



Feasibility and effectiveness of the Super Skills for Life program in enhancing emotional wellbeing of disadvantaged youth in Mauritius: mixed-method design

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+ Children's Mental Health in low- and middle-income countries (LMICs)

- Mental health problems in LMICs are important health concerns.
- Over 80% of individuals with mental health disorders reside in LMICs.
- Youth, particularly vulnerable to mental illnesses, form the majority of the LMIC population.
- An estimated 20-30% of youth in LMICs are affected by mental health issues:
 - With **anxiety** and **depression** symptoms as the leading causes

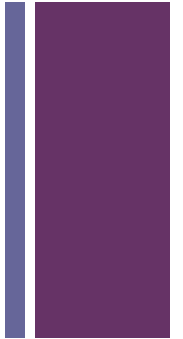
(Yatham et al., 2017)

+ Institutional Care – ‘Looked After’ Children in LMICs

- Rapid expansion of residential care institutions (RCI) in LMICs – 8 million of young people are being ‘looked after’ by the state.
- Young people are at greater risk for poorer mental health and lifelong psychopathology when they experience institutional care (Mooney et al., 2009; Petrowski et al., 2017).
- **Yet a large number of children and adolescents in((RCI) are without access to quality mental health care**
 - Overlooked mental health problems in RCI
 - Lack of implementation of evidence-based psychological programs and
 - Insufficient capacity

+ Intervention programs for disadvantaged youths

- CBT is considered as the treatment of choice. (James et al., 2013)
- However, less than 20% of children and adolescents in need of mental health services access the services (Essau, 2005).
- In LMICs, availability and access to youth mental health services are limited and grossly inadequate (Saxena et al., 2011; Kessler et al., 2007).
- Mismatch between high need and persistent scarcity of financial resources, workforce, and infrastructure for mental health services.
- Recent developments suggest that multiple problems can be targeted within a single protocol: transdiagnostic interventions especially when delivered by non-specialists.



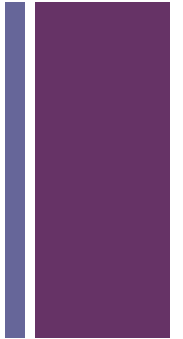
✦ Transdiagnostic Prevention Programs

- Underpins the broad array of symptom presentations (e.g. anxiety, depression, behavioral problems)
- Focuses on identifying the common and core maladaptive psychological, cognitive, emotional, interpersonal and behavioral processes
- Targeting these factors in treatment (Barlow et al., 2004).



+ Super Skills for Life

- 8-session intervention protocol (trainer's manual & children's workbook)
- Delivered once/twice a week
- Each session - 45 minutes
- 8-10 children per group
- The delivery of the following skills:
 - education about emotions and feelings, cognitive reappraisal, problem-solving, behavior activation, relaxation techniques, self-monitoring and social competence.
- Video feedback (session 1 & session 8)
- Structured games
- Role play





SSL Sessions: Topic Description/Activities

Session 1	Introduction	Introduction to SSL, including session rules and reward system 2-minute video presentation Introduction to self-esteem and ways to enhance it
Session 2	Feelings	Introduction to feelings Feelings detective game 2 minute presentation video-feedback.
Session 3	Thoughts	Introduction to thoughts Recognising helpful and unhelpful thoughts Building goals and setting targets
Session 4	Linking Thoughts, Feeling and Behaviour	Explaining the link between thoughts, feelings and behaviours Recognising body signals
Session 5	Learning to Relax	Explaining the importance of being in relaxed state Practicing various relaxation techniques
Session 6	Social Skills	Explaining various types of social skills Role play on various social interactions such as on how to introduce oneself, joining a conversation, and on how to end conversations politely
Session 7	Problem Solving Steps	Introduce problem solving steps Role play of common conflict situations and applying the problem solving steps
Session 8	Review	Overview of all the previous sessions. 2 minute video presentation.

+ French adaptation of SSL



Super Compétences Pour La Vie

Cahier d'exercices pour enfants



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+ Feasibility & Effectiveness Study

Inclusion Criteria:

- Aged between 8 to 15 years
- C/A identified by the institution child welfare professional as displaying any symptom of emotional problems
- Informed consent from the RCI manager and assent from the C/A

Exclusion criteria:

- C/A identified as undergoing active psychiatric treatment or concurrent psychological treatment.
- Unwillingness or decline to participate in the study.

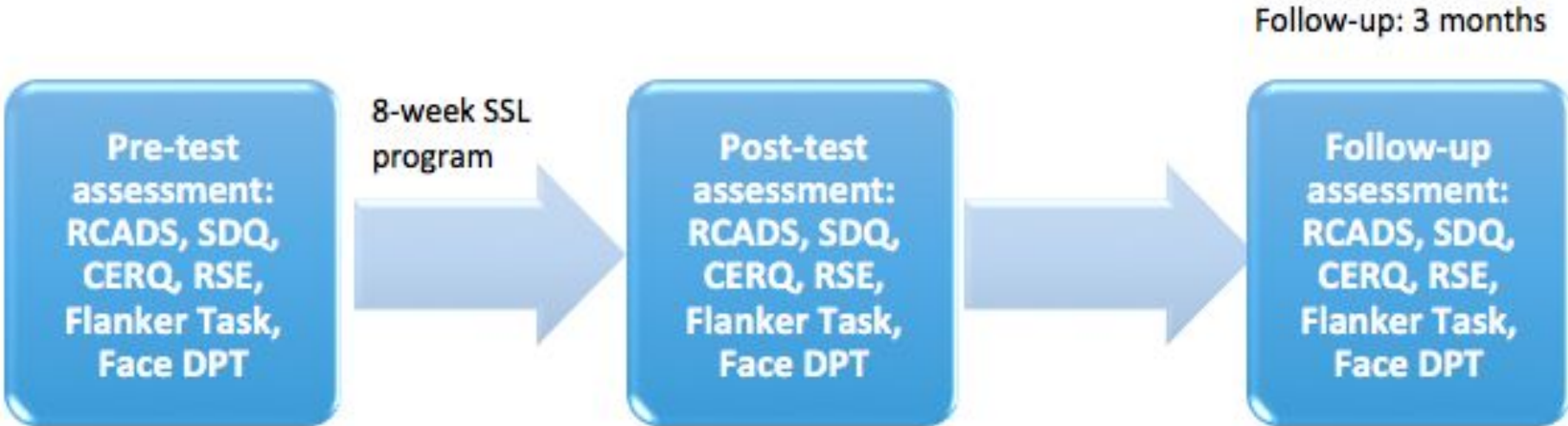
Feasibility study (mixed method design)

- 36 children and adolescents (Male=14 ; Female=22)
- 9 to 15 years ($M=11.4$, $SD=2.3$)
- 2 RCIs
- Intervention program ($n=20$)
- waitlist control group ($n=16$)

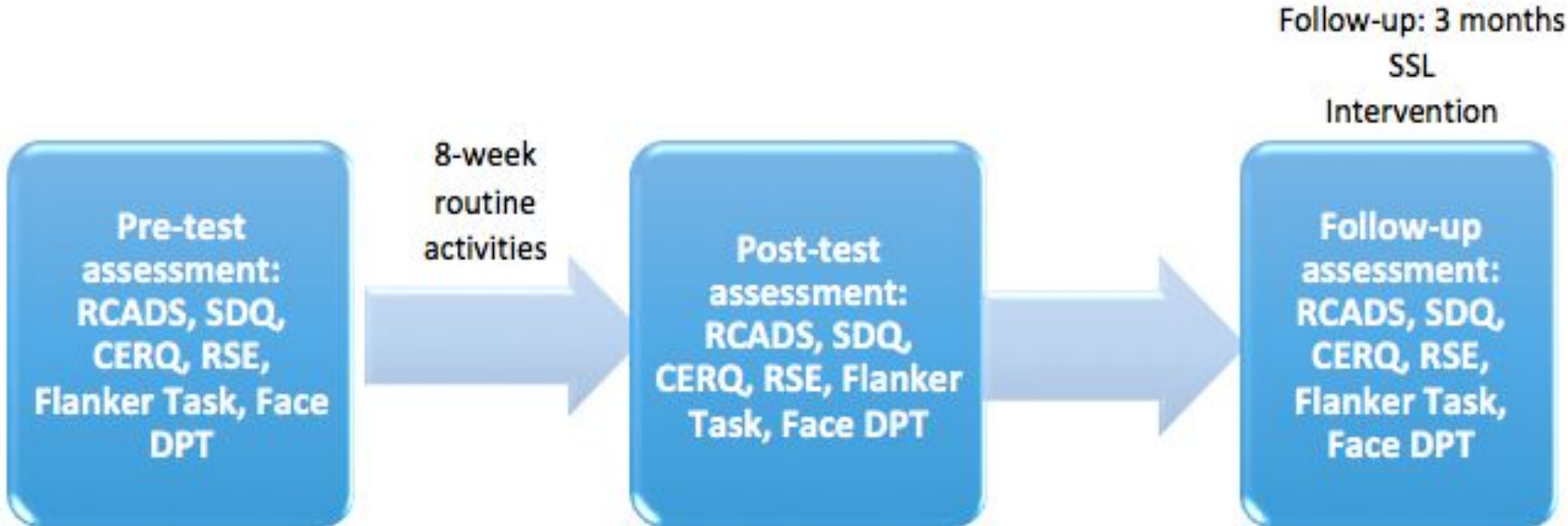
Effectiveness study (Randomized Waitlist-Control Trial)

- 100 children and adolescents (Male=24; Female=76)
- 9 to 15 years ($M=11.9$, $SD=2.7$)
- 6 RCIs
- Intervention program ($n=50$)
- waitlist control group ($n=50$)

Intervention Group



Waitlist-Control Group





Primary Measures

Strength and Difficulties
Questionnaire (SDQ)
Goodman et al., (1995)
5 subscales – 25 items

Revised Children's
Anxiety and Depression
Scale (RCADS)
Chorpita et al., (2000)
7 subscales – 47 items

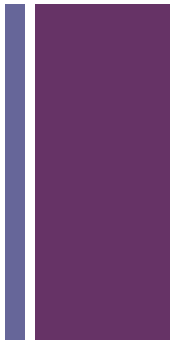
Secondary Measures

Cognitive Emotion Regulation
Questionnaire (CERQ)
Garnefski et al., (2001)
9 subscales – 36 items

Rosenberg Self-Esteem
Questionnaire (RSE)
Rosenberg (1965)
10 items

Child Flanker Task (Christ et al.,
2011) to measure inhibition

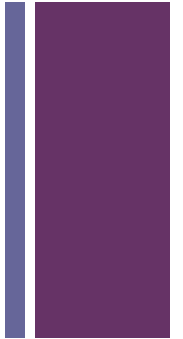
Modified Dot Probe Task
MacLeod et al. (2007)
(facial emotions) to measure
attentional bias



STUDY
2 only

+ Acceptability & Feasibility

- Attendance
- Group Issues: Cohesion, Composition and Organisation
- Intervention Content: Challenging and Effective Features



+ Acceptability & Feasibility

Attendance:

■ *Child/adolescent groups*

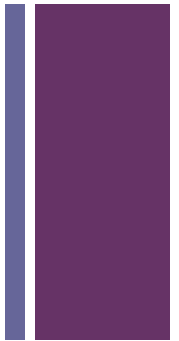
- No dropouts from the control & intervention group at T1, T2 or T3
- 97% attended the 8 sessions of SSL
 - (missed sessions – hospital appointments, competitions, cultural events)

■ *Caregiver groups*

- Encouraged to attend the SSL sessions
- 1 caregiver on each sessions
- Social workers / institution managers – limited presence

+ Group Issues: Cohesion, Composition and Organisation

1. 6 groups of 6-8 children of mixed gender
2. Scheduled time slots for the session
 - The sessions were 1 hour each instead of 45 mins
 - Reschedule of 4 sessions – institution activities
3. Feeling safe in the sessions
4. Nametags used; seating arrangements made
5. Confidentiality and abuse-related experiences
 - Clarify what could/could not be shared in the group
6. Group rules (speaking in turn, using hands, going out)
7. Group cohesion
 - Group activities and role plays
8. Additional sessions for children who could not attend previous sessions
9. Reward system after the sessions (behaviour & participation)

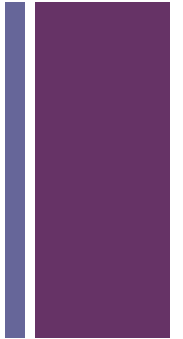


+ Intervention Content

8 semi-structured interviews & 1 focus group discussion with minor participants

Focus-group discussion with social workers/ institution managers after SSL workshop

- **User satisfaction** - overall program and specific content
- **Material**
 - Workbook – understandable, appropriate and engaging
 - Exercises were easy to moderate difficulties (younger ones)
 - Friends & caregivers helped on exercises
 - Relaxation techniques – positive & often used in subsequent daily life
- **Culturally congruent**
 - Material is adapted to the Mauritian culture
 - Children brought their own contribution to plays and games



+ Engagement

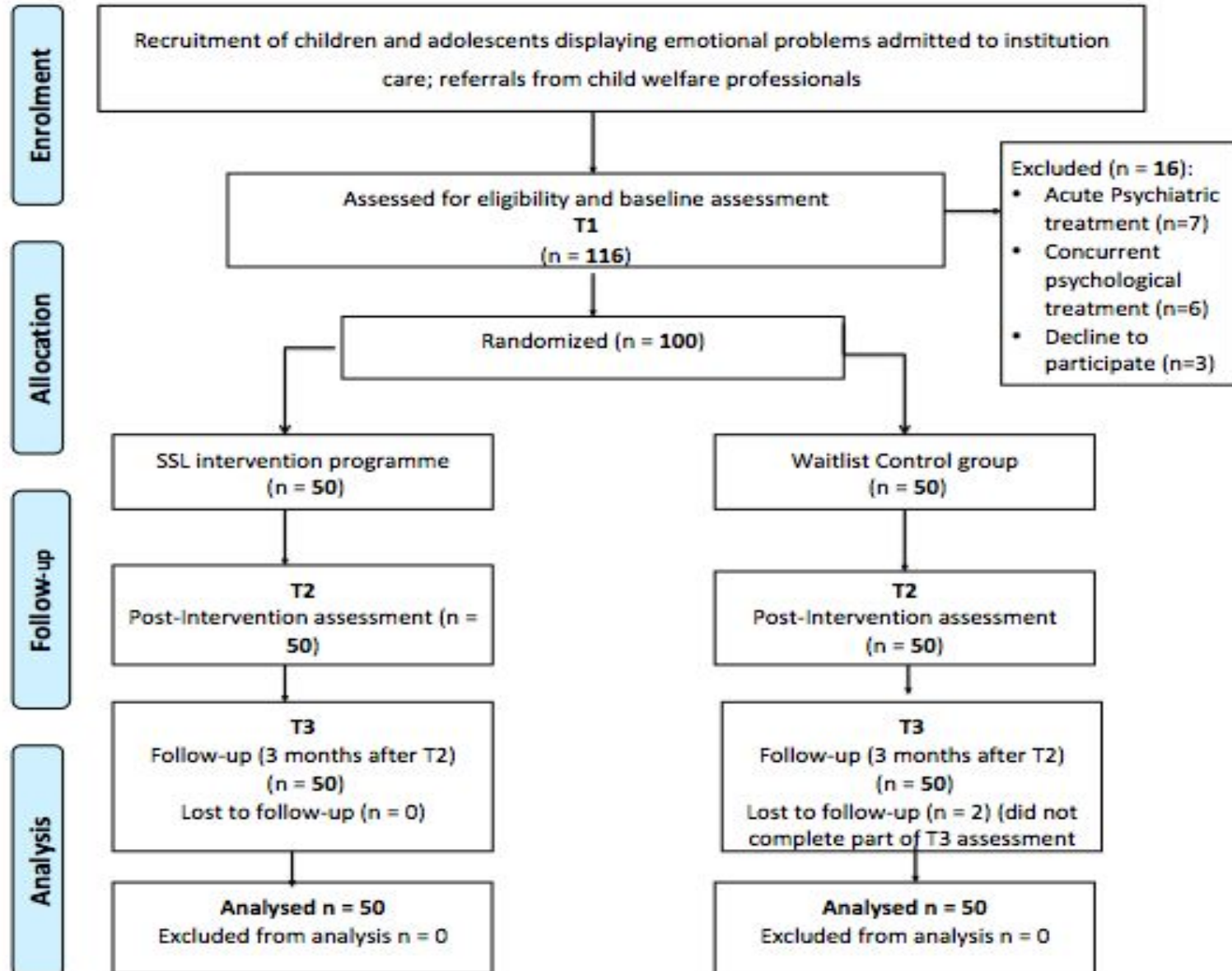
- Low rates of attrition
- First program on mental health with specific content and various sessions
- Direction to better understand their own emotions, feelings and behavior
- Role plays helped to better understand thought processes
 - Promoted social engagement after the sessions
- Positive experience
 - Plan to practice skills learnt
 - At the beginning young people found the intervention 'strange', as to why it is being done – young people have learnt to shut down their emotions and not talk about it.

Ideas for Improvement

- Continued sessions
 - Need for more understanding of emotions and thoughts
 - SSL-adolescent version
- Every child should benefit the program in all institutions
 - Especially when they are new admitted and when they might be due to leave
- Involvement of caregivers
 - Lack of understanding of child's emotions



Method: Consort Diagram of RCT

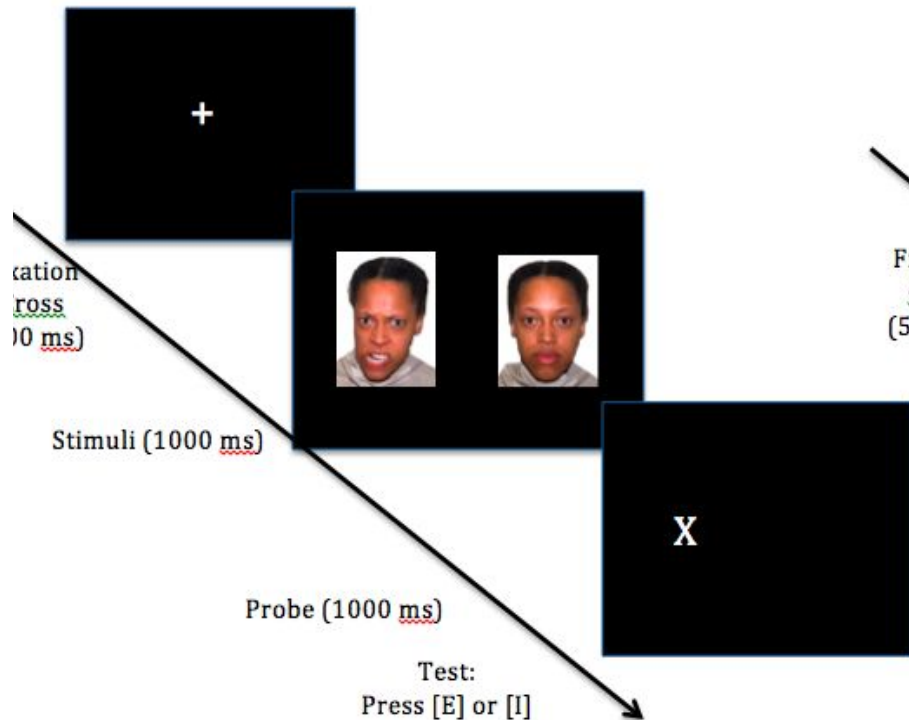


+ Emotional Probe task

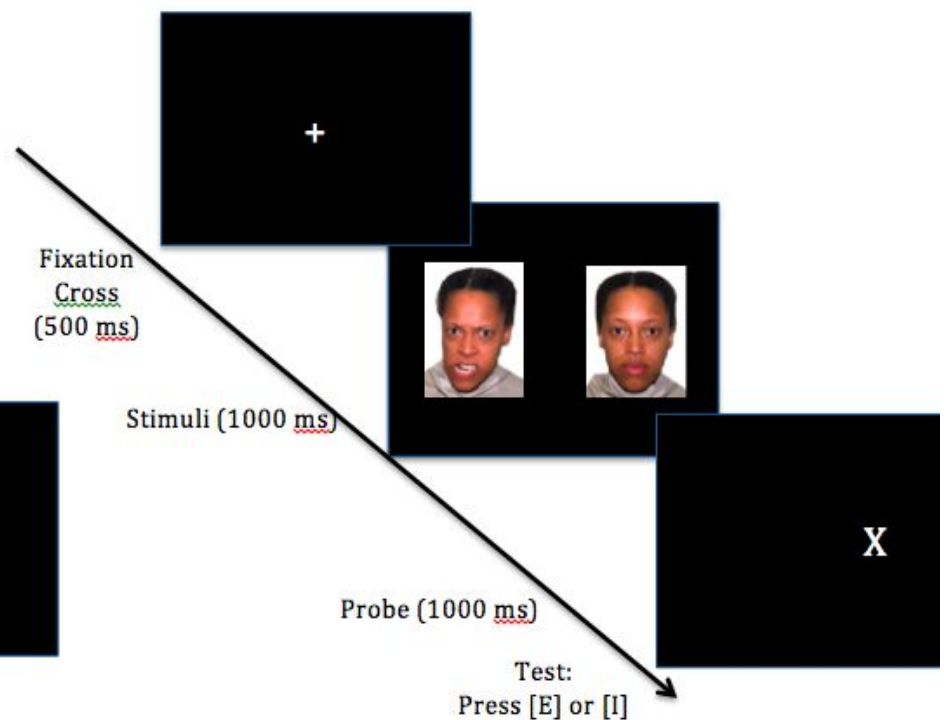
The Dot-Probe Task was modified to measure attentional bias.

12 models (6 *M* & 6 *F*) portraying angry, happy and neutral facial expressions were selected from the Nimstim face set (Tottenham et al., 2009) . Face pairs of same model were presented next to each other into angry-neutral, happy-neutral and neutral-neutral (filler) pairings. Two blocks of trials (10 practice trials and 144 test trials)

Congruent Trial



Incongruent Trial

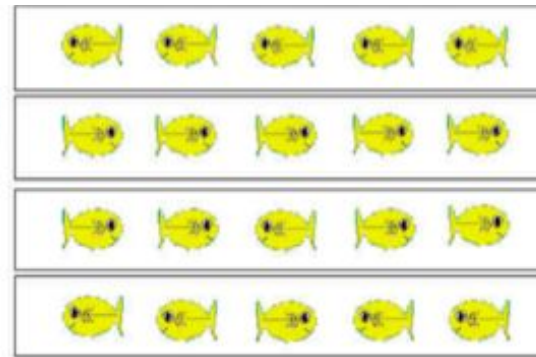




Practice Block 1 will display only one target on the middle of screen.
Practice Block 2 and Test Block will display 5 fish (the middle fish being the target and the rest being flankers): They will be displayed randomly as congruent or incongruent trials.



Target alone



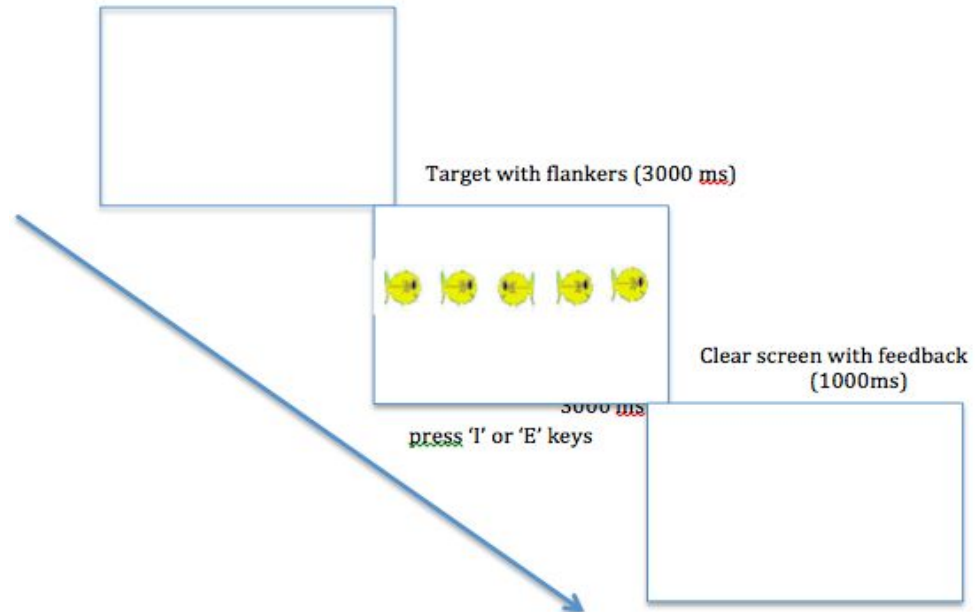
Congruent

Incongruent

Flanker Task

Each trial will take the following sequence:

Clear screen between last trial to next trial (1500 ms)

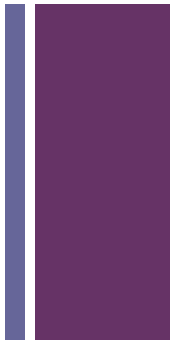


+ Outcomes for Problem Behaviour

	T1		T2		T3		Contrast*
	INT	WLC	INT	WLC	INT	WLC	
<i>SDQ</i>							
Emotional problems	6.2 (2.7)	5.3 (2.5)	4.9 (2.4)	6.4 (1.7)	4.6 (2.7)	7.1 (1.9)	
Conduct problems	5.12 (2.0)	4.9 (2.2)	3.9 (1.4)	5.5 (1.1)	3.72 (1.3)	5.5 (1.0)	
Hyperactivity	6.0 (1.8)	5.0 (1.7)	5.3 (1.5)	6.5 (1.4)	5.8 (1.5)	7.5 (1.1)	T2>T3, T1>T3
Peer problems	6.5 (1.6)	6.3 (2.2)	6.5 (1.7)	6.3 (2.2)	5.9 (1.5)	6.7 (1.7)	
<u>Prosocial</u>	7.3 (2.0)	6.2 (2.0)	7.6 (2.1)	5.2 (1.0)	7.3 (2.7)	5.0 (0.3)	
Total SDQ difficulties	23.1 (5.5)	21.6 (6.0)	21.2 (4.1)	28.8 (3.4)	21.1 (4.1)	(30.9) 5.9	T1>T2>T3

*Significant contrasts are displayed. Contrasts are based on Bonferroni post hoc tests.

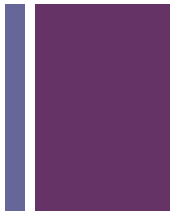
+ Outcomes for Anxiety and Depression



	T1		T2		T3		Contrast*
	INT	WLC	INT	WLC	INT	WLC	
<i>β</i> CADS							
Social phobia	13.7 (5.2)	13.6 (6.3)	8.8 (4.0)	18.3 (4.5)	9.5 (4.2)	15.7 (5.7)	
Panic disorder	9.9 (5.7)	9.4 (6.6)	8.0 (3.4)	19.2 (2.9)	8.9 (2.8)	17.2 (4.0)	T1>T2, T1>T3
Separation anxiety	9.4 (4.7)	8.8 (5.49)	6.0 (2.7)	16.1 (3.9)	8.8 (3.9)	14.6 (4.7)	T1>T2, T1>T3
Generalized anxiety	10.2 (4.2)	9.6 (3.9)	7.3 (1.5)	14.5 (2.5)	7.6 (1.0)	16.8 (1.0)	T1>T2>T3
Obsessive-compulsive	10.1 (3.6)	9.0 (3.5)	6.3 (3.0)	12.7 (1.7)	6.5 (3.3)	14.2 (4.5)	T2>T3
Total anxiety	53.2 (19.9)	50.1 (22.3)	36.5 (9.2)	85.8 (11.3)	40.4 (12.5)	72.4 (22.3)	T1>T2>T3
Total depression	11.2 (6.4)	11.1 (6.1)	6.1 (2.8)	19.1 (2.7)	7.1 (3.1)	20.4 (2.3)	T2>T3, T1>T3

*Significant contrasts are displayed. Contrasts are based on Bonferroni post hoc tests.

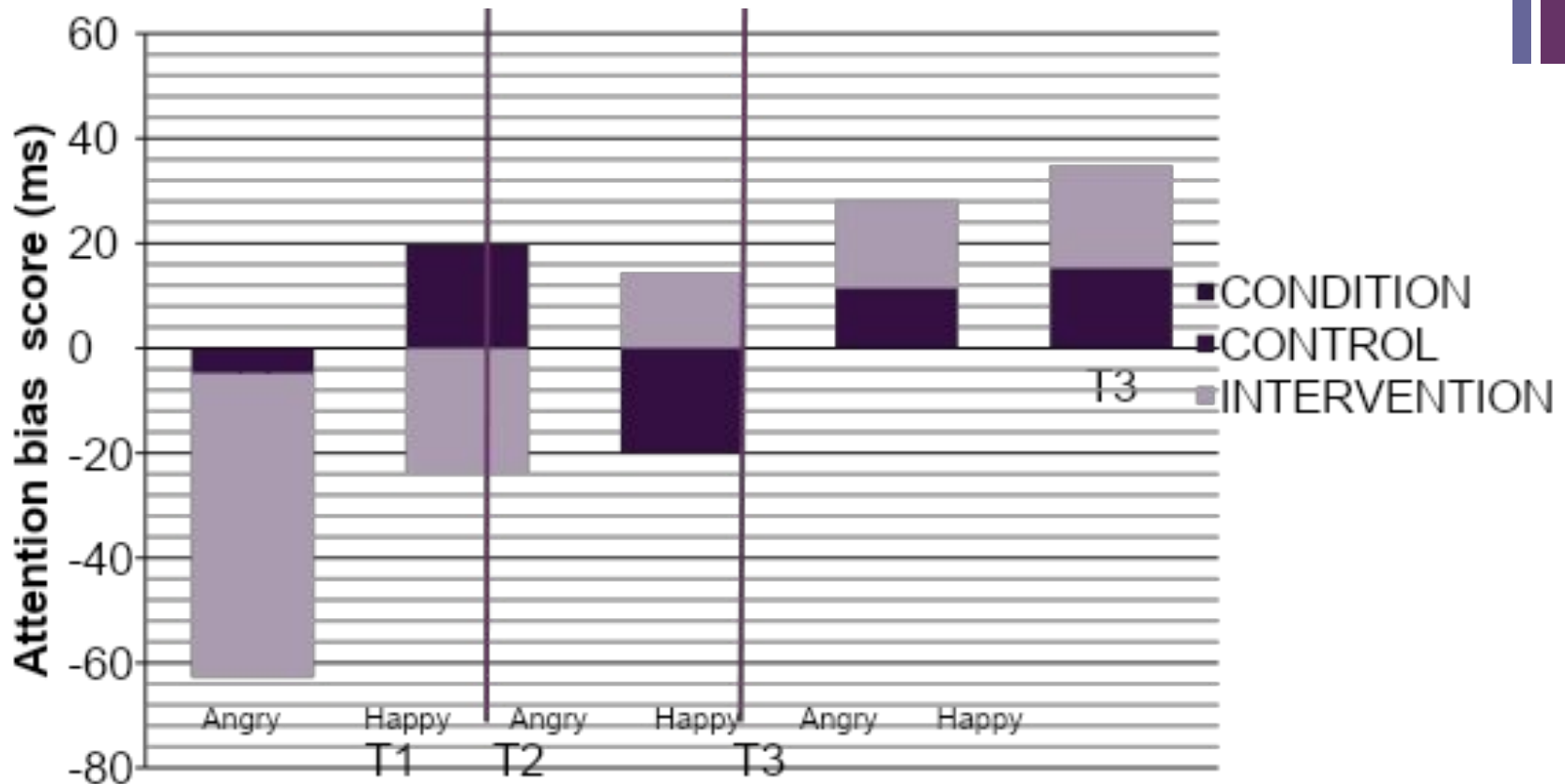
+ Outcome for Emotion Regulation



	T1		T2		T3		Contrast*
	INT	WLC	INT	WLC	INT	WLC	
<i>Maladaptive ER</i>							
Self-Blame	10.7 (3.9)	8.9 (3.6)	5.9 (1.5)	10.7 (2.2)	5.5 (1.3)	11.1 (2.7)	T1>T3
Rumination	12.3 (3.8)	11.1 (3.7)	10.4 (2.1)	15.5 (2.7)	10.1 (2.4)	14.7 (2.9)	T1>T2
Catastrophising	11.0 (3.8)	11.2 (3.7)	8.5 (2.9)	14.5 (2.3)	7.1 (2.0)	14.2 (2.7)	T2>T3
Other-Blame	10.7 (3.5)	9.5 (3.5)	6.6 (2.2)	10.5 (2.4)	5.9 (2.1)	10.8 (2.5)	T1>T3
<i>Adaptive ER</i>							
Acceptance	10.5 (3.2)	9.3 (2.8)	8.6 (1.9)	11.9 (2.1)	6.3 (1.7)	13.1 (2.1)	
Positive Refocusing	13.1 (3.8)	12.9 (3.6)	15.1 (2.4)	11.9 (2.6)	15.7 (2.6)	12.7 (2.8)	T1<T3
Planning	13.1 (3.7)	11.6 (3.1)	14.8 (2.5)	9.2 (2.6)	15.2 (2.9)	8.1 (2.7)	
Positive Reappraisal	12.2 (3.7)	11.6 (3.7)	15.4 (3.1)	11.1 (2.9)	15.3 (2.4)	9.8 (2.9)	T1<T2
Putting into Perspective	11.3 (3.2)	11.5 (4.1)	11.7 (2.4)	14.8 (2.2)	11.5 (2.2)	14.8 (2.5)	T1<T3

*Significant contrasts are displayed. Contrasts are based on Bonferroni post hoc tests.

+ Outcome for Attention Bias



Mean attentional bias scores (SE) for angry and happy faces as a

+ To conclude

- SSL as a transdiagnostic program targeting multiple problems at the same time:
 - □ anxiety and depression symptoms
 - □ problem behaviour - hyperactivity
 - □ maladaptive ER strategies
 - □ adaptive ER strategies
 - □ attention bias towards threat
- The SSL intervention is feasible and effective in improving the emotional wellbeing of disadvantaged children living in RCI.
- "**Healthy citizens** are the greatest asset any country can have." — Winston Churchill