The promise of early booksharing in preventing the development of aggression in children

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Outline

• Aggression in young children

• Khayelitsha booksharing RCT

• Mphatlalatsane study in Lesotho

• Planned Randomized Controlled Trial

• Conclusions
Aggression in young children
Violence and aggression

• Violence – major cause of premature mortality and morbidity in LMIC (WHO, 2012)

• Largely perpetrated by adolescent and young males – often a pervasive and persistent pattern from early childhood (Tremblay et al, 2004)

• Aggression normal in infancy – emerges 12-18 months – increases till about three years and then declines (Tremblay et al, 2004)

• In 25% of children decline does not take place – aggressive behaviour may become a chronic pattern of responding (Tremblay, 2004)

• This developmental pattern is a strong predictor of youth violence and youth offending (Piquero et al, 2012; Broidy et al, 2003)
Violence and aggression

- Key predictors of violence:
  - Attention difficulties and hyperactivity
  - Security of attachment
  - Parenting problems
  - Harsh and coercive parenting

- Poverty and community violence are important but may be mediated by processes of strained parenting (Odgers, 2012)

- Parenting in early years – key risk mechanism (Moffitt & Caspi, 2001)

- Early prevention is key in LMIC – high levels of expertise required to treat entrenched behaviours is rarely available (Patel et al, 2008)
Dialogic Reading
Dialogic Reading/Picture Book-sharing

- Dialogic Reading:
  - Active
  - Bidirectional relationship
  - Fluid exchange between two partners
  - More than in any other context BS involves extensive labelling of objects, questioning, commenting about the pictures, complex “decontextualized talk”

- Three decades of positive evidence supporting BS:
  - Frequency of early book sharing predicts child literacy and language, independent of SES
Core elements of dialogic reading

- Active child participation
- Pointing and naming
- Follow the baby’s lead
- Active questioning (first “where”, then “what” & “who”)
- Animation to emphasize, Lively voice, Repetition
- Elaborations and active linking of book content to the baby’s real world
Dialogic “linking” and elaboration (a)

Mother sees baby looking at illustration of mother brushing child’s hair in the book. She points to and names the object and action.
Dialogic “linking” and elaboration (b)

Mother then enacts the action by pretending to brush her own baby’s hair, continues to name the action while doing it, repeated a few times.
Dialogic “linking” and elaboration (c)

Baby then brushes his own hair, mother continues to name action. May point to action in book again to end sequence of “linking”.
Book Sharing Research

• Influential series of studies in the late 80/90s (Whitehurst et al, 1988, 1992, 1994, 1998)

• Best results from:
  • high intensity
  • direct parent training
  • combination of individual & group
  • early intervention before commencement of preschool

• Some work in LMIC
  • Valdez-Menchaca & Whitehurst (1992) - Mexico
  • Opel, Ameer, & Aboud (2009) – Bangladesh
Khayelitsha booksharing RCT

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• Developed a manualized intervention

• Programme consisted of:
  • group didactic sessions
  • illustrative videos
  • individual sessions of support
  • books and take-home cards for practice
  • video feedback technique
Simple, captivating images, prototypical features, multi-racial
Randomized Controlled Trial

• 91 mother-infant dyads from Khayelitsha recruited

• Infants aged 14 to 16 months at baseline

• Dyads randomized to either
  • an 8-week programme in dialogic book-sharing (n=49) or
  • a control group who received no intervention (n=42)
    (Control subjects received the intervention after nine weeks)

• 82 dyads present at end of trial (9.9% attrition)

• Two local isiXhosa-speaking women carefully selected who had completed high schooling (Phumza Gwaqka, Vuyolwethu Notholi)
At baseline and again 8 weeks later.

**Primary Outcome Measures:**

1. **Child Language:**
   
   i. Infant Comprehension: A self-developed measure (based on the principles of the Peabody Picture Vocabulary Test)
   
   ii. Infant Expressive Vocabulary: A self-developed measure
   
   iii. MacArthur-Bates Communicative Development Inventories Short Form, (CDI; Fenson *et al.*, 2000) translated to isiXhosa

2. **Child Attention:**
   
   i. Early Childhood Vigilance Task (ECVT; Romero *et al*, 2012)
Maternal Sensitivity:
$t(80) = 3.012, \ p = 0.003, \ EF \ d = 0.7$

Pacing:
$U = 610.000, \ z = 2.093, \ p < 0.05, \ EF \ r = 0.2$
Elaborations:
\[ U = 457.500, \ z = 3.587, \ p = 0.000, \ EF \ r = 0.4 \]

Quality of Elaborations:
\[ U = 403.500, \ z = 4.157, \ p = 0.000, \ EF \ r = 0.5 \]
Reciprocity:
\[ U = 598.500, \; z = 2.203, \; p =<0.05, \; EF \; r = 0.2 \]
Active-Withdrawn:
\[ (t(80) = 2.133, \; p < 0.05, \; EF \; d = 0.5 \]
CDI Understands & Says:
$U= 357.50, z = 4.43, p < 0.001; EF= 0.50$
CDI Understanding:
$t(80) = 3.25, p = 0.002; EF= 0.73$
Attention:
$t(80) = 4.91, p<0.001, d = 1.10$

Infant Attention - ECVT
ECVT Attention & Sensitivity

There was a significant indirect effect of group assignment on ECVT performance through maternal sensitivity ($b = 2.20$, BCa CI [7.536, 0.148]), representing a small effect of, $\kappa^2 = 0.065$, 95% BCa CI [0.010, 0.019].

*p<0.05
**p<0.001
Lesotho ECCD Special Initiative

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Lesotho ECCD Special Initiative
Site Context

Slow rates in reducing new HIV infections amongst children aged 0-14

24.9% of age 3 and 45.8% of age 5 years are in preschool (2011)

Extremely remote villages and scarce arable land

Strong chieftainship presence

Frequent economic emigration

New IECCD Policy
Intervention Description

• Intervention delivered at preschool center in each intervention village

• Targets caregivers with children between 1-5 years (2 age groups)
Intervention Description

- 8-week intervention with monthly consolidation sessions:
  - Interactive group and individual activities, video materials, visual aids and practical exercises
- Includes ECCD component and key messages for HIV, health and nutrition
- Community Health Day
- Informal meetings/top up sessions
ECD Component: Book-Sharing
HIV and Health Component

**HIV**
- HIV information sessions
- Exploring barriers to testing and treatment
- Mobilize support for testing and disclosure

**Growth and Nutrition**
- Growth monitoring
- Feeding recommendations
- Hygiene and sanitation
SVRI RCT

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www.preventionresearch.org.za

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