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Social Communication Interventions and Relationship Development Intervention (RDI)

Background

Social communication interventions are a kind of psychosocial intervention that act to make specific alterations in a child's dyadic (paired) communication environment in order to improve the child's social communication, which includes: social reciprocity, sense of self, cognitive flexibility/executive functioning and ability to regulate their emotions. They are usually used to improve core autism features in pre-school children with diagnosed autism.

Relationship Development Intervention (RDI) is a social communication intervention that has been developed to work with older children/young people and adults with autism, as well as with toddlers and young children.

Research shows that in autism, mastery of the pivotal milestone of joint attention (mastered at 9 months of age in typical development) and its preceding milestones can be delayed or disrupted and that this disruption has serious consequences for subsequent social and cognitive development. The consequences include: impairments in reciprocal social interaction, rigid thinking (which leads to inflexible behaviour); lack of perspective-taking (leading to a focus on self and an inability to see the 'bigger picture'); difficulties with emotional regulation (leading to 'challenging' behaviours); impairments in episodic memory (leading to lack of resilience, deficits in self-actualisation and low self-esteem).

NICE clinical guidelines on 'Autism spectrum disorder in under 19's: support and management' (GG 170) recommend as a key priority for implementation that providers of services consider a specific social communication intervention for the core features of autism in children and young people that includes play and activity based strategies with parents, carers and teachers to increase joint attention, joint engagement and reciprocal communication in the child or young person. NICE recommends that strategies should:

- Be adjusted to the child or young person's developmental level
- Aim to increase the parents', carers', teachers' or peers' understanding of, and sensitivity and responsiveness to, the child or young person's patterns of communication and interaction
- Include techniques of therapist modelling and video interaction feedback
- Include techniques to expand the child or young person's communication, interactive play/engagement and social routines

The guidelines state that the intervention should be delivered by a trained professional. This could be a registered Relationship Development Intervention Consultant who has expertise and qualifications in delivering an intervention of this nature.



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The most recent emerging research (Green, 2016) into the developmental trajectory of autism is showing that altering the communication style of the parent/caregiver can alter the trajectory of their child's autism.

The primacy of the parent-child relationship in remediating autism

Social communication interventions as described in the NICE guidelines recognise the primacy of the parent-child relationship in the successful remediation of the core difficulties in autism.

Such social communication interventions including RDI tend to incorporate a 'lifestyle' approach in their methodology. This allows parents to work the intervention into everyday routines, enabling the child to be immersed in a home-based social communication environment. This is crucial because what contributes significantly to the success of the intervention is the parents' ability to spot natural, authentic opportunities for social communication learning that arise as part of everyday living together with the fact that the parent is the natural 'guide' to the child's 'mental apprentice' in typical development, which is what social communication interventions seek to emulate.

There is now an extensive body of peer reviewed research to support the primacy of the parent-child relationship in the early years in developing:

- Executive functioning (Baptista, 2016) (Bernier, In press) (Bibok, 2009) (Carlson, 2009) (Fay-Stambach, 2014)
- Understanding of mental states and emotions (Ayoub, 2014) (Devine, 2016) (Ensor, 2014) (Hughes, 2015) (Pavarini, 2013) (Salmon, 2016) (Taumoepeau, 2008) (van Bergen, 2010)
- Empathic concern (Drummond, 2014) (Farrant, 2011)
- Pretence and imagination (Lillard, 2006) (Markova, In press)
- Self-identify (Fivush, Maternal reminiscing style and children's developing understanding of self and emotion, 2007) (Fivush, Family reminiscing and the construction of an autobiographical self, 2013) (Fivush, Parent-child reminiscing locates the self in the past, 2006) (Fivush, The making of autobiographical memory: intersections of culture, narratives and identity, 2011) (Reese, 2010)
- Episodic memory (Fivush, Parent-child reminiscing locates the self in the past, 2006) (Haden, 2009) (Hedrick, 2009) (Salmon, Talking (or not talking) about the past: the influence of parent-child conversation about negative experiences on children's memories, 2015)



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The evolution of thinking in typical development: child 'mental apprentice' to adult 'guide'

In typical development, the interpersonal engagement between parent and child in the early years acts as the vehicle for the development of the child's ability to: cope with, and enjoy unpredictability and uncertainty; regulate their emotions; understand themselves and other people; and encode special 'episodic memories' that underpin resilience, self-esteem and self-actualisation.

The internationally respected autism researcher and developmental psychologist Peter Hobson describes the interpersonal engagement that takes place between adult 'guide' and child 'mental apprentice' as 'the cradle of thought' in his ground-breaking book of the same name (Hobson, 2002).

The Guided Participation Relationship (GPR)

The GPR describes the framework that must be in place in order for reciprocal interpersonal engagement (the 'cradle of thought') to take place.

Anthropologists have observed that in every culture in the world, child development takes place within a special framework that parents naturally and subconsciously put around their children. Barbara Rogoff, a Professor of Psychology at Santa Cruz University, coined the term 'Guided Participation Relationship' (GPR) to describe this special framework that enables the child to collaborate in a learning relationship which is 'carried out day after day, without much deliberation or conscious awareness'. (Rogoff, 1991)

When development is typical, infants at around six to seven months begin to show signs of an insatiable drive to grow: to stretch, learn and explore.

When the GPR is functioning well, it is a collaborative dance, with each partner contributing to the success of the shared endeavour. There is an instinctive '**feedback loop**' where child apprentices provide information related to their ability to manage the tension associated with engaging beyond the edge of their competence and where parents guide their child using the feedback from the child in order to carefully adjust the level of challenge and support they provide. Parents raise the bar in small increments, presenting tougher problems and demanding greater responsibility to stretch the child's mental functioning, while still providing an environment where the child feels competent and safe.

The infant's sense of their own personal agency and their drive to master new challenges only develops as a result of strong positive memories of engagement (episodic memories) with parental guides providing a growth-promoting environment, in which challenge is carefully balanced with safety.



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Infants learn that even when they initially fail to make sense of, or master a new task, their guides will provide 'soft landings', modifying tasks to make them more attainable and encourage their infants to try again. Hundreds of such positive growth-promoting experiences build the infant's resilience, as well as their trust in and reliance on their guiding relationship and their sense of self.

Messinger et al (Messinger, 2014) concluded that in a successful parent-infant relationship, *'... each person's actions & emotional reactions serve to trigger the actions & emotional reactions of the other in a continuous manner, inexorably moving towards developing the child's mental functioning.'*

Dr Ruth Feldman (Feldman, 2007) describes the 'collaborative dance' that takes place within the GPR as 'synchrony' and states that *'synchrony is a time-bound, co-regulatory, lived experience within relationships that provides the foundation for the child's later capacity for intimacy, symbol use, empathy, and the ability to read the intentions of others.'*

'Synchrony involves the matching of behaviour, affective states, and biological rhythms between parent and child that together form a single relational unit. The high level of positive arousal that infants co-construct with their parents during these short daily episodes of face-to-face play, a level reached only during such shared moments, accelerates the maturation of the infant's relational skills and provides essential environmental inputs for the development of self-regulation and social fit.'

Dr Daniel Stern (Stern, 1985) concluded that the experience of synchrony is required not only for the maturation of brain circuits that support social engagement, but also for the infant's ultimate emotional development. He pointed out how parent-infant synchrony has been shown to predict infants' later attachment security, self-regulation, behaviour adaptation, empathy, symbolic competence, and internalization across childhood and up to adolescence.

Dr Feldman (Feldman, 2007) in her review of relevant research concluded that synchrony plays an important role in facilitating the child's abilities to self-regulate and understand emotions in self and others and feel empathic concern.

Dr Alan Sroufe (Sroufe, 2008) shows that laying the foundations for emotional self-regulation, is, in his view, the most important task of infancy and takes the form of a sequential transfer of responsibility from caregiver to dyad (parent/child pair) to child. *'.. young infants have limited capacities for self-soothing and self-regulation and must frequently be on (and past) the edge of overwhelming arousal. At first, caregivers have almost total responsibility for keeping arousal tolerable. In time, infants play an increasingly active role in a dyadic regulation process, responding to caregivers and, ultimately,*



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instigating regulatory assistance through intentional bids. Gradually, over the early years of life, these regulatory processes are taken over (internalized) by the child.'

Sroufe emphasizes the importance for their continued growth, of infants learning how to successfully manage feelings accompanying failure. *'Infants must fail repeatedly in their assimilative/accommodative efforts. Were such failure routinely to lead to fear and disengagement, rather than continued effort, cognitive structures would not change. Only if failure leads to persistence does change occur. ... It is of great importance that infants be able to cope with the very high arousal often associated with novelty and failures to assimilate and not routinely become disorganized by the negative affect.'*

The synchrony that leads to the development of the child's higher level mental functioning – the functioning that is crucial for them to be able to take advantage of the learning opportunities presented in school and for a good quality of life – can only occur within the GPR, where there is an instinctive feedback loop between child and parent to enable it to take place.

In schools, teachers do not explicitly work on the GPR: typically developing children arrive at school already able to function within the GPR and therefore having mastered all the developmental competencies they require to be ready for learning and life. Children with autism arrive at school unable to function within the GPR and without mastery of the competencies that underpin readiness for learning or ability to engage in learning – their higher level 'mental functioning' (executive functioning and emotional regulation) has not developed, putting them at a severe disadvantage – both academically and socially - in comparison to their typically developing peers.

Atypical development in autism is due to the breakdown of the GPR

In autism, the child's growth-seeking drive does not develop at the appropriate time. The child is not sufficiently driven to seek out the adult when faced with uncertainty and unpredictability, the adult is then confused about how to respond to a child who is not soothed or supported (like typically developing children are) by their reassurance and/or attention. The **feedback loop** is not working and so the GPR breaks down, with catastrophic repercussions for subsequent development. The child seeks out sameness and predictability (becomes rigid in their thinking) and is unable to use the adult either as a reference point to help to manage uncertainty or as a vehicle for the development of self-regulation and self-actualisation.

According to Alan Sroufe, parents have the critical role of training the infant in tension management, *'In the course of playful interaction the infant learns, over time, to maintain behavioural organization in the face of increasingly high levels of tension. As caregiver and*



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infant play, tension is escalated and de-escalated, to the edge of overstimulation and back again, commonly ending in the bursts of positive affect that are so rewarding for caregivers. Episode by episode, day by day, the infant's own capacity to modulate (and tolerate) tension is developed and a reservoir of shared positive affect is created. Thus, in time the caregiver is not only a beacon of familiarity and security, but a repository of positive feelings as well. And, in time, the infant can be more direct and active in seeking what he or she needs by behaving effectively in the face of tension. Through repeated experiences of arousal increase and modulation, the brain itself becomes better adapted for dampening high arousal and for emotional regulation in general.'

For the autistic child, there is no training in 'tension management' and no 'cradle of thought'. Children with autism arrive at school having missed out on thousands of hours of these crucial 'mental apprenticeship' opportunities. Without a guided participation relationship around them as part of their natural daily environment, they have a permanent lack of access to the conditions that promote the executive functioning, self-actualisation and self-reflective competencies that underpin true learning and development. This is a serious disadvantage that continues to worsen over time.

Reinstating the GPR

Parents of typical children instinctively know how to put the GPR around their child in response to the natural parent/child feedback loop. For parents of children with autism, when the feedback loop fails to work, the GPR breaks down and a state of confusion ensues. Parents become locked into 'treading on eggshells' around their child, into shying away from any challenges or anything that will upset the child's need to be in control of their environment. The child's drive for sameness is thus reinforced, creating further obstacles to the mastery of key developmental milestones.

RDI makes explicit what is intuitive about the GPR in typical development – it teaches parents to reinstate the GPR around their child, enabling the 'cradle of thought' (interpersonal engagement) to do its magic.

The framework of the GPR requires that the adult guide:

- Is confident at setting limits and boundaries (including negotiating compromise without relinquishing control when appropriate)
- Uses a ratio of 80% non-verbal to 20% verbal communication. Where communication is verbal, removing demands or commands and using invitational language
- Uses roles to establish co-regulatory patterns (the way partners will work together towards their goal)
- Slows the pace of interaction



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- Uses pausing to facilitate thinking and social referencing and to enable the student to step into their role
- Is able to gently support the student if they are struggling (scaffolding)
- Uses 'spotlighting' to bring the student's attention to something and/or help the child encode episodic memories
- Is aware of the student's 'edge of competence' so that the activity and any challenges are not going to overwhelm the student (leading to withdrawal/avoidance due to too much uncertainty) or underwhelm the student (leading to withdrawal/avoidance due to boredom).

It is not possible to put the GPR in place without the support of an expert who understands its component parts and can model for and guide the parent in how to use each of them in turn, gradually building up to using them together. It takes parents between 6 months to a year with the support of an RDI Consultant to learn how to put the GPR into place effectively with a child with autism.

In RDI, parents are initially given a GPR 'guide' objective by their RDI Consultant. They do not progress to working with their child on child objectives until the GPR is in place. They video themselves working on their guide objective in interactions with their child, analyse their interaction and feed back to their Consultant. The ability to watch back on video and learn how to reflect and modify the GPR as a result of Consultant feedback and support is a crucial learning tool for families.

Through repeated practice at reinstating the GPR and in response to the parent's emerging mastery of the GPR, the parent and child start to develop a shared history as the parent begins to be able to help the child lay down episodic memories of competence that result from the adult facilitating the child's success within joint activities in the GPR. The child can now trust their parent to provide 'soft landings' and learns to instinctively reference their parent when faced with uncertainty or unpredictability.

RDI goals

The main goal of RDI is to remediate the core executive functioning, emotional regulation and self-actualisation difficulties of autism. Remediation is defined as addressing these difficulties until they are no longer obstacles in an individual's life. RDI affords young people (working with adult guides) the opportunities to experience competence in unpredictable situations of ongoing change where they are the ones making discoveries without direct prompting. As a result, they become increasingly curious and intrinsically motivated to expand these discoveries. They become more flexible in their thinking and adaptive in their behaviour.



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All targeted RDI concepts follow typical development systematically and gaps in the mastery of key developmental milestones are identified and addressed. While many individuals have some higher level skills, most have developmental gaps that typically appear within the first year of life. Caregivers modify their own actions to increase the child's level of understanding. Some examples include: slowing down, clarifying their role, simplifying the activity, and decreasing language, using invitational language and removing demands. This process is individualized based on the situation, the child and their response.

In RDI, the over-arching goals are:

1. Through participation in caregiver-guided continually more complex cycles of regulation, challenge and new regulation, the aim is for individuals on the autism spectrum to learn not only to tolerate, but also to enjoy changes and transitions, becoming more flexible in their thinking and adaptive in their behaviour.

Families and caregivers/school staff are supported in their roles as participant guides to provide daily opportunities for the young person's adaptive and thoughtful responding in the face of novel and increasingly unpredictable settings and unexpected change.

2. To facilitate experiences of competence that can lay down special 'episodic memories' of success. These memories are then used to inform decision-making in future similar situations.

These are key factors in the young person developing intrinsic motivation to take part in social engagement.

RDI in practice: what does it look like?

RDI involves an adult guide who, under supervision from a trained and experienced RDI Consultant, will work with the child or young person in a GPR framework during sustained periods of joint engagement.

The adult guide is usually a parent, in conjunction with an RDI-trained teacher or learning assistant within the school or college.

The guide undertakes regular (preferably daily) guiding engagements with the child or young person. A guiding engagement can take many forms e.g. art and craft, board and other games, a building and making project, cleaning, cooking.

The guide will be focusing on a specific student objective and will have planned and framed the activity in order to maximise opportunities for the young person to work on that objective. 'Framing' is a strategic plan for how the GPR will be put in place and maintained



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in the face of resistance and/or withdrawal. The guide will give the student opportunities to be competent within a socially reciprocal framework where each partner in the dyad has a co-regulatory role so that these positive experiences can be subtly spotlighted in order for the student to encode positive episodic memories of being competent and resolving challenges in a joint activity where the guide is used as a reference point.

The guide has to adapt 'in the moment' to the feedback s/he is getting or not getting from the young person in order to make sure that the joint engagement is sustained. The guide also has to spot and exploit spontaneous opportunities to enable the young person to be a competent, reciprocal partner in the interaction. The guide has to develop and maintain an ongoing state of 'mindful guiding' so that they can carry out reciprocal actions whilst anticipating what might happen next, analyse what has just happened and think about what they need to do in order to facilitate the student to be competent in stepping into their reciprocal role in the interaction.

The guide films a sample of guiding engagements with the young person and then critically analyses the footage against the objective they were working on. The video footage and notes are shared with the supervising RDI Consultant who analyses the footage and gives feedback on how the guide can improve their implementation of the GPR and/or better enable the student to master the guiding objective. The guide uses this feedback to inform their planning and execution of the next guiding engagement.

There are 3 stages in RDI:

- Guide training: supporting the adult to be able to put the GPR in place
- Child foundation objectives: competence development; joint attentional learning; self-regulatory decision-making; co-regulatory decision-making; emotional responsibility
- The 'dynamic intelligence' curriculum: self-reflection, self-actualisation, real world savviness

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