ОБЗОРЫ, ЛЕКЦИИ, ДОКЛАДЫ, ИСТОРИЧЕСКИЕ ОЧЕРКИ

REATTACH FOR AUTISM: MAKING SENSE

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Paula Weerkamp-Bartholomeus
President of the Editorial Council of Journal for ReAttach Therapy and Developmental Diversity and President and founder of ReAttach Therapy International Foundation

ТЕРАПИЯ REATTACH ПРИ АУТИЗМЕ: СМЫСЛ ЕЕ ПРИМЕНЕНИЯ

Paula Weerkamp-Bartholomeus
Председатель редакционного совета журнала ReAttach Therapy и разнообразия развития, Президент и основатель Международного фонда ReAttach Therapy

Introduction

World-wide the amount of families facing autism diagnoses is growing rapidly. This growth might be explained by increase of public awareness of autism, the availability of autism experts and widening the diagnostic criteria (King, 2009) (Smiley, 2017). The origin of autism still is uncertain and many causes for the clinical presentation of autism can be identified (Poletaev, 2018). Autism Spectrum Disorder (ASD) are such a complex and heterogeneous area of clinical characteristics that a categorial description of the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders cannot fully embrace these phenomena (American Psychiatric Association, 2013). Comorbidity and overlapping symptomatology with medical and mental health issues (Trajkovski, 2019) (Weerkamp-Bartholomeus, 2018) point out that there is not a simple description or even consensus about ASD. In the historical overview of autism, Fitzgerald points out that even the *history* of autism is very complicated and changed hugely the past few years (Fitzgerald, 2019).

ReAttach is a transdiagnostic intervention that aims at understanding the inter-relation of symptomatology. It fosters coherence and embraces the universal connectedness of human experiences and sensory processing (Petter, 2018). In other words: ReAttach can be defined as a broader spectrum therapy, embracing neurodiversity and aiming at optimal health and personal and inter-relational development.

What is ReAttach?

ReAttach is an intervention that facilitates arousal regulation, multiple sensory processing, coherence, social cognitive training and active learning. These elements are essential in overcoming developmental arrest of any kind. At the beginning ReAttach was designed for adults and children to overcome developmental arrest caused by mental health issues (Bartholomeus, 2015). By facilitating healthy relational, mental and emotional functioning in average 5 sessions of individual training, most adults and children were able to move on. Restoring coherence by re-training coherent concepts turned out to be a respectful, inclusive and effective way to regain self-awareness, self-confidence, self-regulation, proactive coping and autonomy.

One of the major problems that can be identified in all clinical presentations of ASD is lack of coherence (Weerkamp-Bartholomeus, 2018). Coherent concepts can be trained in individuals with ASD by the same intervention under optimal conditions. One of the "must-have" conditions is the engagement of parents or partners. Successful training of coherence helps individuals with ASD to overcome the developmental arrest and catch up with their peers within their individual intellectual, medical and social capacities (Weerkamp-Bartholomeus, 2018).

The program of ReAttach Sessions
Family Assessment

ReAttach trainers will invite both parents and the child with autism for a family assessment. Parents or a partner need to be involved because ReAttach is a systemic intervention improving inter-personal relations. In other words: parents or partners are part of the solution and need to be included in the program as the primary support system. An interview, guided by a Computer Adaptive Tool, is used to map the complexity of the individual state of mind in terms of ReAttach elements (Weerkamp-Bartholomeus, 2018) (Weerkamp-Bartholomeus, 2019). It is important for the Re-

Attach trainer to include the perspective of the individual who will receive ReAttach sessions in tailoring the intervention to the individual state of mind. Instead of a diagnostic interview the ReAttach trainer aims to find out how the student defines his/her individual state of mind. The starting point is that we work from an academic model in which parents, partners and individuals with ASD are students instead of patients or clients. Designing the best ReAttach sessions demands co-creation and therefore inclusion of the student's perspective besides the professional observations of the ReAttach trainer.

Mapping Complexity

ReAttach sessions need to be tailored for every student since providing optimal conditions for processing information, emotions and events demands attunement. It would be an over-simplification to expect that the individual state of mind is a static condition. It is more realistic that our state of mind changes from time to time. The perspective of the student results in an overview of elements of ReAttach that need to be adapted for optimal results and the professional adds the clinical observation. At the start of the family ReAttach Sessions the trainer has a map of the uniqueness of the parents or partner and the individual with ASD as well as an overview of factors that might positively or negatively influence each other. This results in a program for the whole family.

Parents and partners are part of the solution

When you fall in love with a partner or when you are expecting a child it is normal to feel quite optimistic about the future relationship and the developmental outcome. This natural optimism is unrealistic considering the percentages of relationships that end up in a divorce and the percentage of children with neurodevelopmental challenges. However, such a positive attitude about the future is important to develop confidence and the feeling that you can be a competent parent or a good partner. It also protects us from developing anxiety and depression due to an over-alarmed state of mind.

Unfortunately, most parents or partners who are confronted with ASD change. This is a natural response in dealing with the difficulties in social communication, behavior and problems in daily life functioning. Individuals with ASD have a different overall style of how they think, feel, perceive and act in relation with their environment. These styles are called Forms of Vitality (FV) (Klin, 2003) (Krueger, 2019). While the interpersonal relationship of a parent or partner with an individual with ASD is characterized by FV's that don't connect well, FV's of individuals who all have ASD match more easily. Knowing "how" to behave and act in relationship with individuals without ASD is difficult to learn for individuals with ASD due to their developmental stage. The starting-point of ReAttach is that the developmental stage of individuals with ASD can be compared with the pre-conceptual state of mind. This means that a person with ASD hasn't learned to process sensory information into coherent concepts yet. The ASD diagnosis provides parents and partners with the idea that the individual with ASD is not responsible for the miscommunication and the awkward situations that arise as a result. Quite naturally the parents and partners will adapt to prevent miscommunication and to achieve a relationship in which the "ASD-FV" is either camouflaged or compensated and better balanced. The unpredictability of developmental outcome is hard to bear because our brain doesn't like unpredictability: it causes anxiety and stress. The optimism bias that is so important for us to be able to feel confident, competent and secure changes into a negativism bias: it seems as if the world has changed since "autism" entered our lives. As a result, many parents or partners suffer from high stress-responses, which are exhausting and cause physical and mental health problems as well as problems in the relationships with family and friends.

Providing optimal learning conditions for a student with ASD starts with influencing the environment thus working with parents or partners. ReAttach aims at reducing psychological distress and normalizing the FV's of parents and partners to make it possible for the individual with ASD to benefit from the training and learn to mirror the normalized FV's. In other words: we need to change the behavior of the parents or partners by replacing the negativism bias by an optimism bias which protects them from being overanxious. The psychological distress of parents and partners needs to be calmed down and they will receive psycho-education to become aware about their personal adaptation to the autism. The camouflage and compensation require reduction in order to overcome the developmental arrest and facilitate the growth. Since parents and partners are such an important key in the solution, they need to be involved as co-creators of the ReAttach sessions.

ReAttach Sessions for Parents or Partners

My goal here is not to describe a detailed session of ReAttach, since I have done that elsewhere (Weerkamp-Bartholomeus, 2018). The program starts with the ReAttach sessions of parents or partners. ReAttach sessions are individual training sessions that include elements of a body-oriented psychotherapy: sensory integration, social cognitive training and cognitive bias modification by which active learning is facilitated. Each parent or partner will receive minimal one ReAttach session and the program for parents and partners can be extended to five till eight sessions.

ReAttach Sessions for individuals with ASD: making sense

In full acceptance of the FV's of the child or adult with ASD, the ReAttach trainer will not compensate or mask them because the aim of ReAttach sessions is to facilitate the exploration of another type of FV based on a different perception and information processing. Let me try to explain this by using the example of a toddler who is about to start to walk: Instead of compensating (carrying the child) or camouflaging the fact that the child doesn't walk yet, parents provoke the first steps just by their presence, their optimism and by facilitating small steps: they walk backwards and offer the optimal conditions for the child to act. Walking enfolds itself (Coote, 1999) as soon a child is ready and not afraid to fall. The supporting parent doesn't teach "how" to do it. The child is programmed to learn how to walk. But what about ASD? Despite all the evidence that supports the theory that ASD is a progressive prenatal pervasive development disorder that already starts in the womb (Courchesne E. M.-B., 2011) (Chow, 2012) (Gohlke, 2007) (Poletaev, 2018) I believe that both early intervention programs, treatment of underlying physical problems and multimodal interventions such as ReAttach can boot up development, reverse switches in DNA or perhaps rewire. How else can I explain the experience that the core aspects of autism vanish when an individual takes the step from the pre-conceptual state of mind into the conceptual state of mind?

ReAttach sessions can be seen as a challenge to learn

new FV's as in "how" to live your life and develop yourself. One of the first challenges is to create the conditions to start with ReAttach trainings. The body-oriented part of the training involves tapping on the hands as part of multiple sensory stimulation. The touch of the gentle tapping activates Oxytocin (OT), which is a neuro-hypophysial hormone synthesized in the paraventricular and supraoptic nuclei of the hypothalamus (Marazziti, 2018). OT is involved in the pathophysiology of neuropsychiatric disorders including obsessive-compulsive disorders and ASD. By the tapping the OT-production activates the social reward system in the brain which is responsible for social initiative. Before we start with ReAttach sessions the social reward system must be activated so the individual with ASD is ready to ReAttach. This can be objectified by the social initiative that is taken by the individual with ASD towards the trainer.

The complexity of the individual state of mind of persons with ASD makes it impossible to describe a ReAttach protocol for ASD. Instead the individual with ASD will receive a tailored intervention learning step by step how to process multiple sensory information into coherent concepts of self, significant others and relational concepts. The trainer constantly provokes the next step in development by activating the mirror neuron network, the mind reading network, affective mentalization and imagination.

In average 5 ReAttach sessions individuals with ASD are ready to step into the conceptual stage of development and to gain coherence. Consecutively concepts of the self, differentiation between self and others and relational concepts will be trained as well as individual developmental goals such as: activation of imagination or starting a conversation. When a child is pre-verbal the sessions aim to create optimal communication conditions and getting ready to speak. Parental training in ReAttach is recommended for families with a child with co-morbidity of ASD and cognitive impairment. This will allow the parents to assist their child in future learning. I will come back to this topic later.

A new adventure

Overcoming a developmental arrest is quite a new adventure for all involved. The best attitude for parents or partners is to be curious and supportive. Clinical experiences have shown us that many children with ASD will change as a result of the ReAttach sessions (Weerkamp-Bartholomeus, 2018). Parents must be ready to face another period of unpredictability: a period of growth. In many cases the child will explore new behavioral repertoire which can a be welcomed as healthy behavior which is necessary for personal growth. Picky eaters may start to choose different types of food, individuals who previously couldn't express emotions or pain start to identify these and are going to learn how to regulate them themselves. A curious and supportive attitude of parents is quite helpful to successfully navigate the period of catching up with their peers by going through developmental stages that were not available yet.

Clinical experiences have shown us that adults with ASD, especially high functioning adults, are very motivated by the academic ReAttach model. They are great co-creators of tailored ReAttach sessions and very well able to formulate their own learning objectives. Although the changes are quite evident, the process is mild and can be well dosed. The benefit of such a slow but profound change is stability. Learning processes can be live changing and although we are capable of taking great steps in development, it will be pleasant instead of shocking.

As I mentioned before, the group of individuals with ASD is heterogeneous and there is a lot of overlapping symptomatology with neuropsychiatric presentations such as Obsessive Compulsive Disorder, Personality Disorders, Post Traumatic Stress Disorders, Dissociative Identity Disorders and Schizophrenia (Weerkamp-Bartholomeus, 2018). Especially adults with a lot of overlapping symptomatology might need extra support considering their mental health.

Individuals with ASD have been shown to experience difficulties in episodic memory and episodic future thinking (Lind, 2010) and it cognitive processes such as scene construction and self-projection need to be assessed in ASD (Crane, 2012). Our clinical experiences have shown that children and adults with ASD who previously showed difficulties in episodic memory and episodic future thinking, were able to learn both (Weerkamp-Bartholomeus, 2015) (Weerkamp-Bartholomeus, 2018). For adults with ASD and comorbidity with personality disorders or PTSD, the gained ability of reconstructing the past resulted in grief and sorrow. This is understandable considering the huge amount of negative experiences and wrong decisions they were now able to review. The gained ability to learn from these negative experiences needed monitoring because it could easily provoke a negativism bias. The cognitive bias modification part of ReAttach was used to prevent this from happening and working towards an optimism bias and pro-active coping styles. Furthermore, it is exciting to review how most adults and adolescents with ASD were able to catch up with their peers and outgrow the diagnosis.

Discussion

Autism Spectrum Disorders are considered to start in vitro (during prenatal life) (Courchesne e. a., 2018). By improving the physical and mental health conditions of mothers in risk of a pregnancy of a child with autism, ASD might be prevented (Poletaev, 2018). Parents receive the information that early identification and treatment of ASD is essential and ethically demanded (Pierce K. C., 2016). Both prevention and early intervention are investments in optimization of health and development: in personal growth. For prevention and early intervention parents are indispensable.

Clinical results point out that the individuals with complex neurodevelopmental disorders, such as ASD, have the resilience to overcome their developmental arrest by learning interventions such as ReAttach. How can we explain the reduce of core ASD-symptomatology (Weerkamp-Bartholomeus, 2018) and individual growth by such an accessible learning intervention as ReAttach?

Neural circuits are sculpted by experience (Pierce K. C., 2011) (Jones, 2013) and research has shown that the neural circuits of individuals with ASD have developed atypically. The Mirror Neuron System plays a crucial role in the formation actions perception and imitative behavior (Khalil, 2018), thus in the formation of FV's (Krueger, 2019) and it is suggested to be impaired in ASD. Individuals with ASD reveal severe deficits in recognizing FV's and their capacity to appraise them doesn't improve when they grow older (Rochat, 2013). A variety of neural structures ranging from brain stem to the cerebellum and central cortex are shaped differently (Breveglieri, 2006) (Courchnese, 1997) (Frith, 2003) in children and adults with ASD.

The clinical results suggest that ReAttach provides learning experiences that changes neural circuits by wiring or rewiring through experience. The clinical presentations of individuals with ASD after ReAttach has changed which is observed by improved facial expressions, eye-contact, coherent speech but merely by change of their FV's into neurotypical FV's. This might be explained by improved connectivity

of a multi-layer neural network including the Mirror Neuron System: the Motor System, Basal Ganglia, Insula (responsible for imitating behavior, action understanding and automatic mimicry) and the Mind-Reading Network (Khalil, 2018): Pre-Frontal Cortex, Anterior Cingulate Cortex and the Temporo-parietal Junction (responsible for social decision making, social cognition, reasoning and cognitive perspective taking). The active learning part by associative memory processing, which is a major component of the ReAttach intervention for autism further suggests involvement of the Default Mode Network.

Future studies with neuro-imaging methods are required to assess the underlying mechanism of this accessible cost-effective approach: ReAttach makes sense!

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Conflict of interest

None

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ABSTRACT

Autism Spectrum Disorders are a complex heterogenous group of clinical characteristics of which lack of central coherence and an atypical overall style of inter-personal reactions (forms of vitality) belong to the core symptomatology.

Due to the number of individuals diagnosed with ASD that world-wide is growing rapidly, many research projects aim at detecting the underlying causes or mechanism or prevention and early intervention programs. ReAttach is an intervention for children and adults with ASD that facilitates arousal regulation, multiple sensory processing, coherence, social cognitive training and active learning. The method can be defined as a broader spectrum therapy, embracing neurodiversity and aiming at optimal health and personal and inter-relational development.

The aim of this paper is to describe the ReAttach procedure and treatment outcome for ASD and to explain why ReAttach the involvement of parents and partners is required.

The effects in terms of changes in clinical presentation and Forms of Vitality of individuals with ASD suggest that ReAttach is an accessible and cost-effective tool to overcome the developmental arrest in ASD.

Keywords: autism, ReAttach, Forms of Vitality, Mirror Neuron System, learning.

РЕЗЮМЕ

Расстройства аутистического спектра (РАС) представляют собой гетерогенную группу расстройств, для которых типичны нарушения коммуникации, т.е. способности к взаимодействию с другими людьми, а также нарушения сенсорного восприятия и ухудшение способности понимания взаимосвязей между различными событиями, явлениями и предметами.

Число людей с диагнозом РАС быстро растет во всем мире. В связи с этим появляется все больше исследований, направленных как на выявление первопричин и механизмов развития РАС, так и на разработку мер профилактики и коррекции аутистических расстройств. Терапия ReAttach – это еще один способ коррекции для детей и взрослых с РАС. Применение этого метода позволяет оптимизировать регуляцию уровня возбуждения-торможения в ЦНС, повышает согласованность и эффективность обработки и интеграции множества поступающих сенсорных сигналов, улучшает навыки общения и когнитивные функции, включая способность к обучению. Этот метод может быть обозначен как терапевтическое воздействие широкого спектра, оптимизирующий диверсифицированную обработку сенсорных сигналов, получаемых ЦНС, способствующий улучшению общего состояния здоровья и облегчающий становление межличностных контактов.

В статье описываются принципы процедур ReAttach, приводятся данные по результатам лечения пациентов с РАС, а также обосновывается положение о том, что ReAttach требует партнерского участия пациента и его родителей. Результаты клинического применения терапии ReAttach позволяют полагать, что эти подходы являются доступным и экономически эффективным инструментом для устранения задержки развития и других нарушений при РАС.

Ключевые слова: аутизм, ReAttach, формы жизненной силы, зеркальные нейроны, обучение.

Контакты:
Paula Weerkamp-Bartholomeus. E-mail: reattachfoundation@gmail.com