

Perspectives in Infant Mental Health

Professional Publication of the World Association for Infant Mental Health

Contents

Message from WAIMH president Campbell Paul regarding the 17th WAIMH Congress in Brisbane, C. Paul.....1

WAIMH Executive Director Corner, K. Puura.....3

Collaborate, support and engage at WAIMH 2021, E. Hoehn, L. Morton and E. Taylor4

From the Editors, M. Foley, P. O'Rourke, J. Manly Todd, A. AbuAli, S. Maharaj, C. Kulkarni and M. Sorsa6

Remembering Nancy Suchman, A. Berg7

Signal-Perspectives in Infant Mental Health Articles Revisited: A Paper by Daniel Siegel, The Developing Mind: Toward a Neurobiology of Interpersonal Experience, from The Signal (1998), The Perspectives in Infant Mental Health Editorial team.....8

The Austrian Early Childhood Intervention Programme: Support for families with young children in burdened life circumstances to improve relational health and well-being (A brief overview), G. Antony, T. Bengough, C. Marbler and S. Sagerschnig.....16

WAIMH Position Paper: Infants' Rights in Wartime, WAIMH.....22

WAIMH Office News: IMHJ Store and memberships, M. Sorsa and N. Aalto.....23



Message from WAIMH president Campbell Paul regarding the 17th WAIMH Congress in Brisbane

By
Campbell Paul, Melbourne, Australia

Associate Professor, President of WAIMH

Dear WAIMH colleagues and friends,

In the midst of these extremely stressful times around the world, I wish you well.

We have the COVID-19 pandemic, economic and political turmoil, conflict and ongoing mass displacement of children and families as well as natural disasters. We are also reminded of the 10th anniversary of the tsunami and the disaster in Fukushima, but as with other catastrophes around the world, Dr Hisako Watanabe and her colleagues in Japan show us what we can do as professional groups when we work together, sharing our observations, our learning, and our interventions in the interests of infants and families.



WORLD ASSOCIATION FOR
INFANT MENTAL HEALTH

WAIMH Central Office

Tampere University, Faculty of Medicine and Life Sciences, Arvo Ylpön katu 34, Arvo-building, 33520 Tampere, Finland
Tel: + 358 50 4627379, E-mail: office@waimh.org, Web: www.waimh.org

Editorial Staff

Editor

Maree Foley, Switzerland

Associate Editors

Azhar Abu-Ali, United Arab Emirates

Chaya Kulkarni, Canada

Patricia O'Rourke, Australia

Jody Todd Manly, United States

Intern Editor

Salisha Maharaj, South Africa

Production Editor

Minna Sorsa, Finland

Perspectives in Infant Mental Health is a quarterly publication of the World Association for Infant Mental Health. Address correspondence to Maree Foley (maree.foley@extra.co.nz). ISSN 2323-4822. All opinions expressed in Perspectives in Infant Mental Health are those of the authors, not necessarily those of WAIMH's. Permission to reprint materials from Perspectives in Infant Mental Health is granted, provided appropriate citation for source is noted. Suggested format: Perspectives in Infant Mental Health 2021, Vol 29 (1).

This process of sharing and learning from each other is so important. We from the WAIMH organisation and the extensive Brisbane Congress teams are really looking forward to meeting with as many of you as we can in June, either in-person or in the virtual space on-line. Indeed using the amazing communication technologies to which each of us has had to adapt, I truly hope that we will be able to reach even more people than in previous congresses. I know that previously many of our colleagues were unable to come to Rome, Prague or Edinburgh because of the distances and the cost involved, but hopefully, the relatively modest fee for on-line participation in the Congress should enable thousands of people to join up together.

Participants from Australia and New Zealand who can be with us in Brisbane will have an extra special program, including a welcome reception, Congress dinner and the opportunity to meet with each other in person day by day over refreshments at the Convention Centre beside the Brisbane River. The traditional Pre-congress Institutes have undergone a chronological readjustment such that instead of being all day before the Congress, they will be spread through the middle hours of the Congress days.

Nonetheless, everyone will have an opportunity to share actively together through the Q&A sessions following scientific and clinical presentations and smaller group gatherings using zoom to talk with a number of the Congress presenters.

Emma Taylor from ICMS Australasia our Congress organiser, Dr Elisabeth Hoehn and Libby Morton from the local organising committee have done an amazing job pulling together such a flexible, creative program that will be accessible to huge numbers around the world. I'm doubly fortunate because I will be there in Brisbane which is just a two-hour flight for me and our colleagues in Melbourne.

With cautious enthusiasm, Australians have begun to return to gatherings of larger groups of people such as at major sporting events and at the theatre. I thoroughly enjoyed the return of the Australian Ballet to the stage a few weeks ago, where the dancers were so excited to be sharing their passion for dance with people in the audience. The venue was a big stadium at the Melbourne Tennis Centre, so Covid safe practice and social distancing were possible. For those of us fortunate to be in Brisbane for the Congress in June we will have the

opportunity to meet in person, but also to enjoy what Brisbane has to offer in exhibitions, music, the arts and food!

The scientific program is exceptional, and I'm sure you will enjoy presentations from our four keynote speakers. Prof Helen Milroy from Western Australia will commence the Congress proceedings, building on the theme of the Congress, with her presentation entitled "Babies Born into Stories", and will show us how storytelling, in particular, indigenous storytelling is such a powerful way to influence and strengthen babies, their relationships and their development. We are so fortunate to have Helen bring her wisdom to our Congress.

Prof Jonathan Green from Manchester is a pioneer in work with very young children at risk of developing autism. He has demonstrated how innovative clinical interventions focusing on early relational and social development can mitigate the development of autism in vulnerable infants.

Dr Rosario Montirosso is the chief of the 0-3 Center for the Study of Social Emotional Development of the at-Risk Infant at the IRCCS Eugenio Medea centre, Bosisio Parini in Italy, and he has been working with parent-infant relationship problems for at-risk infants for some 25 years. His presentation will take us into the rapidly developing field of applying neuroscience and epigenetics to our understanding of the role of the baby's body, embodied interactions in the human infant's attuned social interactions, and early development.

From the University of Michigan, USA, Dr Kate Rosenblum who is a clinical and developmental psychologist, directs the Zero to Thrive multidisciplinary program which promotes the well-being of families with young children experiencing major adversity. Dr Rosenblum is VP of the board of the Alliance for the Advancement of Infant Mental Health, one of our strong infant mental health partners.

WAIMH past President, Prof Kai von Klitzing, from Leipzig, will lead a key symposium considering how we need to acknowledge and understand the social and cultural aspects of attachments and relationships and how there is real diversity across different cultures and communities.

These amazing presentations represent only a tiny amount of the Congress program with something like 220 presentations much of which you will be able to view during the 4 ½ days of

the Congress itself, but the rest over the subsequent six months at your leisure. I'm sure everyone who has attended a busy Congress has experienced the frustration of knowing that there are really interesting and important sessions that you like to be able to attend but you can't because there is something else you really want to go to! With the Brisbane Congress, this should not be a problem as you'll have the opportunity over the subsequent six months to listen to any or all of the presentations. This Congress represents really great value enabling participants to hear from their colleagues working at the grassroots, sharing the same sets of challenges and triumphs as well as acknowledged experts in research, policy, epidemiology and clinical service delivery.

Some people may feel a little intimidated by having to prerecord the presentation or use virtual technology to connect with Congress participants. Recording with Zoom is pretty straightforward, and the guidelines on our Congress website are easy to follow. I know at the beginning of the Covid-19 pandemic I was introduced to the whole new world of virtual conference technologies and teaching methods. Even more challenging was the thought of doing infant-parent work, meeting babies and their families by telehealth. I was dramatically surprised at how adaptable we can be using these technologies, and even more importantly how adaptable are babies, toddlers, people and their parents in adapting to use the technology. Especially seeing babies and parents face-to-face is the best, but when that is not possible I'm amazed at how even very small infants can respond to your voice, your face, your gaze, simple toys and sounds over the phone or computer screen. It is amazing how important gaze and voice are. At the Congress, there will be a number of presentations and opportunities to discuss the impact of the Covid-19 pandemic on our clinical work and the necessary adaptations of virtual technologies.

So, I am really looking forward to hopping on the plane in two months to go up to Brisbane, and equally to hopping on to the virtual network to meet up again with infant mental health colleagues all over the world. I hope that after the Congress you will also be able to link together in your own local infant mental health networks to discuss the challenging ideas, research, and clinical riches that the Congress will bring. Meanwhile, I do hope you keep well and safe with your own families and communities.

WAIMH Executive Director Corner

Dear colleagues and friends,

The year 2021 has started with an ongoing struggle with the COVID-19 pandemic, where some countries and areas are practically virus-free and some areas where lockdowns with restrictions are still needed. In my previous welcome address, I was still hopeful that we would all have been vaccinated against the virus by June 2021 and could come together in Brisbane, but this clearly is not possible in the current situation. However, it turns out that postponing the Congress for a year did give us time to prepare for all the possible scenarios we anticipated in 2020. Sometimes our monthly zoom-meetings with the excellent team in Australia, chairs of the Local Organizing Committee, Elisabeth Hoehn and Libby Morton, Emma Taylor from the professional congress organizer and WAIMH President Campbell Paul have been quite hair-raisingly worrying with discussions on sudden lockdowns in different parts of Australia, and what to do if that happens just prior to the Congress.

In these discussions, the team has shown its capacity to be truly creative and found ways to be prepared for every possibility. What now looks likely is that in June 2021 Australia and New Zealand will be allowing larger gatherings, and participants from those regions will be able to attend the Congress in person. For participants from other continents and regions, we will offer participation in the Congress as an on-line event. In case there is a sudden lockdown in Australia, we are fully prepared to organize the Congress completely on-line with very short notice. At this point, I can say with certainty that we WILL have the 17th World Congress of the WAIMH in Brisbane either as a hybrid Congress or an online-Congress, and we are looking forward to meeting as many of you as possibly face-to-face and those of you who cannot be on-site, we hope to meet on-line.

As it became clear that most of the Congress program would have to be online and pre-recorded, we have tried to figure out ways to include live interaction in every way that we can. The program schedule is built with careful consideration concerning different time zones. For the on-site attendees, there will be a live program during the day. The plenaries and masterclasses are live presentations scheduled to the program so that people in every time zone will be able to see at



least something live without having to be up in the middle of the night.

As all the plenary sessions will also be recorded, those taking place at an unsuitable time can be watched later. We have also tried to build in possibilities for the audience to interact with the presenters with chat and live Q and A times that can be seen in the program. It will not be the same as being there in person, but we hope that these little things will allow at least some interaction between the presenters and the audience.

In my previous welcome, I wrote how much I looked forward to the possibility of seeing you all in person and being able to share experiences and many smiles and laughs with you. For those of you who can be onsite at the Brisbane WAIMH Congress, I send my warmest wishes and hope that you will enjoy seeing friends and new acquaintances. I miss that opportunity now even more, but live in the hope that we will meet again, "don't know how, don't know when, but I know we'll meet again some sunny day..." Until then let us wash our hands, keep each other safe and get together one way or another at the 17th WAIMH World Congress in June 2021.

With warmest wishes to you all,

Kaija

Collaborate, support and engage at WAIMH 2021

By Elisabeth Hoehn, Libby Morton and Emma Taylor

Introduction

The organisers of WAIMH 2021 in Brisbane in June are encouraging members to collaborate, support and engage in this year's event like never before as the impact of the global pandemic continues to impact our lives, including the assessment and treatment of infant mental health.

Infant mental health specialists the world over are having to adapt to our changed circumstances in ways that could hardly be imagined just 12 months ago, with some having to manage patient interactions remotely or developing new strategies to provide the best outcomes for patients and families.

WAIMH in 2021 is a product of our new world by being held as a hybrid event and as such its importance cannot be underestimated.

Its theme - *Creating stories in infant mental health: research, recovery and regeneration* – is all about collaborating, supporting and engaging with one another.

Through the platform and program that has been developed, WAIMH 2021 will bring delegates together like never before whether they are there in person or attending virtually.

To achieve this, WAIMH 2021 has some exciting new initiatives that will foster greater collaboration and engagement wherever you are in the world.

ENGAGE: Greater inclusion with scientific program

We are confident that the WAIMH 2021 Scientific Program will allow for greater inclusion and participation by delegates wherever they are in the world.

The Scientific Program for WAIMH 2021 has been broken down into three opportunities:



- WAIMH 2021 – Live to the World
- WAIMH 2021 – Live in Brisbane
- WAIMH 2021 – On-demand

Attendees can view the sessions to be presented live, including live Q&A, and watch all 200+ hours of on-demand content at their own pace.

For those attending in person, the Live in Brisbane program is also available, including the exclusive sessions for in-person attendees only. To view the program information follow the links below:

WAIMH 2021 on-demand program listing - <https://www.waimh2021.org/on-demand-list.php>

WAIMH 2021 Live in Brisbane & Live to the World Program - <https://www.waimh2021.org/full-program.php?d=2#tables>

News for presenters

All accepted presenters should have now received detailed information and instructions regarding preparation of presentations for WAIMH 2021. If you haven't received the information, then please contact us at program@waimh2021.org

COLLABORATE: Register now

Registrations for WAIMH 2021 are still open and now include opportunities for

attendance virtually or in-person. Those living outside of Australia are encouraged to register as a virtual attendee to gain access to the Live to the world and on-demand program from the comfort of their home or office. If you are able to travel to Brisbane, you can participate in the live in Brisbane program as well as gain access to the full suite of on-demand content.

Registration information can be found here - <https://www.waimh2021.org/registration.php>

SUPPORT: Sponsor a delegate

The impact of COVID-19 and the constraints it has placed on WAIMH in Brisbane has, paradoxically, provided us the opportunity to offer a greater number of sponsorships to allow colleagues from developing countries to attend the World Congress.

This is in line with WAIMH's goal to be truly multi-national, culturally diverse, and accessible to everyone.

Delegates from Low Income (LIC), Lower-Middle (LMIC) and Upper-Middle Income (UMIC) countries can be sponsored by High Income Country peers - by individual infant mental health professionals, by Affiliate Associations of WAIMH or by companies.

To donate to the sponsorship fund, to check your eligibility, or to apply for sponsorship please follow this link <https://waimh2021.org/sponsor-a-delegate.php>

Sponsor WAIMH 2021

Digital Advertising Package – Level One - \$2,200	Digital Advertising Package – Level Two - \$800
<ul style="list-style-type: none"> • Company Bio – 100 words • Hosting of 2 Video Reels • Hosting of 4 Downloadable PDF Brochures • Contact Details and Hyperlink to your website • Delegate Meeting Hub access • Two Virtual Congress Registrations 	<ul style="list-style-type: none"> • Company Bio – 25 words • Hosting of 1 Video Reels • Hosting of 2 Downloadable PDF Brochures • Contact Details and Hyperlink to your website

It is now easier than ever to highlight your organisation's support of infant mental health to over 1,000 participants at WAIMH 2021 Hybrid.

In addition to the offerings in the Sponsorship Prospectus, we are offering the below digital advertising packages on the interactive virtual platform. These represent great value for money as not only is this visible to all participants during the event dates, but your organisation's information will remain on the platform for six months after the

live dates and we'll send you the analytics so you can track your visitors.

For further information including existing in-person opportunities in Brisbane please view the prospectus by clicking this link: [WAIMH 2021 Sponsorship Prospectus](https://waimh2021.org/SponsorshipProspectus).

Contact
Andrea O'Sullivan
WAIMH2021 Sponsorship & Exhibition Manager
Email: sponsorship@waimh2021.org
Tel: +617 3255 1002

Art competition following the 2021 theme

Indulge in a bit of escapism during this COVID pandemic and get creative and inspired with the WAIMH 2021 Art Competition and the WAIMH 2021 Kovid Koala Competition!

WAIMH 2021 Art Competition

The Congress theme - *Creating stories in Infant Mental Health: research, recovery and regeneration* - is around creating stories that will help infants thrive to live compassionate, creative and productive lives, and to share those stories with the wider infant mental health community from around the world.

The art competition calls for visual representations and interpretations of the WAIMH Congress theme in an original piece of artwork or photo.

Accompanying the artwork or photo, in 50 words or less, write a short statement about what has inspired the artwork. This will be displayed alongside the entries and the judges will also refer to this statement when reviewing entries.

For more information on the art competition including guidelines, criteria and competition dates follow this link, <https://waimh2021.org/art-competition.php>

WAIMH 2021 Kovid Koala Competition!

The WAIMH Kovid Koala Competition has been re-imagined for WAIMH 2021 in a new COVID edition!

We encourage you to take a picture of yourself with a koala in your natural habitat. As we are all experiencing more time within our home environments due to the pandemic, we want to see you and your koala in your "new normal" and life during COVID-19.

All you need is a clip on koala, koala toy or even a printed image of a koala and a camera. We encourage you to have fun and be creative.

For more information on the COVID edition of the Koala Competition including how to submit, follow this link, <https://www.waimh2021.org/koala-competition>



Picture from Art Exhibition in WAIMH 2012 World congress. Jan Vermeiren, Mannetje. (2010). (Painted terracotta figure, 39cm) Reminding us of ancient fertility sculptures, the figure is poignant; a reminder of both the beauty and the vulnerability of human birth. Mannetje (little man), shaped in clay, echoes the first man, the first person, shaped out of clay in Africa. First by God, and later by human hand. Representing the creative impulse, Mannetje has a beguiling/beseeching look. The figure implores not only for the survival and protection of the species, but also for the survival and protection of the arts.



From the Editors

By Maree Foley (Switzerland), Patricia O'Rourke (Australia), Jody Manly Todd (USA), Azhar AbuAli (United Arab Emirates), Salisha Maharaj (South Africa), Chaya Kulkarni (Canada) and Minna Sorsa (Finland)

Welcome to this Winter (2021) edition of WAIMH *Perspectives in Infant Mental Health*. Since the last issue, COVID-19 remains a constant for many of us across the globe. The impact has been harshly indiscriminate, especially for families with infants, toddlers, and young children. We acknowledge every baby across the globe and strengthen our resolve to be actively engaged in ensuring that every baby is seen, protected, and provided with nurturing care, along with their families and their communities. We acknowledge all infant and early childhood mental health professionals who are working relentlessly with, and on behalf of babies and their families amidst this COVID-19 pandemic.

This issue focuses on sharing information about the WAIMH Congress in Brisbane, Australia (June 23-27). WAIMH President, Assoc Prof Campbell Paul and WAIMH Executive Director Prof Kaija Puura, begin with Congress updates. These updates represent a huge amount of work on behalf of WAIMH, and on behalf of WAIMH, we offer our thanks to Campbell, Kaija, and the WAIMH Congress team. Furthermore, details have been provided by the Local Organizing Committee (LOC) led by Dr Elisabeth Hoehn, Libby Morton, and Emma Taylor from ICMS Australasia (Congress organiser). Once again, these updates represent mammoth efforts and innovation.

We thank the whole Congress team for their perseverance, creativity, and commitment to create a WAIMH Congress that is accessible, across time zones with connection possibilities for delegates. The 2021 WAIMH Congress, will be a Hybrid Congress. That is, it is possible to participate in the Congress, live in Brisbane at the Brisbane Convention & Exhibition Centre, or virtually, online. This issue provides information, updates and ways to participate.

Emer Prof Astrid Berg (WAIMH President-Elect) offers memorial for Dr Nancy Suchman. Dr Suchman's passing has been met with much sadness and loss. Her contribution to the field, as a friend, mentor, researcher, innovator, practitioner, was profound with foundational and ground-breaking research in psychotherapeutic work with parents with drug addiction. Her work was grounded in a deep respect for the suffering of parents who arrive at parenting with addiction, loss, and trauma by their side. She is and will continue to be greatly missed. If you have not yet come across her work, you may like to explore her work "*Mothering from the Inside Out*".

We also draw attention to *The Signal* and *Perspectives Infant Mental Health* Archive, which is full of many gems, with papers dating back to 1993. In so doing, we feature a paper, originally published in *The Signal* (1998), "*The Developing Mind: Toward a Neurobiology of Interpersonal Experience*", written by Daniel Siegel. Dr Daniel Siegel is a clinical professor of psychiatry at the UCLA School of Medicine, the founding co-director of the [Mindful Awareness Research Center](https://perspectives.waimh.org/perspectives-archive/) at UCLA, and the Executive Director of the [Mindsight Institute](https://perspectives.waimh.org/).

His work has been and continues to be hugely influential across field and disciplines including early relationships and parenting. If this a new area of learning for you, or if you are looking for a refresher, this paper by Dr Siegel, written over 20 years ago, provides an excellent overview. Furthermore, this paper is being republished as part of a dialogue with *Perspectives in Infant Mental Health* readers regarding an updated paper that will be featured on interpersonal neurobiology and early relationships in our December 2021 issue.

Shifting from neurobiology, we then turn our focus to community-based participatory approaches to early child and family care and development. Colleagues from Austria, Gabriele Antony, Theresa Bengough, Carina Marbler and Sophie Sagerschnig, share with us, about their programme: *The Austrian Early Childhood Intervention Programme: Support for families with young children in burdened*

life circumstances in order to improve relational health and well-being.

In 2019, the WAIMH position paper on Infants' Rights in Wartime, written by Prof Miri Keren, Dr Ghassan Abdullah, and Prof Emer Sam Tyano, was published in the *Infant Mental Health Journal*. The paper draws our attention to the impact of traumatic consequences upon infants and young children and their families, who are living in war zones across the globe. This paper has been made available as an open-source paper by the IMHJ and Wiley. The link is provided in this issue.

Of note, the *Perspectives in Infant Mental Health* Editorial team are currently working on re-writing the Author Guidelines and these will be available in May 2021. As a reminder, Perspectives papers can be accessed online, with past issues dating back to 1993 currently available by following this link: <https://perspectives.waimh.org/perspectives-archive/>. Also, past articles are available online in text format, which in turn can be shared: <https://perspectives.waimh.org/>. The WAIMH office staff, led by Dr Minna Sorsa with Neea-Leena Aalto and Sari Miettinen do an amazing job in the office. They juggle all things WAIMH and like that above, their office update is a fleeting summary of what they do on our behalf. Thank you so much.

Finally, we hope to see many of you (in person and or virtually) in Brisbane at the WAIMH Congress, June 23-27, 2021.

May you and your families and friends, stay safe and well.

Maree Foley, Editor-in-Chief Patricia O'Rourke, Associate Editor

Jody Todd-Manly, Associate Editor

Azhar AbuAli, Associate Editor

Chaya Kulkarni, WAIMH Board Member Associate Editor

Salisha Maharaj, Intern Editor

Minna Sorsa, Production Editor

Remembering Nancy Suchman



By Astrid Berg, Cape Town (South Africa)

It was with great sadness that I heard of the passing of Nancy Suchman on the 25th December 2020 after a 2 year brave battle with cancer. Nancy was an esteemed colleague and cherished mentor and friend to me and to the infant mental health team in Cape Town, South Africa. Nancy was an Associate Professor in the Department of Psychiatry and the Child Study Center at the Yale School of Medicine, USA, where she was involved in research since 1993.

My association with Nancy goes back several years. In 2012 I came across her Chapter “The Mothers and Toddlers Program: An Attachment-Based Intervention for Mothers in Substance Abuse Treatment” which she had co-authored with Cindy DeCoste and Linda Mayes¹. What struck me so forcibly in that Chapter was the way in which she and her colleagues combined rigorous research methodology with sensitive, attuned clinical intervention, the essence of which was “...the therapist accepting and exploring the mother’s representations and experiences as they are and noting them as they change so that the mother can also recognize how her thinking affects her parenting” I had not come across such a respectful synthesis of approaches – that is, the consideration for the clinical as well as the research component. It was this that made me write to her and I was surprised and very pleased that she replied almost immediately and agreed to visit us in Cape Town.

Her first visit occurred in May 2013 during which she introduced us to the principles and research outcomes of the intervention “Mothering from the Inside Out”. We could soon see that the intervention fitted in well with our clinical approach and that it was applicable to our patient population. Two more visits followed – in 2015, with Cindy DeCoste, and one in 2017. Our collaboration culminated in the publication of the paper “Mothering from the Inside Out: Adapting an evidence-based intervention for high-risk mothers in the Western Cape of South Africa”² and its presentation at the WAIMH Congress in Rome in 2018.

Besides her formidable knowledge of statistics and research methodology, she had a profound understanding of psychodynamic psychotherapy. This sensitised her to the challenges of everyday issues within the clinical setting; her understanding of the reality of work on-the-ground made her a unique researcher as she was able to hold both poles: the clean lines of a research protocol and the turbulence that work with troubled parents invariably entails.

Nancy was a living example of Community-Based Participatory Research. Not only were the contributions and ideas coming from the South African partners valued and incorporated into the intervention, but the well-being of the patient participants was regarded as being of prime importance and as coming first at all times. It was this profoundly ethical attitude towards the patient within

the framework of a rigorous research methodology that was unique and compatible with general good clinical, psychodynamically informed practice.

The respectful and open minded approach towards a context so vastly different to that of the US has contributed to the ongoing engagement and enthusiasm of local clinicians, enabling them to become upskilled through the various workshops and training programmes that were presented by Dr Suchman and her colleagues. The research focus within the daily work setting has added an invaluable dimension to the repertoire of local clinicians and has made research possible in a country where resources are constrained and the need for mental health interventions enormous. Without Nancy Suchman’s quiet and dependable leadership this would not have been possible.

In addition to the collaborative research, Nancy actively participated in the Master’s Programme in Infant Mental Health at Stellenbosch University, and was a supervisor and examiner for two completed PhDs at this University.

She shall be sorely missed. The IMH Team in Cape Town extends heartfelt condolences to Nancy’s colleagues, friends and family.

Astrid Berg, Cape Town, 29th December 2020

¹ *Handbook of Infant Mental Health*, Third Edition, p. 493

² *Development and Psychopathology* (2019), 1–18

Signal-Perspectives in Infant Mental Health Articles Revisited: A Paper by Daniel Siegel, *The Developing Mind: Toward a Neurobiology of Interpersonal Experience*, from *The Signal* (1998).

By The Perspectives in Infant Mental Health Editorial team

Introduction

The Signal and *Perspectives in Infant Mental Health* Archive, is full of many gems, with papers dating back to 1993 ([Perspectives Archive - Perspectives](#) (waimh.org)).

The paper featured here is from *The Signal* (1998), "The Developing Mind: Toward a Neurobiology of Interpersonal Experience", written by Daniel Siegel.

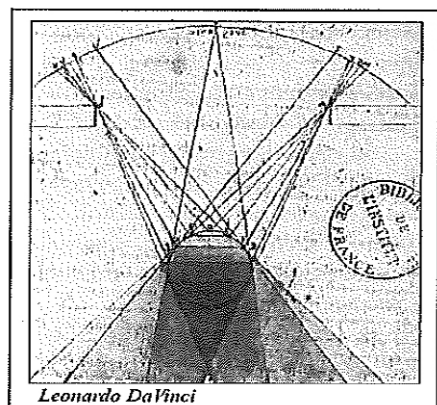
Dr. Daniel Siegel is a clinical professor of psychiatry at the UCLA School of Medicine, the founding co-director of the Mindful Awareness Research Center at UCLA, and the Executive Director of the Mindsight Institute. His work has been and continues to be hugely influential, across disciplines. If you are interested to follow up further, here is the link to his website: [Dr. Dan Siegel Home Page - Dr. Dan Siegel](#)

If this is a new area of learning for you, or if you are looking for a refresher, this paper by Dr Siegel, written over 20 years ago, provides an excellent

overview. Also, if this is a new area and you wanted to watch a short video of Dr Siegel introducing the concept of interpersonal neurobiology, here is a link: [Interpersonal Neurobiology - Dr. Dan Siegel](#)

Finally, this paper is being republished as part of a dialogue with *Perspectives in Infant Mental Health* readers regarding an updated paper that will be featured on interpersonal neurobiology and early relationships in our December 2021 issue.

The Developing Mind: Toward a Neurobiology of Interpersonal Experience



By Daniel J. Siegel, M.D.

Editor's Note: Daniel Siegel is Associate Clinical Professor of Psychiatry at UCLA and the Medical Director of the UCLA Infant and Preschool Service. He is also Director of Interdisciplinary Studies at the Children's Mental Health Alliance Foundation in New York.

His forthcoming book, *The Developing Mind: Toward a Neurobiology of Interpersonal Experience*, will be published by Guilford Press in the spring of 1999.

Charles H. Zeanah.

As we near the end of the 1990s, the "Decade of the Brain," the field of mental health is in a tremendously exciting period. Recent findings in cognitive neuroscience have revealed some new insights into how mental processes emerge from the activity of the brain. Advances in the science of development, especially longitudinal studies in the field of attachment, shed new light on how early experiences influence such fundamental processes as memory, emotion and the regulation of behavior. The often isolated fields of neurobiology and attachment, have a fascinating set of convergent findings

relevant to clinical work with infants and their families. Examination of these and other areas of research can offer us new ways of understanding how the developing mind is shaped by the interaction of interpersonal experience and neurobiological processes in the creation of the human mind.

Clinical programs and therapeutic practice can be greatly enriched by a foundation in an interdisciplinary approach to the developing mind. Though the various fields interested in mind, brain and experience have much to offer, there has been little translation and synthesis available to make these findings readily accessible to a clinical audience. For example, very little in cognitive neuroscience, the study of how mental processes emerge from the mind concerns itself with how social experiences shape development.

Likewise, most research in attachment does not draw directly upon findings from neurobiology. By integrating insights from a variety of domains, including anthropology, developmental psychology, cognitive neuroscience, behavioral genetics, linguistics and other disciplines studying the nature

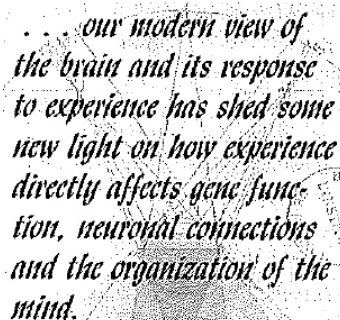
of the mind, we in the field of mental health can greatly enhance our ability to understand how children develop within a matrix of interpersonal experience. Such a perspective can enable us to integrate the most modern findings from neurobiology with a broad understanding of development, experience and human relationships.

The mind develops throughout life as we interact with others in our environment during infancy and beyond. The genetically influenced timing of the emergence of specific brain circuits during the early years of life makes this period a time of exquisite importance for the influence of interpersonal relationships -with parents and other caregivers- on how the structure and function of the brain will develop and give rise to the organization of the mind. But how do the processes of the mind emerge from the neuronal activity of the brain? How can human relationships influence the activity and development of the brain? What are the mechanisms by which interpersonal experience can actually shape neuronal activity and growth? These questions have led me to become immersed in a pursuit of a "neurobiology of interpersonal experience": a way of understanding the neurobiological processes by which the mind emerges from the activity of the brain in interaction with other brains - with other minds.

Grounding ourselves in a neuroscience of relationships, can allow us in the field of infant mental health to approach our work with all of the scientific foundation that this Decade of the Brain has to offer. In the following pages, I will highlight a few of the major ideas of this perspective. More detailed discussions and references can be found in the *Developing Mind* text.

Mind, Brain and Experience

What is the mind? Though it cannot be seen with or without a microscope, the mind does have an organization to its processes that can be described and studied. Mental processes such as memory, emotion, attention, behavioral regulation and social cognition can be understood by examining the nature of brain activity. Recent technological advances have permitted truly new insights into the nature of the mind. For example, our modern view of the brain and its response to experience has shed some new light on how experience directly affects gene function, neuronal



... our modern view of the brain and its response to experience has shed some new light on how experience directly affects gene function, neuronal connections and the organization of the mind.

connections and the organization of the mind. While we are at only the barest beginnings of understanding how the mind emerges from the brain, it is nevertheless a crucial area of study of how the mind develops within a complex set of social experiences. One general message from a synthesis of neurobiology and attachment is that it is within the vital human connections of interpersonal relationships that many of the neural connections which create the mind are shaped: *Human relationships shape the brain structure from which the mind emerges.*

What is the brain? The brain is composed of a massively complex network of interconnected neurons which number about one hundred billion. The projections of these long cells reach out to other neurons at a junction called a synapse. At this meeting point, a neurotransmitter is released which diffuses across the synapse and activates or inhibits the adjacent neuron. If enough activating input is received, then an action potential equivalent to a small electrical current passes down the length of this next neuron to cause the release of neurotransmitter at the "down-stream" synaptic ends.

The important point here is that the activity of neurons occurs in a network of activation - a certain portion of a spider-web like neural network active across time. It is the specific pattern of this spatiotemporal brain activity that determines the nature of the mental processes created at a given time: the timing and the location of neural activation within the brain determine the "information" contained within the neural net patterns. Activity in sensory regions may mediate perception and the specific nature of this firing may signify the different aspects of perceptual information: a visual stimulus, auditory input or tactile

sensation, for example. Information carried within perceptual regions often becomes integrated into a larger "cross-modal" perceptual system.

Such an integrating process is an example of how the brain functions as a hierarchical set of layers of relatively distinct component elements whose neuronal activity may become clustered together into a functional whole. The complexity of the brain as an interconnected system is revealed by the fact that an average neuron directly connects with (has synaptic connections to) about ten thousand other neurons! This means that there are trillions of connections and an imponderably large number of combinations of potential neural net activation patterns. It is for this reason that neuroscientists (with the bias of their own human brains, of course) suggest that the brain is the most complex entity in the universe!

The brain as a system is composed of hierarchical layers of component parts that can be examined at a number of levels of analysis: single neurons, neuronal groups, circuits, systems, regions, and hemispheres. At birth the brain is the most undifferentiated of any "organ" in the body. As development unfolds, neural pathways are created as synapses are formed which allow for the creation of these component parts to become differentiated and to carry out such features as attention, perception, memory and emotional regulation.

A huge number of genes encode for the timing and general details of how circuits are to develop early in life: However, the creation, maintenance and elaboration of neural connections may often also require that they be activated in a process called "experience-dependent" development. Experience activates specific neuronal connections and allows for the creation of new synapses and the strengthening of existing ones. In some cases, the lack of use leads to impaired synaptic growth and to a dying away process -called pruning- in which connections are lost and neurons themselves may die.

The differentiation of the 'brain during the early years of life is thus dependent upon genetic information and the proper experiential stimulation. It is for this reason that the early years of life, the time when the basic circuits of the brain are becoming established that mediate such processes as emotional and behavioral regulation, interpersonal

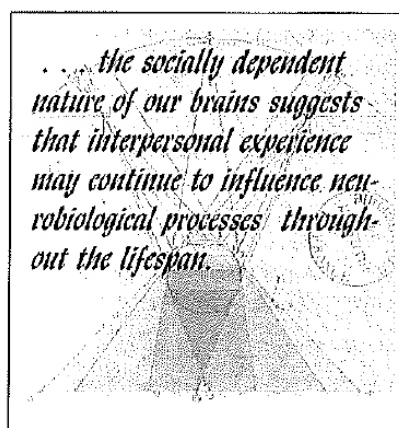
relatedness, language and memory, are the most crucial for the individual to receive the kinds of experience that enable proper development to occur.

But how does experience influence neurons and the genes which encode, in part, their growth and development? Numerous studies demonstrate that genes have two major functions: 1) genes store information in their "template" function, and 2) genes are expressed in their "transcription" function in which they lead to the production of specific proteins which alter cell structure and function. In this manner, the activation of neurons during experience leads to new synapses by the activation of genes that cause the production of the proteins necessary for neuronal growth and synapse formation.

Genes do not exist in a vacuum but require experience for their expression. Genes are activated by experience. This view allows us to see how the heated arguments about "nature versus nurture" or "heredity versus experience" do little to further our understanding of the biological reality that experience directly shapes brain structure via the activation of genes.

In the early years of life, the most important form of experience is within interpersonal relationships with parents and other caregivers. Certain interpersonal experiences appear to be common in the majority of attachment relationships in all cultures which have been studied. This common feature has been called "contingent" or "collaborative" communication between caregiver and infant. How does this form of reciprocal, emotionally attuned, interpersonal communication shape the development of the brain? Writers such as Myron Hofer (1994), Allan Schore (1994), Allan Sroufe (1996), Daniel Stern (1985), Colwyn Trevarthen (1994, Aiken and Trevarthen, 1997), and Edward Tronick (1989), have offered a variety of ways of understanding the link between early experience, emotional development and self-regulation.

One way of pursuing possible answers to this basic question about how interpersonal communication shapes neuronal connections is by first defining in a more general manner what the mind is, and then looking toward attachment as a way in which the more mature mind of the caregiver directly interacts with the less mature mind of the infant to facilitate its development.



A variety of disciplines explore the nature of the mind in its ability to process information -and to regulate the function of the individual in adapting to the environment. These various conceptualizations of mind often share the notion that the mind is more than a physical entity - such as brain activity alone - and yet emerges from and also regulates the "self" and the physiological processes from which it emerges. The mind is thus often seen as a "process" fundamental to each person.

A dictionary definition of the psyche includes the terms soul, intellect, spirit and mind. In attempting to put these various perspectives into a broader framework, it has been useful to have a working definition that views the mind as emerging from the patterns in the flow of energy and information within the individual and between individuals. In this way, the mind is created by both neurobiological processes within the individual and interpersonal interactions between individuals.

The activity of the brain serves to process information within its energized neural patterns. Information is processed in the brain by means of neural activity which serves to "represent" aspects of the internal or external world. The "mental symbol" or "code" is conceptualized as being embedded within patterns of neural net firing. For example, when we recall a visual image, such as the room we grew up in, the firing of a pattern of neural circuits within our visual system is similar but not identical to the pattern that fired when we were actually there years ago.

Memory, as with other mental processes including ongoing perception, is an actively constructive process that draws on a range of neural systems and is shaped by a wide variety of factors

influenced by external and internal factors. Within the brain, the pattern of activation (energy) of distributed neurons acts as a symbol (information) of some experienced event that is constructed by the mind itself.

The brain is capable of creating mental symbols or representations that signify some aspect of the outer or inner world. As we perceive and encode into memory various forms of representations, we can then later reactivate these mental symbols, these neural net profiles, and be able to recall various aspects of past experience. Information is thus represented in the mind by way of the flow of neural activity across various spatially distributed circuits. The way in which these representations cause further effects in the mind - such as contrasting, clustering into categories, extracting general properties - is the essence of information processing. The resultant neural activity becomes a mental symbol itself and creates a cascade of representational processes that are at the heart of the flow of cognition. Most of these processes occur without the involvement of consciousness, a subject we will not even begin to attempt to address in this article!

Colwyn Trevarthen (1994) and Don Tucker and colleagues (Tucker et al 1995) have described the ways in which the right and left hemisphere are dominant for the mediation of distinct modes of representational processing. From before birth, the brain reveals an asymmetry in its structure and development. For the infant, the right hemisphere is dominant in its growth during the first three years of life. Recent discoveries over the last several decades have resulted in a number of fascinating notions about the divided brain and mental processes. For the purposes of this article, I will highlight those findings that are particularly relevant to early development and attachment.

The left hemisphere is dominant for the semantic aspects of language, syllogistic reasoning (drawing cause-effect relationships), and linear analysis. The right hemisphere is dominant for nonverbal aspects of language (tone of voice, gestures), facial expression of affect, the perception of emotion, the regulation of the autonomic nervous system, the registration of the state of the body and for social cognition including the process called "theory of mind."

These findings suggest a possible view of secure attachments in which the right hemisphere -dominant in the first three years of the infant's life -is crucial for the collaborative communication between parent and child. Secure attachments involve contingent communication that can be thought to involve the parent's sensitivity to the child's signals and the capacity of the parent to perceive the mind of the child.

Examination of the adult attachment interview findings from Mary Main and others (Main, 1995) also reveals that parents of securely attached children tend to have a coherent autobiographical process. This research interview actually has the most robust predictive power for the security of attachment of child to parent and may reveal some way in which the parent's mind has come to integrate a number of mental processes that emerge within memory and narrative. This finding raises the important question of how an intra-individual process like the parent's autobiographical narrativization would relate to the parent's ability to have contingent communication with a child and the capacity to create a secure attachment.

Interpersonal experience can be seen as involving the flow of energy and information from one mind to another. At the neurobiological level, this involves the sending of signals from one brain to another via interpersonal communication that involves a variety of levels of messages and receiving sensory capacities. In attachment relationships, the infant's emerging capacities to receive and send energy/information shape the nature of the communication. In secure attachments, for example, the parent is able to perceive the signals of the infant with a fair degree of reliability and respond in a manner that is contingent to the state of the child.

Looking to the notion of minds in attachment has been described by Mary Main (1991) and by Peter Fonagy and Mary Target (1997) and their respective colleagues. From these perspectives, having a metacognitive capacity or reflective function that enables the parent to think about mental states of the self or of the child -such as emotions, thoughts, memories, perceptions, intentions, beliefs and attitudes- may be at the heart of secure attachments.

From the concept of mind proposed here, secure attachments can be seen as the way in which the mind of the parent is able to directly and collaboratively communicate with the mind of the child. As we will see, mental processes such as

memory, emotion, representations, states of mind, self-regulation and the integration of a range of mental processes each may be fundamentally influenced by interpersonal experience. These influences are greatest during infancy because of the development of basic brain structures at that time. However, the socially dependent nature of our brains suggests that interpersonal experience may continue to influence neurobiological processes throughout the lifespan.

Memory

Recent discoveries in the development and neurobiology of memory have yielded some exciting and relevant insights into the nature of how our minds respond to experience and influence later functioning (Milner, Kandel and Squire, 1998). Two major forms of memory have been described: implicit and explicit. Implicit memory includes a range of processes such as emotional, behavioral, perceptual and possibly somatosensory memory. These forms are present at birth and involve circuitry that does not require focal attention for encoding nor does it include a sense of "I am recalling something" when retrieval occurs.

For example, an infant bitten by a dog may have the emotional memory of fear when seeing a dog in the future but may have no sense that she is "recalling" anything when having this sensation. In this manner, implicit memory is NOT the same as nonconscious memory in that the effects of the recall are indeed within conscious awareness but only experienced in the "here and now" and not with the subjective sense of that something is being recalled. These implicit forms of memory are thought to be carried out in areas of the brain that subsume their functions such as the amygdala and other areas of the limbic system (emotional memory), basal ganglia and motor cortex (behavioral memory), and the sensory cortex (perceptual memory). These regions are relatively well developed at birth and capable of responding to experience by alterations in the synaptic connections within their circuitry, the essence of "memory encoding."

Another important aspect of implicit memory is the ability of the mind to form schema or mental models of experience. These generalizations can be across experiences and across sensory modalities and reflect the brain's inherent capacity to function

as an "anticipation machine" - deriving from ongoing experience an anticipatory model of what may occur in the future. Such mental models are a fundamental part of how attachment experiences are thought to influence the Child's later relationships as expressed in John Bowlby's notion of an "internal working model" of attachment (Bowlby, 1969).

By the end of the first year of life, infants begin to have a sense of the sequence of experienced events marking the beginning of explicit memory (Bauer, 1996). Explicit memory is what is commonly considered as "recollecting." It requires focal attention for its encoding that appears to activate a region of the brain called the medial temporal lobe, including the hippocampus. The postnatal neurogenesis of parts of the hippocampus may explain the delayed onset of explicit memory until after the first years of life.

When explicit memory is retrieved, it has the subjective sense of "something being recalled." Explicit memory includes two major forms: Semantic (factual) and episodic (autobiographical). This latter form of memory has the unique features of a sense of self and time. Recent brain imaging studies suggest that episodic memory is mediated by a number of regions including an area of the brain called the orbitofrontal cortex. Ernst Tulving and colleagues (Wheeler, Stuss and Tulving, 1997) use the phrase, "autonoetic consciousness" to refer to the ability of the mind to know the self and to carry out "mental time travel" -seeing the self in the past, present, and possible future. The development of the orbitofrontal regions during the first years of life may help us to understand the onset of this autonoetic capacity during the toddler and preschool years.

There is a tremendously exciting convergence of findings regarding the orbitofrontal region which suggest a number of highly relevant processes subsumed by this coordinating area of the brain. Located in the prefrontal cortex, just behind the eyes, and sitting between the "limbic system" and the associational regions of the neocortex, this convergence area receives input from and sends neural pathways to a wide array of perceptual, regulatory and abstract representational regions of the brain. In this manner, the orbitofrontal cortex serves to integrate information from widely distributed systems and

also to regulate the activity of processes ranging from memory representations to the physiological status of the body, such as heart-rate and respiration.

The orbitofrontal cortex: 1) is dependent upon attachment experience for its growth and it mediates emotionally "attuned communication" (Schoore 1994, 1996); 2) mediates autoegetic consciousness (Wheeler, Stuss and Tulving, 1997); 3) monitors the state of the body and regulates the autonomic nervous system as well as being a primary circuit of stimulus appraisal which evaluates "meaning" of events (Damasio, 1994); and 4) it appears to be an important region subsuming social cognition and "theory of mind" processing (Baron-Cohen, 1995).

Interestingly, it appears that it is the orbitofrontal cortex on the right side of the brain that is dominant for most of these processes. These findings may help us to understand the possible mechanisms underlying how contingent emotional communication between infant and caregiver within attachment relationships has such profound influences on a range of domains including autobiographical memory and narrative, physiological regulation, and interpersonal relatedness. Each of these basic aspects of the developing mind are mediated by the same self-regulating, experience-dependent circuits that have their initial differentiation during the early years of life!

Emotion

The contingent communication between infant and caregiver is often considered as a manifestation of the parent's sensitivity to the child's emotional signals and a form of affective attunement between the members of the pair. How can we understand the ways in which this communication with and about emotion has such a profound influence on the development of such a wide range of functions? Researchers have addressed the topic of emotion by looking at the level of psychological function, attachment theory and more recently at neurobiological substrates of emotional development.

My own approach is to examine the fundamental role of emotion by drawing on various levels of analysis -from neuronal processes to interpersonal relationships- in viewing the individual mind as a system and the relationship between individuals

as a way in which two minds come to function as a dyadic system. This "interpersonal neurobiology" perspective allows us to move back and forth between neuronal activity and mental function and between individual and dyadic processes.

Though there are a wide range of details about how researchers attempt to define emotion, many authors point to a number of common features (Sroufe, 1996, Garber and Dodge, 1991). Emotion is often considered as a way in which the mind appraises the meaning of a stimulus, is a response to engagement with the world, and prepares the self for action. Emotion is also seen as having a number of levels of manifestation, including subjective, cognitive, physiological and behavioral components.

A fascinating recursive finding has been noted by a number of authors in terms of the regulation of emotion: Emotion is both regulated and is regulatory. In other words, the process of emotion serves to regulate other mental processes and is itself regulated by mental processes. This view supports the more recently held perspective that there are no discernible boundaries between our "thoughts" and "feelings."

Emotion influences and is influenced by a wide range of mental processes. Another way of stating this is that emotion, thought, perception, memory and action are inextricably interwoven. This linkage is exemplified by the idea that perception is the brain's preparation for action: There is no perception without the potential for action upon incoming stimuli. Thus, regions mediating "perception" are directly influenced by those which respond, internally and behaviorally, to perceptual representations.

Likewise, modern views of the brain circuitry subsuming emotional processes support the view that all layers of the brain are influenced by the "limbic" regions. In fact, recent views of the neurobiology of emotion suggest that the limbic region -which includes the orbitofrontal cortex, anterior cingulate and amygdala- has no clearly definable boundaries. This suggests that the integration of a wide array of functionally segregated processes, such as perception, abstract thought and motor action, may be a fundamental role of the brain. Such an *integrative process* may be at the core of what emotion *does* and indeed what emotion *is*.

The brain as a system can be seen to function as a set of differentiated neuronal groups and circuits that can be clustered into a functionally integrated set of activations. Edelman (1992) has described the importance of such a cluster of interacting parts as having a "value" system that can reinforce or "select" certain stimuli and neuronal responses as valued preferentially over others. A range of neuromodulatory systems, including the limbic regions, can be proposed to meet the criteria for a value system of the brain. Such a value system must have extensive innervation to far-reaching areas of the brain, have the effect of enhancing the excitability and activation of neurons, and influence their plasticity (the capacity to strengthen and form new neuronal connections). In this manner, the limbic system may be conceptualized as a primary source of "value" for the brain.

What we can now say about the neuronal functions directly related to emotion is that there is believed to be an interdependence of several important domains of mental processes: stimulus appraisal (the evaluation of meaning), neural circuit activation, social communication, bodily state and autonomic regulation each appear to be mediated by a closely linked system of neural circuits. The significance of this finding is that it explains how communication within attachment relationships is the primary experience that regulates and organizes the development of those circuits in the brain that mediate self-regulation and social relatedness.

Early in life, when the infant's brain is developing the circuitry responsible for these domains, attachment relationships help the experience-dependent growth of crucial neuromodulatory regions responsible for emotional regulation (Schoore, 1994). The infant has the capacity for interactive regulation as well as an emerging capacity for self-regulation. Repeated experiences in which interactions with the caregiver help to alleviate distress and amplify positive emotional states serve to organize the growth of the circuits that allow for more mature and complex levels of self-regulation as the child matures.

Later in life, when these circuits are fairly well established, interpersonal relationships may continue to be important in the healthy reliance upon interactive regulation of adulthood. In this manner, resilience may be

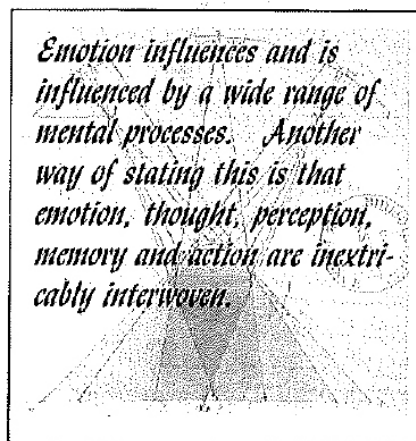
based on healthy early experience but is a capacity -not a final product- that provides the individual with the internal resources to continue to draw on a balance of self-regulation and on interactive regulation within interpersonal relationships for continued functioning and adaptation throughout the lifespan.

Sharing emotional states is a direct route by which one mind becomes connected to another. The brain's evaluation of the meaning of events -the information- is linked to the activation of neural circuits- the energy. Our internal experience of emotion becomes in essence the "music of the mind" - the rhythmic flow of energy and information through our neural circuitry. Our interpersonal sharing of emotion, seen within attuned communications of secure attachments, is the way in which the flow of energy and information occurs -often nonverbally- between two individuals' minds.

Within neural circuits, the systems that mediate the perception of social communication -especially the nonverbal messages within facial expressions, gestures and tone of voice- are closely linked to those that appraise the meaning of stimuli and regulate the activation of the autonomic nervous system. Thus, information and energy flow are directly regulated by the regions that carry out and perceive interpersonal communication! It is with this new awareness that we can see the mechanisms underlying the long held belief in how powerful human relationships are in organizing our continually emerging minds.

States of mind and self-regulation

The capacity of the mind to self-organize can be explored by examining the nonlinear dynamics of complex systems, or complexity theory. Modern applications of this systems view to the human mind have yielded some powerful ideas for understanding development. In essence, these applications suggest a number of relevant concepts: self-organization, the movement toward increasingly complex states of activation, and the regulation of the state of activation of a system by both internal and external factors called "constraints."



For our discussion of infant development, the relevant point is that one can view the relatively undifferentiated brain of the child as using the more specialized brain of the parent as an "external constraint" to organize its own functioning. The parent's mind acts to both alter the present state of the child's mind and to help form the neural circuits which will enable the child's brain to regulate itself in increasingly sophisticated ways as the child matures. Interaction between parent and child thus serves to help self-organization both in the interactive moment and in creating self-organizational neural capacities for the future.

The organization of attachment relationships may reveal characteristic ways in which the state of mind of the parent becomes linked to that of the child. For example, a securely attached child-parent relationship may have an ease in the creation of what can be called "dyadic states" in which the minds of two individuals become "joined" and function as a single adaptive and flexible system. Such a system can be seen as both highly integrated and highly differentiated in a manner that creates maximal complexity of the system's flow of states across time. This feature of complexity theory has profound implications at a number of levels.

One implication is that integration occurs when there is a functional coupling of differentiated components. In the case of secure attachments, this coupling can be seen to allow for a balance in the patterns of regularity and novelty within the flow of states of the pair that enables the achievement of maximal complexity. Such a balance is observed as "attuned" or contingent communication and from this complexity view can be said to allow the system to achieve the most

flexibility and stability.

Avoidantly attached children and their parents may be seen to have interactions as isolated individuals who never enter such adaptive and flexible complex dyadic states. Highly differentiated but poorly integrated as a functional dyadic system, these pairs may lack the sense of joy and connection present in the experience of the securely attached child and parent's interactions.

In contrast, ambivalently attached children experience the intrusive and inconsistent behavior of their parents which may lead to an excessively hypervigilant "matching" of child to parental states. Such a condition leads to excessive coupling (Beebe and Lachman, 1994) and poor differentiation that we can propose may severely limit the complexity and hence adaptive and flexible nature of the states achieved by these dyads.

For the disorganized attachments, a child may have experienced abrupt shifts in state on the part of the parent that can result in fear and disorientation in the child's mind as described by Mary Main and Erik Hesse (1990). The hypervigilant stance seen clinically in these children may also reveal highly coupled communication with poor differentiation that may be seen as minimizing the level of complexity achievable by the dyad. The parent seems unable to perceive distress in the child and is thus unable to provide interactive regulatory experiences that would enable the child to use the parent to enter more tolerable levels of arousal. Repeated experiences within disorganized attachments have been shown to be associated with the process of dissociation in which mental processes fail to become integrated into a coherent whole (Main and Morgan, 1996, Ogawa et al, 1997).

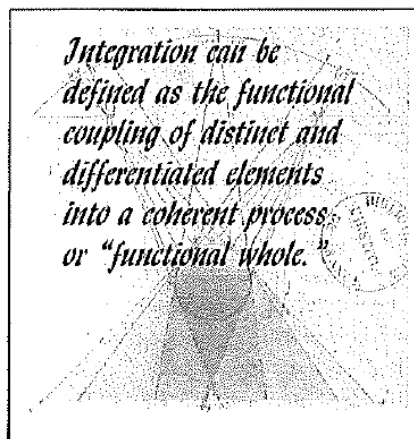
Adult attachment narratives of the parents of disorganizedly attached children reveal the unique finding of narrative discontinuity and disorientation during the interview that are considered to be signs of unresolved trauma or grief. These findings suggest that the "unresolved state of mind" of the parent has a profound effect on the capacity of that adult to not only provide a coherent autobiographical narrative but to offer the coherent parenting that organized attachments require.

The interweaving of findings from attachment research, complexity theory and neurobiology yield some intriguing possibilities. One idea is that the mind functions as a system that develops the ability to self-organize utilizing the modulation of both internal and external constraints. Internal mechanisms include neuro-modulatory processes that enable the mind to regulate its states of activation, representational processes and behavioral responses. Such a well-developed capacity for neuromodulation would be mediated by circuits capable of integrating a range of neural processes, from abstract representations to bodily states.

As we've discussed, these circuits may confer "value" to stimuli and are functionally connected to the systems that mediate interpersonal communication. Attachment can be understood as the way in which the child's mind comes to organize itself as a system both within itself and as a part of the larger system of human relationships. We each carry forward elements of these early organizing experiences in our neurally mediated capacities for emotional regulation, interpersonal relationships, and autobiographical narrative processes.

"Integration" can be proposed to be a central self-organizing mechanism that links these many disparate aspects of internal and interpersonal processes. Integration can be defined as the functional coupling of distinct and differentiated elements into a coherent process or "functional whole." This concept has been used by a wide range of researchers including those studying group behavior ("inter-individual integration"), development across the lifespan ("individual integration"), and brain functioning ("neural integration"). Within a coherently integrated process, adaptive and flexible states are achieved as individual components remain highly differentiated AND become functionally united.

Such states may also be seen as moving toward conditions that maximize complexity. Coherent narratives and flexible self-regulation may reflect such an integrative process within the individual mind. Interpersonal integration can be seen when the mind of one person has the free and collaborative exchange of energy and information with another mind. Such adaptive and flexible states flow between regularity and predictability



on the one hand, and novelty and spontaneity on the other, to yield a maximal degree of complexity in their functional coupling. Such dyadic states may be seen within the interactions of securely attached children and their parents.

The "mind" - defined as the flow of energy and information - can thus be conceptualized as an inherently integrating system. This "system" may be viewed from a wide range of levels of analysis, from groups of neurons to dyads, families, and even communities. Such a view may allow us to synthesize our understanding of the neurobiology of the individual brain with insights into the interpersonal functioning of people within dyads and larger social groups.

Another application of the concept of integration can be seen in unresolved trauma or grief. Unresolved states may be conceptualized as an ongoing impediment of the mind to achieve coherent integration. Lack of resolution thus implies a blockage in the flow of information and energy within the mind and may also manifest itself as an impairment in the capacity to achieve a coherent transfer of energy and information between minds. This may help us to understand the finding that the most robust predictor of disorganized attachment is a parent's unresolved state of mind as revealed in the adult attachment narrative.

One example of this failure to achieve integration is in the various forms of dissociation that may accompany lack of resolution. For example, unresolved states may involve the intrusion of elements of implicit memory, such as emotions, behaviors and perceptions, in the absence of an explicit memory counterpart for aspects past traumatic experiences (Siegel, 1996). Such "disassociations" of mental processes may be at the core of clinical "dissociation" and

an outcome of both trauma and earlier histories of disorganized attachments. A parent with lack of resolution is at risk of having the sudden and inexplicable intrusion of these traumatic implicit elements and the concomitant rapid shift in internal states which may dramatically impair the parent's ability to perceive, tolerate and respond contingently to the child's signals. In this manner, we can see that impaired internal integration may lead to impaired interpersonal integration.

A further application of the concept of integration can be seen in an analysis of the nature of our life-stories. The structure of the narrative process itself may reveal the central role of integration in states of mental health and emotional resilience. Within the brain, the neural integration of the processes dominant in the left hemisphere with those dominant in the right can be proposed to produce a "bihemispheric" integration which enables many functions to occur, ranging from perceptual processes to motor coordination.

Another process that can be proposed to depend upon bilateral integration is that of narrativization. The left hemisphere has what has been called an "interpreter" searching for cause-effect relationships in a linear, logical mode of cognition. The right hemisphere is thought to mediate auto-noetic consciousness and the retrieval of autobiographical memory. Also dominant on the right side of the brain is the social cognition or theory of mind module of information processing. Coherent narratives can thus be proposed to be a product of the integration of left and right hemisphere processes: the drive to explain cause-effect relationships (left) and the capacity to understand the minds of others and of the self within auto-noetic consciousness (right). In this manner, we can propose that coherent narratives reflect the mind's ability to integrate its processes across time and across the representational processes of both hemispheres.

Could this central process of the mind's capacity for integration, both internal and interpersonal, be the link between narrative and parent-child relationships? Is such a capacity at the heart of secure attachments? Finding ways to facilitate an integrative process within and between individuals may enable us to help others grow and

develop. Utilizing these interpersonal neurobiological ideas about the developing mind perhaps can help us to begin to unravel the mechanisms of what for so many in the field of infant mental health has been an intuitive idea: That relationships have the power to nurture and to heal the mind.

References

- Aitken, K.J., & Trevarthen, C. (1997). Self-other organization in human psychological development. *Development and Psychopathology*, 9, 653-678.
- Baron-Cohen, S. (1995). *Mindblindness: An essay of autism and theory of mind*. Cambridge, MA: MIT Press.
- Bauer, P.J. (1996). What do infants recall of their lives? Memory for specific events by one-to-two- year-olds. *American Psychologist*, 51, 29-41.
- Beebe, B. & Lachman, F. (1994). Representation and internalization in infancy: Three principles of salience. *Psychoanalytic Psychology* 11:127-166.
- Bowlby, J. (1969). *Attachment and loss. Volume 1: Attachment*. New York: Basic Books.
- Damasio, A. (1994). *Descartes' error: Emotion, reason, and the human brain*. New York: Grosset/Putnam.
- Edelman, G. (1992). *Bright Air, Brilliant Fire*. New York: Basic Books.
- Fonagy, P. & Target, M. (1997). Attachment and reflective function: Their role in self-organization. *Development and Psychopathology*, 9, 679-700.
- Garber, J. & Dodge, K.A., (Eds)(1991). *The Development of Emotion Regulation and Dysregulation*. Cambridge: Cambridge University Press.
- Hofer, M.A. (1994). Hidden regulators in attachment, separation, and loss. In: N.A. Fox. (Ed), *The Development of Emotion Regulation: Biological and Behavioral Considerations. Monographs of the Society for Research in Child Development*, 240, volume 59. Pages 192-207.
- Main, M. (1991). Metacognitive knowledge, metacognitive monitoring and singular (coherent) versus multiple (incoherent) models of attachment: Findings and directions for future research. In: C.M. Parkes, J. Stenson-Hinde & P. Marris (Eds), *Attachment*

Across the Life Cycle. London: Routledge, pp. 127-159.

Main, M. (1995). Attachment: Overview. with implications for clinical work. In S. Goldberg, R. Muir & J. Kerr (Eds), *Attachment Theory: Social, developmental and clinical perspectives*, pp. 407-474. Analytic Press: Hillsdale, NJ.

Main, M., & Hesse, E. (1990). Parents' unresolved traumatic experiences are related to infant disorganized status: Is frightened and/or frightening parental behavior the linking mechanism? In M. Greenberg, D. Cicchetti, & M. Cummings (Eds.), *Attachment in the preschool years* (pp161-182). Chicago: The University of Chicago Press.

Main, M. & Morgan, H. (1996). Disorganization and disorientation in infant strange situation behavior: Phenotypic resemblance to dissociative states. In, L.K. Michelson & W.J. Ray (Eds.), *Handbook of Dissociation: Theoretical, Empirical, and Clinical Perspectives*, New York: Plenum Press.

Milner, B, Squire L.R., & Kandel, E.R. (1998). Cognitive neuroscience and the study of memory. *Neuron*, 20:445-468.

Schore, A.N. (1994). *Affect Regulation and the Origin of the Self: The neurobiology of emotional development*. Hillsdale, NJ: Erlbaum.

Schore, A.N. (1996). The experience-dependent maturation of a regulatory system in the orbital prefrontal cortex and the origin of developmental psychopathology. *Development and Psychopathology*, 8, 59-87.

Siegel, D.J. (1996). Cognition, memory, and dissociation. *Child and Adolescent Clinics of North America*, 5, 509-536.

Sroufe, L.A. (1996). *Emotional development: The organization of emotional life in the early years*. New York: Cambridge University Press.

Stern, D.N. (1985). *The interpersonal world of the infant*. New York: Basic Books.

Trevarthen, C. (1996). Lateral asymmetries in infancy: Implications for the development of the hemispheres. *Neuroscience and Biobehavioral Reviews*, 20:571-586.

Tronick, E.Z. (1989). Emotions and emotional communication in infants. *American Psychologist*, 44, 112-119.

Tucker, D.M., Luu, P., & Pribram, K.H.

(1995). Social and Emotional Self-regulation. *Annals of the New York Academy of Sciences*. 213-239.

Wheeler, M.A., Stuss, D.T., & Tulving, E. (1997). Toward a Theory of Episodic Memory: The frontal lobes and autonoetic consciousness. *Psychological Bulletin*, 121, 3, 331-354.

The Austrian Early Childhood Intervention Programme: Support for families with young children in burdened life circumstances to improve relational health and well-being (A brief overview)

By Gabriele Antony, Theresa Bengough,
Carina Marbler, Sophie Sagerschnig
(Austria)

National Centre for Early Childhood
Interventions (NZFH.at)

Austrian National Public Health Institute
Austria

Introduction

The Austrian Early Childhood Intervention Programme (Frühe Hilfen), includes regional Early Childhood Intervention Networks, that reach out to families in need and supports them in creating healthy environments for their children. With this objective in mind, mental, social and health resources, and the needs of all family members, are addressed by the outreach programme.

Peacock et al. (2013) stated that no single intervention is designed to meet the needs of every family. Therefore, Frühe Hilfen, with its home visits and referrals to other services, is just one part of a global support system and the very first element of prevention chains.

With its innovative approach to attending to specific needs of families and their children, Frühe Hilfen empowers and offers guidance to families who are most vulnerable due to short- or long-term strains and hence, hopefully, prevents toxic stress and adverse childhood experiences, for many children and their families.

The unique low-threshold approach of these networks succeeds to improve living situations and relational health and well-being. To summarize, early childhood is a vulnerable phase, but one with good chances to promote health equity.

Frühe Hilfen - Early Childhood Intervention Networks in Austria

Considering national characteristics and taking into account what has worked well for other countries, a standard model for *Frühe Hilfen* was developed for Austria in 2014 (Figure 1). This model was developed upon:

- A literature review on conception of a universal basic offer in terms of time and content (Antony, Stürzlinger & Weigl, 2014) and
- A first needs assessment and experiences from the Austrian model region Vorarlberg and Germany (Haas et al., 2013).

As a result, the model combines universal and indicated prevention.

The implementation of regional Early Childhood Intervention Networks is professionally supported and guided by the National Centre for Early Childhood Interventions (NZFH.at) (www.fruehehilfen.at). The national centre's mission includes:

- coordination
- harmonisation and monitoring of the nationwide implementation
- quality assurance and improvement (ongoing training of family supporters)
- Further development of the scientific basis and quality standards
- evaluation measures, and
- knowledge transfer

Part of the monitoring is a nationwide data collection system (FRÜDOK) based on anonymized background information about supported families, documented by the family supporters. It is maintained and analysed by the Austrian National Centre for Early Childhood Interventions.

Background information includes:

- details about the referral and reason for support
- details on pregnancy or/and supported children
- data on the family situation

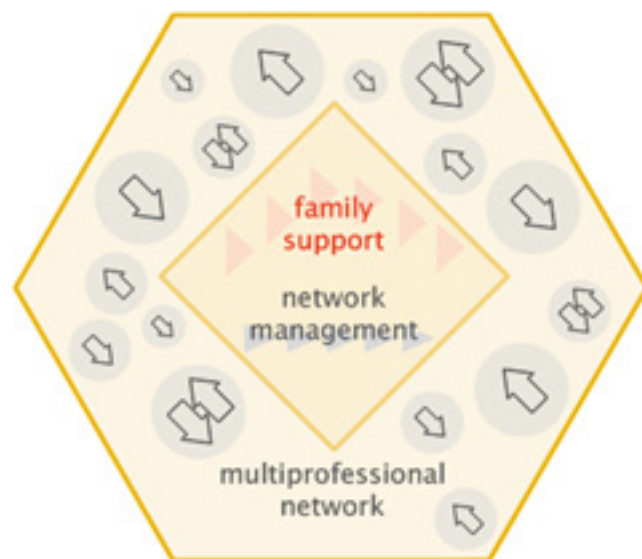


Figure 1. Indicated model for Frühe Hilfen. Source: National Centre for Early Childhood Interventions (NZFH.at).

- information of referrals to other support services as well as
- data about the home visits and other contacts with the families or with professionals from support services.

Data is only collected if there is a written or oral consent of the family.

Up to this date, the indicated part of Frühe Hilfen – the so-called Early Childhood Intervention Networks – are established in all provinces of Austria. These are multi-professional support systems with centrally coordinated services for parents (to be), and children in early childhood that are provided in a low-threshold manner on a local and regional level.

Parents are not only defined as biological parents, but also as individuals acting as psychological parents fulfilling the social role of parents (e.g., patchwork parents, homosexual parents, foster parents, adoptive parents, or grandparents).

The Early Childhood Intervention Networks consist of:

- A multi-professional team for continuous and comprehensive family support.
- At least one person with the task of network-management
- A variety of regional and local service providers and professionals also function as gatekeepers for families.

Existing and available regional support services like pregnancy counselling, midwife services and broader health care are integrated with a multi-professional network that fosters interdisciplinary cooperation and development. Thus, individualised and need-oriented support can be offered to families.

Primary target groups are parents (to be)/families with multiple burdens such as poverty, job loss, illness etc. and a lack of resources. The focus is on the period from pregnancy up to a child's third birthday.

Relevant burdens potentially initiating support by regional Early Childhood Intervention Networks are mainly social burdens (e.g., financial distress, social isolation, or unsecured/insufficient living space) or psychological strains (e.g., mental illness/addiction of the primary carer or partner, undesired pregnancy).

The Mental, social and health needs



Photo: Fotocredit Bruckmüller NZFH.at.

of the families are considered. Most of the families worry about their financial and social situation and are strained by the psychosocial health situation of at least one primary caregiver. Having an unplanned pregnancy, being very young when the child is born or having a disability is not that frequent amongst the families support but often seen as extreme burdens.

At least one-third of children from supported families show an increased demand for care, due to premature or multiple birth, congenital disease or disability, developmental delay or disorder or excessive crying, or feeding/sleeping disorder (Marbler, Sagerschnig, & Winkler, 2020).

The core intervention of regional Early Childhood Intervention Networks directed to the primary target group is the so-called "family support".

Family support is done by specially trained professionals like midwives, nurses, social workers, psychologists, or pedagogues. This intervention consists of regular contacts between the family

supporter and the family, mostly conducted as home visits or other personal contacts within the families' environments, supported by contacts via telephone and e-mail. The family supporter determines existing resources and burdens, identifies, and together with the parents, plans for the concrete need for support. They then organize and coordinate adequate support services.

For this kind of resource-oriented individual support, a trusting relationship, gained through empathetic conversations and small advice for everyday life during pregnancy or with a newborn/toddler, is a prerequisite. Quick help and the accompaniment to appointments and meetings is just as beneficial. It is based on voluntary participation and free of charge for families. Due to this low-threshold concept, vulnerable families are better reached increasing the potential of their uptake of services.

Theoretical background

The Austrian programme on Early Childhood Intervention Networks wants to support a healthy start in life for all babies, especially for those in burdened family situations. Therefore, the programme is evidence-based. For example, the programme is informed by World Health Organisation (WHO, 2020) and the evidence base from the Adverse Childhood Experiences (ACEs) (See Felitti et al, 1988; Gilbert et al., 2009; Kundakovic & Champagne, 2015; Shonkoff & Garner, 2011; Teicher & Samson, 2016).

Furthermore, “toxic stress” is a key concept regarding early childhood experiences and long-term consequences on health. While normal stress experiences are part of everyday life and cause only mild physical reactions, toxic stress leads to disorders of the brain and other organs and systems in the body (Danese et al., 2008; Gunnar, Morison, Chisholm, & Schuder, 2001; Massin, Withofs, Maeyns, & Ravet, 2001; McDade et al., 2005; Miller & Chen, 2007; Miller, Chen, & Cole, 2009; Overfeld, Buss, & Heim, 2016; Shirtcliff, Coe, & Pollak, 2009; Shonkoff & Garner, 2011; Stevens, Lauinger, & Neville, 2009; Tyborowska et al., 2018).

At best, the parent-child relationship with other protective social relationships are important resources for the child and protects them from the consequences of such hardship (Alio, 2017; Shonkoff & Garner, 2011). These protective factors also influence further life skills, including problem-solving (Grossmann & Grossmann, 2003).

So, it is of special importance to support parents and families with their children, in their communities, to reduce toxic

stress and make way for them to be able to create environments that support healthy and safe child development.

Frühe Hilfen: Beginnings of family support

Early Childhood Intervention Networks come into place, aim to support families in burdened situations in a low-threshold manner to promote the healthy development of these children. In the long-term, this intervention aims to contribute to sustainable population health and especially to health equity.

To clarify the task and goal of the family support, an initial meeting is held with the family.

Thereby, a first assessment of the family situation and the support services already installed takes place. Attention is paid to the following aspects:

- the situation of the child (e.g., increased care requirements due to pregnancy or birth complications, congenital diseases)
- the situation of the parents (e.g., physical and mental health, education and employment situation, Single primary caregiver)
- the situation of other family members or relevant caregivers (e.g., siblings)
- parent-child relationship (e.g., parent-child interaction, attachment security, interactions between family members, a child with each other, custody situation of the child)
- partnership and family situation (e.g., family climate, family cohesion, disharmony, separation, early parenthood, unplanned pregnancy)

- living conditions (e.g., network, household financial situation, housing conditions)
- Specific resources (e.g., social and emotional support from the social environment, Confidence/optimism, religion/belief, personal coping skills or coping strategies)
- specific stresses (e.g., postpartum depression, overwhelm and fears about the future, poverty, homelessness, trauma, violence, neglect, stressful caregiving responsibilities such as many children, siblings with illnesses or disabilities, dependent adults, etc.)

Who are the families?

Nearly 6.000 families and more than 5.000 children under 3 years of age have been supported so far by the Austrian Early Childhood Intervention Programme. The families are often overwhelmed with the situation, have strong fears about the future and show a variety of burdens.

Differences in health outcomes and development of children are strongly linked to their social background. Children from families with a lower socioeconomic status experience poorer health and are more likely to be unsuccessful in school (Marmot, 2010; Melhuish, 2014).

The Early Childhood Intervention Networks succeed to reach (socially disadvantaged) families in needs, often during pregnancy or shortly after birth.

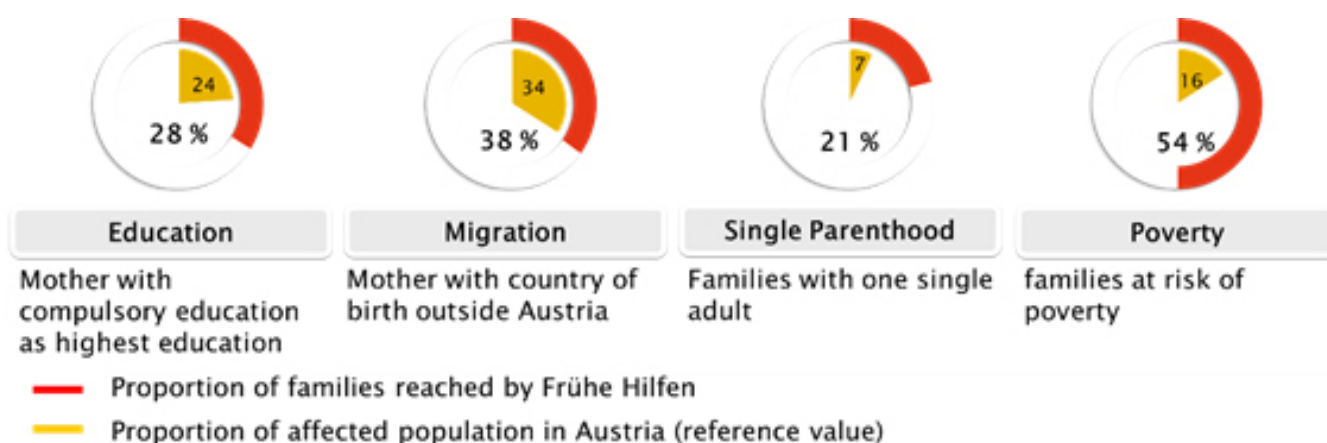
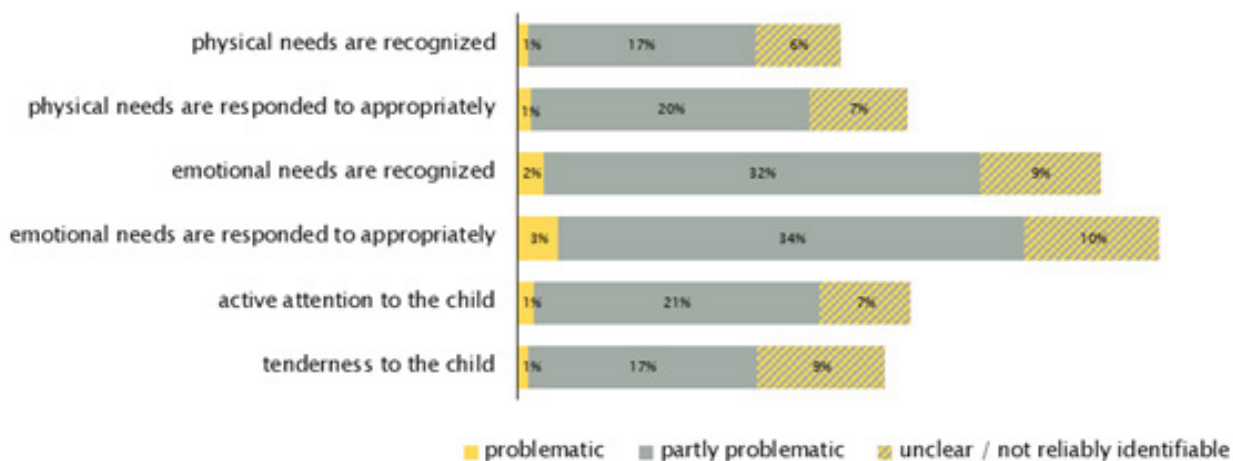


Figure 2. Characteristics of supported families Source: National Centre for Early Childhood Interventions (NZFH.at).



Note: Children without problematic care are not shown in this figure.

Figure 3. Problems with acceptance and care of the child, in percentage of supported children. Source: National Centre for Early Childhood Interventions (NZFH.at).

Data analysis of supported families showed that:

- More than 50 per cent of them can be characterised as poor or at risk of poverty (compared to 16 % of families with children under three years in the whole population)
- Almost a third of the primary caregivers have no higher education than compulsory school (compared to 24 % of women aged 15 to 44 in the whole population)
- More than a third are not born in Austria (compared to 34 % of all mothers who had a child in 2018)
- Nearly one quarter are single parents (compared to 7 % of families with children under three years in the whole population). (Kaindl & Schipfer, 2019; Marbler et al., 2020; Statistik Austria, 2019a, 2019b) (see also Figure 2).

Furthermore,

- 30 per cent of all mothers are, or have been in treatment because of a mental illness and about 10 per cent show signs of postpartum depression at the beginning of family support.
- At least 15 per cent of mothers have experienced violence once in their lives.
- Signs of acute violence within the family exist in about 7 per cent of all supported families (Marbler et al., 2020).

Difficulties regarding different dimensions of the parent-child interaction (recognition and/or acceptance of physical or emotional needs, active attention to the child or tenderness to the child) concern at least 43 per cent of all supported children (Marbler et al., 2020).

(see also Figure 3).

Based on the individual family history and specific needs, the family supporter assists in finding appropriate support services.

- 1 in 5 supported families is referred to psychological services and/or to social activities like playgroups or mother/parent-child-meetings.
- Psychiatrists or psychosomatic treatments are referred to in 10 per cent of supported families.
- Further referrals are initiated to childcare, grants and subsidies, services for parental education, midwives, family and household assistance, pediatric practice or services that support bonding and so on (Marbler et al., 2020).

If several support services are installed in a family, there may also be family conferences with all the service providers involved to coordinate further action and not to overburden the family. In a recent study, families have highlighted that such an individual, comprehensive and fast support, really helped to better their situation (Weigl & Marbler, 2020).

Outcomes

Families are supported through empathetic and encouraging conversations with their family supporters, as well as through practical advice.

In a recent study, mothers told us, that these conversations were among the most important aspects of family support. They lead to a reduction of anxieties, improved their self-confidence and self-efficacy, and enabled the use of assistance and advice. They experienced being heard and learned that they are good parents (Weigl & Marbler, 2020).

Based on the feedback of the supported families, it is known that they are very satisfied with the support and experience an overall benefit of the intervention for all family members (Marbler et al., 2020).

Data analysis showed that:

- The psychosocial health of mothers has improved in nearly 30 per cent of families and that 50 per cent of mothers with symptoms of postpartum depression have improved their mental health until the end of their family support.
- Further positive results can be seen for the social and financial situation of families, the living situation, the communication in families, the fear of the future, the overstraining and signs for acute violence.

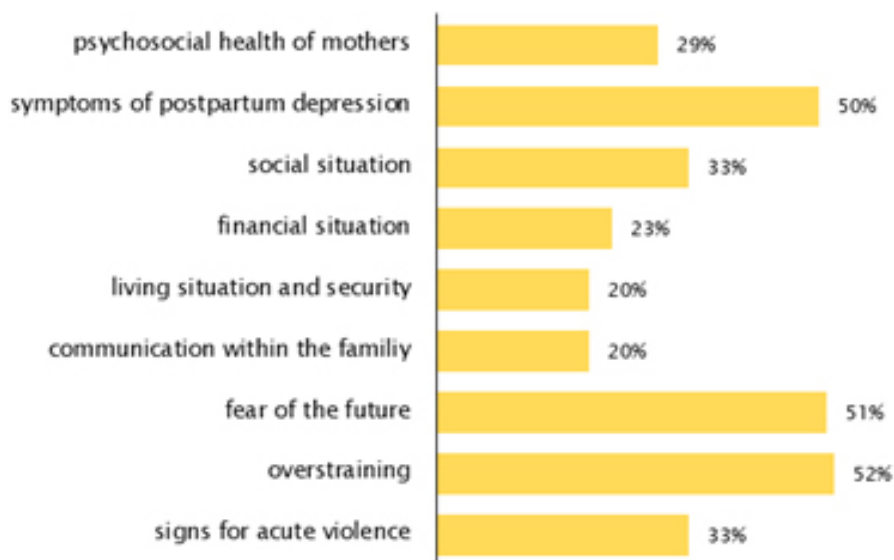


Figure 4. Improved situations in families with burdens in specific areas at the beginning of family support. Source: National Centre for Early Childhood Interventions (NZFH.at).

- Also, the interaction with the child has improved in many families (Marbler et al., 2020)

(see also Figure 4)

Conclusion

The evidence-based Austrian Early Childhood Intervention Programme is effective as it supports parents in creating good conditions for the growth of their children.

Evaluation results from reports of supported families as well as the data collected within the programme confirm that the short-term objectives of the Austrian Early Childhood Intervention Programme can be achieved.

Nevertheless, long-term effects on the development and health of children from supported families cannot be proven yet, as the programme is just implemented for five years and the methodology for such a study is also quite complex.

The programme is based on a key principle of voluntary participation. As the mandate for the support comes from the families themselves, they may also refuse further support from Early Childhood Intervention Networks, even if professionals see an on-going need for support. In some families, there are signs for endangerment of child welfare resulting in a respective report to child and youth welfare.

However, the evaluation reports on the

Austrian Early Childhood Intervention Programme also show that the regional networks can only be successful if there are adequate resources allocated and necessary support services are sufficiently available in the region and are willing to cooperate with the network.

Peacock et al (2013), stated that no single intervention is designed to meet the needs of every family. The Frühe Hilfen, with its home visits and referrals to other services, is part of a global support system. It is the first element in prevention community chains. It is an innovative community based participatory approach, attending to specific needs of families and their children, Frühe Hilfen empowers and offer guidance to families who are most vulnerable due to short- or long-term strains.

Hopefully, this innovation prevents toxic stress and adverse childhood experiences for many children and their families. To summarize, early childhood is a vulnerable phase, but one with good chances to promote health equity.

References

- Antony, K, Stürzlinger, H. & Weigl, M. (2014). *Frühe Hilfen – Evidenz zur zeitlichen und inhaltlichen Konzeption eines universellen Basisangebots*. Ergebnisbericht. Wien, Gesundheit Österreich GmbH im Auftrag des Bundesministeriums für Gesundheit: 48.
- Alio, A. (2017). *Toxic stress and maternal and infant health*. New York: University of Rochester Medical Center, NYS Maternal & Infant Health Center of Excellence
- Black, M. M., Walker, S., Fernald, L. C. H., Andersen, C. T., DiGirolamo, A. M., Chunling, L., & McCoy, D. C. (2017). Advancing Early Childhood Development: from Science to Scale *The Lancet*, 389(10064): 77–90.
- Bos, K. J., Zeanah, C. H., Smyke, A. T., Fox, N. A., & Nelson, C. A. (2010). Stereotypies in Children With a History of Early Institutional Care. *Archives of Pediatrics and Adolescent Medicine*, 164(5), 411. doi: 10.1001/archpediatrics.2010.47]
- Danese, A., Moffitt, T. E., Pariante, C. M., Ambler, A., Poulton, R., & Caspi, A. (2008). Elevated Inflammation Levels in Depressed Adults With a History of Childhood Maltreatment. *Arch Gen Psychiatry*, 65(4), 416.
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction

- to many of the leading causes of death in adults. The Adverse Childhood Experience (ACE) Study. *American Journal of Preventive Medicine*, 14, 245–258.
- Gilbert, R., Widom, C. S., Browne, K., Fergusson, D., Webb, E., & Janson, S. (2009). Burden and consequences of child maltreatment in high-income countries. *Lancet*, 373(9657), 68–81. doi: 10.1016/S0140-6736(08)61706-7
- Grossmann, K., & Grossmann, K. (2003). *Bindung und menschliche Entwicklung. John Bowlby, Mary Ainsworth und die Grundlagen der Bindungstheorie*. Stuttgart: Klett-Cotta.
- Gunnar, M. R., Morison, S. J., Chisholm, K., & Schuder, M. (2001). Salivary cortisol levels in children adopted from Romanian orphanages. *Development and Psychopathology*, 13(3), 611–628.
- Haas, S., Pammer, C., Weigl, M., Winkler, P., Brix, M. & Knaller, C. (2013). *Ausgangslage für Frühe Hilfen in Österreich*. Wien, Gesundheit Österreich GmbH im Auftrag der Bundesgesundheitsagentur: 123.
- Kaindl, M., & Schipfer, R. K. (2019). *Familien in Zahlen 2019. Statistische Informationen zu Familien in Österreich*. Wien: Österreichisches Institut für Familienforschung
- Koren, G., & Nulman, I. (2010). Drugs in Pregnancy. *Archives of Pediatrics and Adolescent Medicine*, 164(5), 495. doi: 10.1001/archpediatrics.2010.64
- Kundakovic, M., & Champagne, F. A. (2015). Early-Life Experience, Epigenetics, and the Developing Brain. *Neuropsychopharmacology Reviews*, 40, 141–153. 153. doi: 10.1038/npp.2014.140
- Marbler, C., Sagerschnig, S., & Winkler, P. (2020). *Frühe Hilfen. Zahlen, Daten und Fakten 2019*. Wien: Gesundheit Österreich
- Marmot, M. (2010). *Fair society, healthy lives. The Marmot Review. Strategic review of health inequalities in England post-2010*. London: Institute of Health Equity
- Massin, M. M., Withofs, N., Maeyns, K., & Ravet, F. (2001). The Influence of Fetal and Postnatal Growth on Heart Rate Variability in Young Infants. *Cardiology*, 95(2):80–83.
- McDade, T. W., Leonard, W. R., Burhop, J., Reyes-Garcia, V., Vadez, V., Huanca, T., & Godoy, R. A. (2005). Predictors of C-reactive protein in Tsimane' 2 to 15 year-olds in lowland Bolivia. *Am J Phys Anthropol*, 128(4), 913. doi: 10.1002/ajpa.20222
- Melhuish, E. (2014). *The impact of early childhood education and care on improved wellbeing*. London: British Academy.
- Metzler, M., Merrick, M. T., Klevens, J., Ports, K. A., & Ford, D. C. (2017). Adverse childhood experiences and life opportunities: Shifting the narrative. *Children and Youth Services Review*, 72, 141–149. doi: <http://dx.doi.org/10.1016/j.childyouth.2016.10.021>
- Miller, G., & Chen, E. (2007). Unfavorable Socioeconomic Conditions in Early Life Presage Expression of Proinflammatory Phenotype in Adolescence. *Psychosomatic Medicine*, 69(5):402–409.
- Miller, G., Chen, E., & Cole, S. W. (2009). Health psychology: developing biologically plausible models linking the social world and physical health. *Annu Rev Psychol*, 60:501–524. . doi: 10.1146/annurev.psych.60.110707.163551
- Overfeld, J., Buss, C., & Heim, C. (2016). Psychische und körperliche Krankheitsanfälligkeit. Die Bedeutung früher traumatischer Lebensereignisse. *InFo Neurologie & Psychiatrie*, 18(9), 30–40. doi: 10.1007/s15005-016-1782-9
- Peacock, S., Konrad, S., Watson, E., Nickel, D., & Muhajarine, N. (2013). Effectiveness of home visiting programs on child outcomes: a systematic review. *BMC Public Health*, 2013(13), 17. doi: 10.1186/1471-2458-13-17
- Shirtcliff, E. A., Coe, C. L., & Pollak, S. D. (2009). Early childhood stress is associated with elevated antibody levels to herpes simplex virus type 1. *PNAS*, 106(8), 2967.
- Shonkoff, J. P., & Garner, A. S. (2011). The Lifelong Effects of Early Childhood Adversity and Toxic Stress. *American Academy of Pediatrics*, 2011(30), e246.
- Statistik Austria. (2019a). *Bildungsstandregister: Bildungsstand der Bevölkerung ab 15 Jahren 2017 nach Altersgruppen und Geschlecht*. Wien: Bundesanstalt Statistik.
- Statistik Austria. (2019b). *Mikrozensus-Arbeitskräfteerhebung 2018: Familientyp nach Familientyp und Zahl der Kinder ausgewählter Altersgruppen - Jahresdurchschnitt 2018*. Wien: Bundesanstalt Statistik.
- Stevens, C., Lauinger, B., & Neville, H. (2009). Differences in the neural mechanisms of selective attention in children from different socioeconomic backgrounds: an event-related brain potential study. *Dev Sci*, 12(4), 634–646. doi: 10.1111/j.1467-7687.2009.00807.x
- Stone, K. C., LaGasse, L. L., Lester, B. M., Shankaram, S., Bada, H. S., Bauer, C. R., & Hammond, J. A. (2010). Sleep Problems in Children With Prenatal Substance Exposure. *Archives of Pediatrics and Adolescent Medicine*, 164(5), 456. doi: 10.1001/archpediatrics.2010.52.
- Teicher, M. H., & Samson, J. A. (2016). Annual Research Review: Enduring neurobiological effects of childhood abuse and neglect. *J Child Psychol Psychiatry*, 57(3), 266. doi: 10.1111/jcpp.12507
- Tyborowska, A., Volman, I., Niermann, H., Pouwels, L., Smeekens, S., Cillessen, A., Toni, I., & Roelofs, K. (2018). Early-life and pubertal stress differentially modulate grey matter development in human adolescents. *Scientific Reports*, 8, 9201.. doi: 10.1038/s41598-018-27439-5
- Weigl, M., & Marbler, C. (2020). *Partizipative Erarbeitung eines Konzepts zur Begleitforschung im Bereich Frühe Hilfen*. Gesundheit Österreich. Wien.
- WHO. (2020). *Framework on Early Childhood Development in the WHO European Region*. Copenhagen: WHO Regional Office for Europe.

WAIMH Position Paper: Infants' Rights in Wartime

In 2019, the WAIMH position paper on Infant's Rights in Wartime, written by Miri Keren, Ghassan Abdallah, and Sam Tyano, was published in the *Infant Mental Health Journal*. The paper draws our attention to the impact of traumatic consequences upon infants and young children and their families, who are living in war zones across the globe.

The paper recommends greater attention to the psychological needs of infants in war zones. It draws our attention to the needs of infants and their families who are refugees as a result of war. The voice of infants is upheld as unique and necessary to be heard and considered alongside all children and adolescents living in, and with the consequences of war.

On behalf of WAIMH, we are grateful to Miri Keren, Ghassan Abdallah, and Sam Tyano, who wrote this position paper; not as observers, but as witnesses and as healers to infants and their families, during the horrors of war.

We are also grateful to Holly Brophy-Herb (Editor of the IMHJ) and to Wiley, for making this paper available as an open-access paper via the Wileyonline library.

Abstract

"The World Association for Infant Mental Health (WAIMH) decided to compose a position paper on infants' rights in wartime, as there is still a general lack of attention paid to the impact of war-related traumas on infants' development and psychological health. Though there are numerous areas of violent conflicts around the globe, there have been few published studies that relate specifically to infants. Consequently, humanitarian aid programs tend to overlook infants' psychological needs and to pay more attention to those of older children. This position paper first reviews the studies identified through a literature search, about the impact of war-related traumas during pregnancy and postnatal periods, then describes the existing recommendations that have been added to the Children Rights Convention and their implications for infant mental health clinicians" (Keren, Abdallah & Tyano, 2019).



Here is the open-source link to: WAIMH Position paper: Infants rights in wartime.

<https://onlinelibrary.wiley.com/doi/full/10.1002/imhj.21813>

Full Citation

Keren, M., Abdallah, G., & Tyano, S. (2019). WAIMH position paper: Infants' rights in wartime. *Infant mental health journal*, 40(6), 763–767. <https://doi.org/10.1002/imhj.21813>

WAIMH Office News: IMHJ Store and memberships

Dear WAIMH members:

We have received many queries regarding subscribing to the Infant Mental Health Journal. We have revised the ordering system so that you first need to pay the current WAIMH membership dues.

Info about ordering IMHJ at WAIMH online store

WAIMH has developed a system whereby you need to order the IMHJ from the WAIMH Store on a yearly basis. Members will be able to order the journal at a highly reduced rate, and you can choose a paper version with online access or an online access option only.

Once you have signed up for or renewed your membership you can go to the WAIMH Store and subscribe to the Infant Mental Health Journal at the reduced rate. Note: New membership applications first need to be approved.

After you have paid your WAIMH membership dues, you will need to log in to the WAIMH Online Store on the WAIMH website using your membership login and passwords.

After logging in, you will see the three different subscription options that are available to WAIMH members: Paper & Online Subscription (USA and Canada); Paper & Online Subscription (International orders for people living outside USA or Canada); and Online Subscription

You need to click the subscription type of your choice. After your subscription has been processed, you will receive the paper journal and/or login instructions for the online journal from Wiley.

WAIMH membership

The WAIMH membership year is January-December irrespective of when you make the membership payment.

There are various ways to renew your WAIMH membership via online payments: You can either choose the autorenewal option or renew the membership manually each year. You can also make a two year payment, which has to be renewed manually every two years.



OPTIONS FOR A WAIMH MEMBERSHIP

Membership Dues
(Professional, Student)

- automatic renewal (until cancelled)
- manual renewal for 1 year
- manual renewal for 2 years

+ Infant Mental Health Journal

subscription

- Go to Store
- Subscribe print and/or online
- Select international or US/Canada



IMH Journal Online subscription

Only Online Journals in 2020 (Volume 41). In a short while you will get instructions from Wiley to your email address (how to login to...



IMH Journal Paper and Online subscription (International)

Paper and Online Journals in 2020 (Volume 41) for people living outside US and Canada.



IMH Journal Paper and Online subscription (USA and Canada)

Paper and Online Journals in 2020 (Volume 41) for people living in US and Canada.

WAIMH Webinar Recordings

We would like to thank everyone who attended the WAIMH Webinars on fathers in February! In case you did not have the chance to attend, the recordings are now available to WAIMH members on our website, and will open to the public after three months.

The recording of our December webinar 'Looking back, looking forward: Learning from our pioneers as we adapt into the future' is now available to everyone on WAIMH's YouTube channel. Feel free to share the link with your colleagues too!

All the best wishes,

Minna and Neea from the WAIMH Central Office