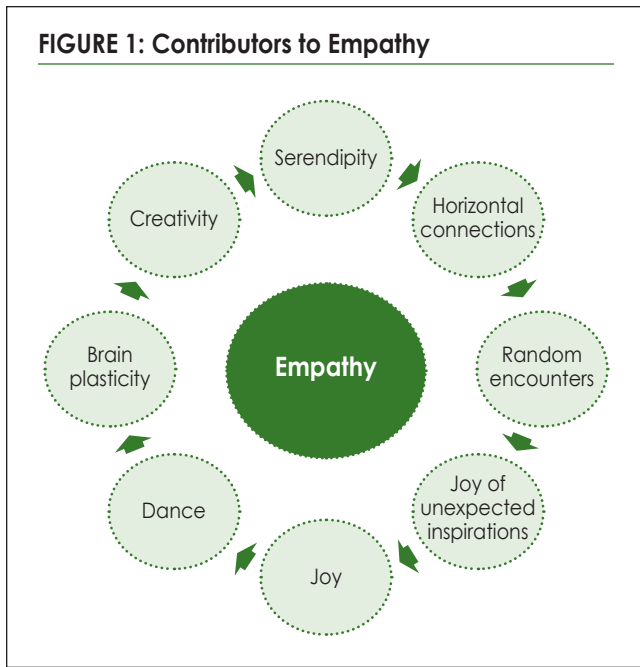
Ryszard Praszkiel

Empathy plays a crucial role in boosting serendipity. Can one boost something that is by definition an unintended good consequence, the finding of something without looking for it?

In business, serendipity happens when random encounters through horizontal connections lead to inspiration and innovation. To increase innovation, forward-thinking businesses develop a milieu, in many cases through architecture, that fosters serendipity and nurtures empathy. New people need to tune into each other in order to inspire and be inspired. Examples of this are seen in the Venture Café Cambridge Innovation Center, a shared space between business and academia, in MIT’s interdepartmental spaces and Google’s engineering hubs. The ability to connect horizontally in these spaces fosters innovation. Similarly, horizontal connections enable empathic synchronization between people. This only happens when responding with empathy.

With these empathetic encounters comes the joy of unexpected inspiration. The joy of inspiration requires opening up and being empathetic to the newly met person. Joy relates positively to creativity in organizations. Positive affect is shown to be

FIGURE 1: Contributors to Empathy



a predecessor of creative thought. For organizations, even artificially induced joy can lead to improved performance on tasks that require creative ingenuity.

Joy and play augment creativity; play has been shown to augment neural connections and facilitate divergent thinking capability. There is a cycle of mutual reinforcement where dopamine and endorphin release leads to feelings of joy, which can lead to increased creativity. This increased creativity can in turn lead to enhanced endorphin release. In addition to the individual effects of joy, it can be thought of as an empathy carrier. Sharing pleasure is one of our earliest experiences, implicit in the parent-child relationship. Empathic joy is a predictor of better student outcomes and a proactive and positive interaction with students.

As joy has been demonstrated to lead to enhanced creativity, dance is known to augment brain plasticity. Dance movement is a medium for sensing, understanding and communicating ideas, feelings and experiences. Dance stimulates kinesthetic empathy, harmony, openness to others and creativity. As

further evidence of the role of dance in augmenting brain function, it has been shown to reduce the risk of dementia and has also led to improvement in Parkinson's disease.

These observations are first steps toward new studies in this area. What might the corporation of the future look like? Perhaps we will see more workspaces that are open places that foster empathic horizontal and diagonal paths of communication, with the joy of work and dance in small and large group settings. We see this today in AIESEC, the international student organization, uniting university students in their exploration of peace and fulfillment of humankind's potential. Spontaneous dancing can be found at the start of each conference day.



The engaged audience tunes into Dr. Praszkie's presentation.

Roots of Empathy research – Bern University Switzerland

DAVID LÄTSCH, PhD

Professor of Developmental Psychology

Division of Social Work

Bern University of Applied Sciences



David Lätsch

In 2014, Roots of Empathy began implementing its first programs in Switzerland. In 2015, with funds provided by the Swiss Child Protection Fund, we began studies to determine if Roots of Empathy was having a measurable impact and, if so, where and how.

This research sought to examine not only some of these facets of empathy but also behaviours linked to empathy.

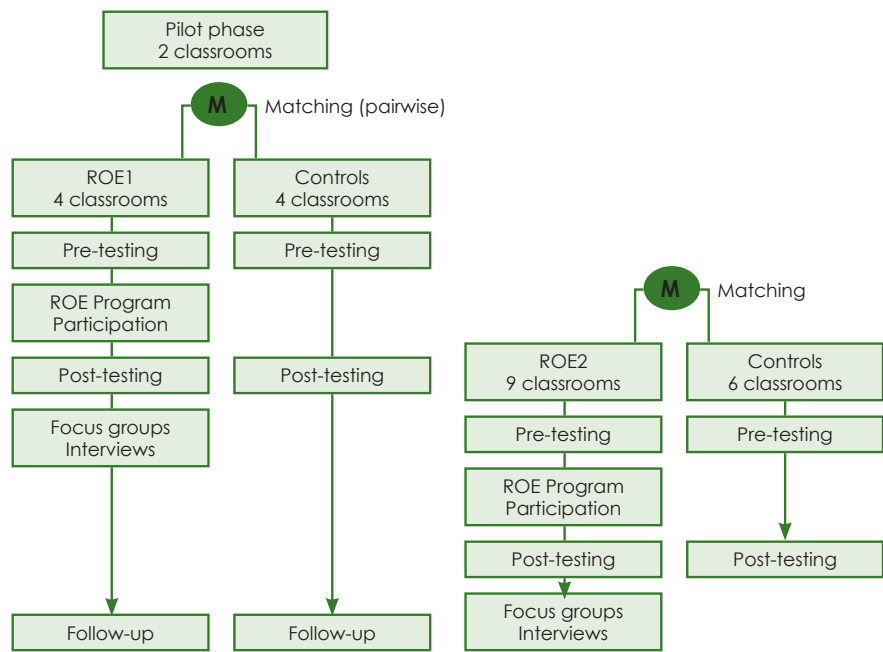
The study addressed the second and third Swiss cohorts of Roots of Empathy (2016 and 2017). The research design was a pre-test, post-test, matched controls trial. (Figure 1) A mixed methods approach was taken with both qualitative and quantitative measures including self- and teacher reports, peer nominations, behavioural testing and focus groups.

Did Roots of Empathy work?

Both cohorts and controls were well matched at baseline with no significant differences observed in baseline characteristics. The largest effect size was a statistically significant increase in affective empathy but not other types of empathy. Aggression, both physical and verbal, were also significantly reduced. Prosocial behaviour, altruism and emotional regulation all saw a statistically significant increase. Emotional problems and externalizing problems, based on teacher reports, were also significantly decreased. Further research verified that not only did these changes hold over time, the effect size increased one-year post Roots of Empathy program.

FIGURE 1: Study Design

The study



Bern University of Applied Sciences

Who did Roots of Empathy work for?

We found it striking that a program of such a short duration was able to produce even small detectable short- and mid-term effects. The effect was more strongly seen in girls and those in the medium range at baseline. While it may not have had a strong impact on all aspects of empathy, the impact on aggression and prosocial behaviour is very important. Through statistical modelling, it was found that prosocial behaviour is mediated by empathy and aggression is mediated by both empathy and emotional regulation. Essentially, while the program may not have strongly promoted children’s ability to be empathic, it did promote children’s propensity to use their empathy.

A Youth Workers' Guide to Supporting Mental Health

Elina Marjamäki

Specialist Coordinator – Development

Children and Young People

The Finnish Association for Mental Health



Elina Marjamäki

The Finnish Association for Mental Health is the world's oldest mental health NGO, founded in 1897. It focuses on promoting mental health and preventing mental health problems and building a strong and inclusive civil society, impacting politics and policymaking and providing mental health materials and training, for both professionals and the public. It also provides both professional and volunteer-base help and support in crises such as national help lines, chat services, and in-person help.

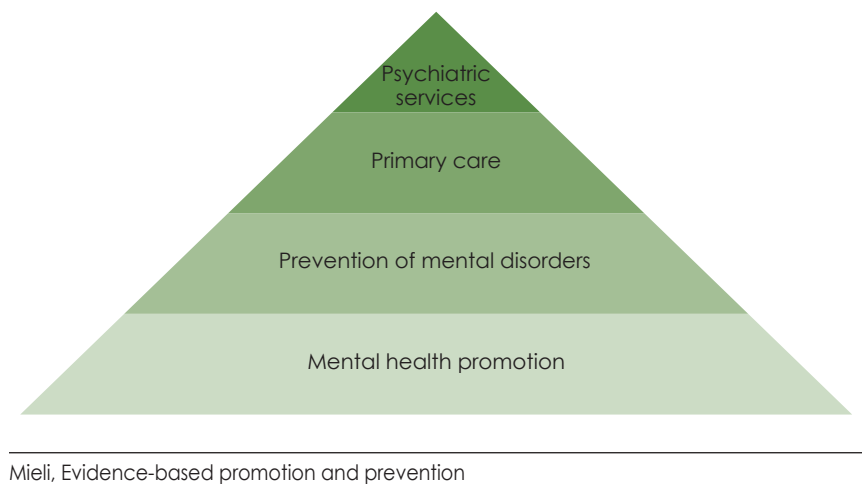
Mental health flourishes in societies that are just, equal, and non-violent; where children are not maltreated or bullied, and where there is economic equality and fairness. Bullying or maltreatment in childhood increases the likelihood of mental health issues in adulthood.

The best promoters of mental health in children besides parents are people who work with them, such as early childhood educators, teachers, youth workers, and coaches. It follows that the best arenas for mental health promotion in children are schools and other arenas where children and young people spend their days. If we consider the pyramid of mental health systems, the base of the pyramid is mental health promotion. The challenge is that the day-to-day promotion of mental health doesn't make headlines; creating joyful moments or teaching children skills that strengthen their mental health,

such as emotional and interaction skills or relaxation skills or coping skills doesn't get airplay. Our work is to make mental health promotion visible and exciting.

Through the 1990's, there were no universal life skills teaching in schools in Finland and it became evident that life skills among young people started to decline. Therefore, in 2004 we launched a new school subject "health education" for upper basic school for 13–16 year olds; and this was our NGO's "golden ticket" to get the "Mental Health" into the schools.

FIGURE 1: Mental Health Systems



But not without a few hurdles. There were a lot of stigma associated with mental health and this created a lot of anxiety among teachers and students. So, mental health needed a new paradigm. We started to talk about mental health as a skill that you can learn, that you can teach and that you can support and strengthen;

- Everyone has mental health
- Everyone needs mental health
- Mental health is the foundation for well-being

Mental health teaching was co-created with health education teachers who tested the ideas with their students. Ideas were put into action with board games, computer games and a manual and 2-day training package for teachers. Ministry of

Education and Culture gave us funding to disseminate the material and two-day training program for all health education teachers nationwide in Finland. After health education teachers, the mental health training and material has spread to youth workers, lower basic schools, early education and child health clinics. “Mental Health Power” was created together with youth workers for youth work taking into account the nature and style of their work, and it is different from e.g. teacher’s work. We wanted also to make visible the importance of the youth work in strengthening mental health of young people.

The mental health skills that we have seen improve with this curriculum are:

- Daily routines: sleeping, eating, exercising, relationships, hobbies, values
- Empathy and emotional skills: vocabulary, recognizing, accepting, tolerating
- Interaction, social skills
- Coping skills and the importance of having more than one coping skill
- Sexual health, sexual growth, being accepted and loved and the importance of inclusion
- Having a safety net; learning to seek help, talk about problems, and know who to reach out to
- Stress management and recovery
- Self-knowledge, self-esteem, self-compassion and appreciation

The feedback from youth workers on this training has been positive with reports that it widened their perspective on mental health. The training and material gives them concrete tools and information they can use with young people to promote mental health as a skill and feel empowered in their role.

The long-term results of implementing this curriculum have been striking with feelings of overall loneliness and bullying decreasing among young people and reports of good quality parental-child relationships increasing. There has also been an increase in students feeling that their teachers are interested in them. This focus on mental health as a skill to be taught and learned has paid dividends; Finland is ranked number one in the United Nations happiness rankings.

The power of kindness: why empathy is essential in our everyday lives

BRIAN GOLDMAN, MD

Emergency Room Physician

Radio Host

Healthcare Pundit

Author

There is a distinction between sympathy, which is a gesture of concern for another person without feeling what they feel, and empathy. Empathy is the capacity to use your imagination to put yourself in the place of another person. Empathy can be further broken down into:

- Affective empathy: emotional contagion (feeling another’s pain)
- Cognitive empathy: perspective taking
- Emotional concern: what drives humans to take helpful action

What is kindness and why did I write a book about it? Kindness is the quality of being friendly, generous and considerate. I define kindness as a state of synchronization between you and another person, often unexpected in its power.



Brian Goldman

What lessons have I learned on my search for personal and professional empathy?

Personal lessons I have learned are:

- If you have had emotional deprivation, use it to help others in distress
- If you have been lonely, embrace it to know how others who are lonely feel
- Use your mistakes and embrace your feelings to empathize with those who are where you have been
- Share openly what you are ashamed of for shame cannot flourish in the open
- Be mindful and in the moment
- You can always find at least one thing in common with everyone on this planet
- Your gift for empathy is in your pain and disappointment

Lessons I have learned and can share for professional empathy are:

- Centre yourself as you work
- Smile, acknowledge and greet people
- Sit down and slow down
- Communicate clearly; how do you do that? By imagining you are the one receiving the information you are giving
- Try a little humour
- You are human – act like one
- If you have a choice between being right and being kind, choose kind

Why is there an empathy gap in our current health care? There are some medical cultures that undervalue empathy, there is a lack of training, and specialization of care leads to fragmentation where Health Care Providers, or HCPs can do their jobs without actually ‘caring’ for the patient.

The risks of fragmentation of care are made real with the life story of Greg Price, a pilot who waited 400 days for a referral that turned out had been lost. He suffered from abdominal pain and when he went to a walk-in clinic, the abdominal pain was caused by testicular cancer metastases. He died from complications of his previously undiagnosed cancer. Greg’s father David has commissioned a film to depict his son’s story and to help educate so other people don’t fall through the cracks of the health care system where “lots of people provided good care but no one cared for him.”

How does this happen? One contributing reason could be our obsession with speed. There is always a time crunch that translates into how many minutes you spend per patient delivering care where complexity is rising and you feel like you are always behind. We know that there are rising rates of burnout among medical students and residents and high levels of burnout correlate with decreased empathy scores on the Jefferson empathy scale.

The human brain is hard wired to be empathetic. Newborns cry when their mothers cry and they mimic one another’s faces and later vocalizations. This is the basis for attachment and empathy, which is such a key prosocial trait that it would be difficult to build civilizations without it.

Empathy comes in many forms and we are all hardwired for empathy with the exception of narcissists, psychopaths, sociopaths and machiavellians. Dr. Derek Mitchell at the University of Western Ontario has studied empathy in psychopaths and they are unable to respond to the distress of others and show reduced activity in the amygdala.

Some people are born with empathy and others have empathy thrust upon them by circumstances. The key is to recognize when circumstances give you the opportunity to be your kindest self.

*Mary Gordon and Roots of Empathy bring empathy to at-risk children with the core belief that
“I’m no different from them”*

The state of empathy

MARY GORDON, C.M., O.N.L., LL.D.

Founder/President

Roots of Empathy

I appreciate the reflections and visions of the world that we have heard over the last two days. We have talked about empathy, the types of empathy, the neurobiological foundation for empathy, and the cultivation of empathy. I'd like to talk about our capacity for empathy.

There are countless stories about the absence of empathy over human history – from neglect to bullying, to wars, to genocide. Today we have 65.5 million people displaced from their homes – forced to flee wars, genocides, natural disasters. Sixty-five million people plus on the move, in need of help, shelter, security. This is a less visible example of the absence of empathy.



Mary Gordon

*“The children are not part of the future they are 100% the future.
They will determine the civility of the world.”*

This symposium is about knowledge transfer and the scientists who have come here to share their work, value it. Empathy is the driver for the 21st century. Empathy leads to connection and connection is crucial. We have soared into our solar system, and explored the deepest canyons of our oceans – but we have yet to navigate the figurative depths of the human heart. In its most basic manifestation, connection forms from touch. A mother's caress, a friend's hug, a colleague's hand on one's shoulder, a leader's handshake. The power of human touch is incalculable. It can speak volumes without a word. In the joy of birth, in the face of death, at the height of bliss and the deepest depths of grief – we reach for one another. It can eclipse every other human sense.

Empathy is crucially important and it is under siege. We must learn to embrace, share, include. We have all the research we need to make life fair, equitable, and inclusive – where everyone has a sense of belonging, where differences are celebrated and our common humanity leads to connection. The connections made between presenters over the last two days are already translating into joint research projects. Here is to knowledge transfer and new research collaborations.



Roots of Empathy
Racines de l'empathie



@ Roots of Empathy

tel: 416-944-3001 fax: 416-944-9295

email: research@rootsofempathy.org

web: www.rootsofempathy.org

Canada Charitable No. 89643 4818 RR0001

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