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SCHOOL OF SOCIAL WORK

The Mental Health of Children Affected by Armed Conflict: Perspectives from a 15-year Intergenerational Study of War

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Presentation Overview

- Background
- RPCA conceptual drivers
- **Mixed methods** research moving **from observational studies to effectiveness** and **implementation science**: Examples in Sierra Leone, Rwanda, Refugees in the US
- **Implementation science** on reach, fidelity/quality and scaling out via **alternative delivery platforms**
- Key takeaways

Research Program on Children and Global Adversity (RPCGA): Goals

- Identify factors contributing to **risk** and **resilience** in children, families and communities facing adversity globally
  - Focus on **capacities**, not just deficits

- Contribute to developing an evidence base on intervention strategies:
  - Help **close the implementation gap**
  - Support development of **high quality and effective programs and policies in low resource settings**

We are Facing the Largest Humanitarian Crisis Since World War II

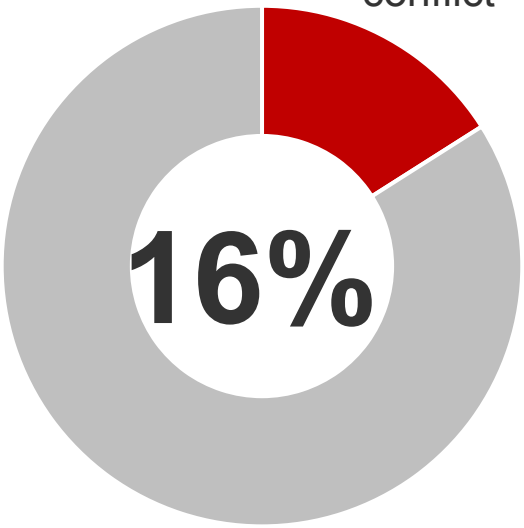
Globally, at the end of 2018 there were:

- **70.8 million** forcibly displaced people
- **41.3 million** internally displaced people
- **25.9 million** refugees
- The number of **children living in conflict zones rose by 74%** over the last decade

(UNHCR, 2019; UNICEF, 2019)

Children Living in Conflict Zones

357 million children impacted by conflict



Total child population

Report: The War on Children. Save the Children International, 2018

Data sources used: UCDP GED dataset (Sundberg and Melander, 2013; Croicu and Sundberg, 2017); Gridded Population of the World (GPW) v3 (CIESIN, 2005) and World Population Prospects (UN, 2017).

Modern War and Terrorism:
Devastating Consequences for Children & Youth

- The Nature of War is Changing
  - Increases in regional and intra-national conflicts
  - Non-state actors (rebel groups, terrorist organizations)
  - Little regard for international conventions
  - Wars of destabilization; infrastructure is undermined
- Civilians, especially young people, are often the most vulnerable
  - Implications for both **survival** and **trajectory of development**

U.N. Sees Rise In Toll of War On Children

By SATOSHI SUGIYAMA

More than 10,000 children were killed or maimed in armed conflicts last year, the United Nations reported on Wednesday in an annual survey that is closely examined because it names and shames countries that fail to protect children.

The suffering occurred across the world.

In Yemen, a coalition backed by the United States and led by Saudi Arabia was responsible for more than 1,300 child deaths or injuries recorded in 2017. The Saudis quickly disputed that conclusion.

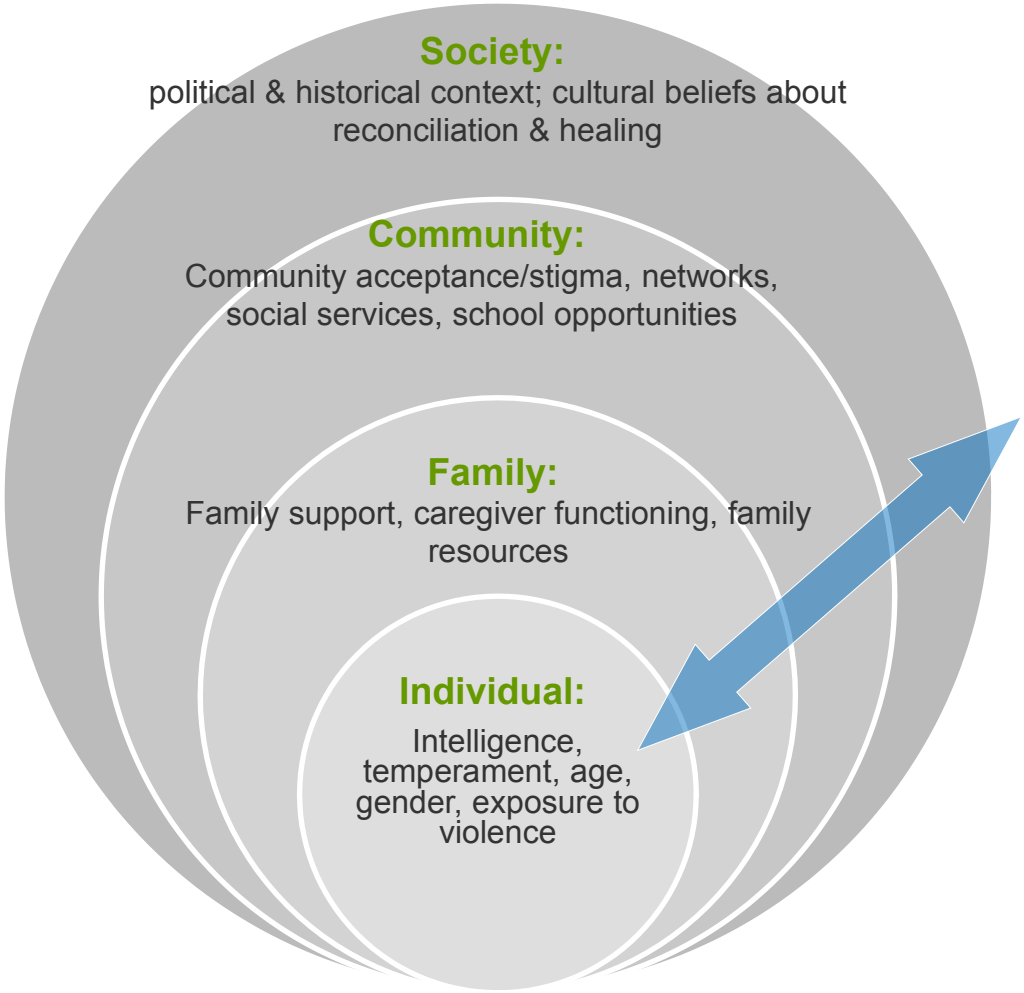
The Need for Developmentally-informed Prospective/Longitudinal Research

Need:

- Developmental and ecological approaches
- Example re: war and children--Expansion of focus beyond the immediate crisis to include the post-conflict environment

Currently:

- Much research is cross-sectional
- Programming has not embraced a developmental perspective on children, adolescents and youth
- Intervention responses are short lived, even 6 months to a year in length
- Many intervention studies focus on individual children and fail to integrate the strength of extended families and communities; family-based interventions



after Developmental Ecological Model of Bronfenbrenner, 1979; Betancourt & Kahn, 2008

Mental Health in War Affected Children

- Children exposed to war suffer from high rates of **traumatic stress reactions, depression, anxiety, and high risk behaviors** (Tol et al., 2012)
- Many meet diagnostic thresholds of **PTSD** on standard measures.

Child soldiers:

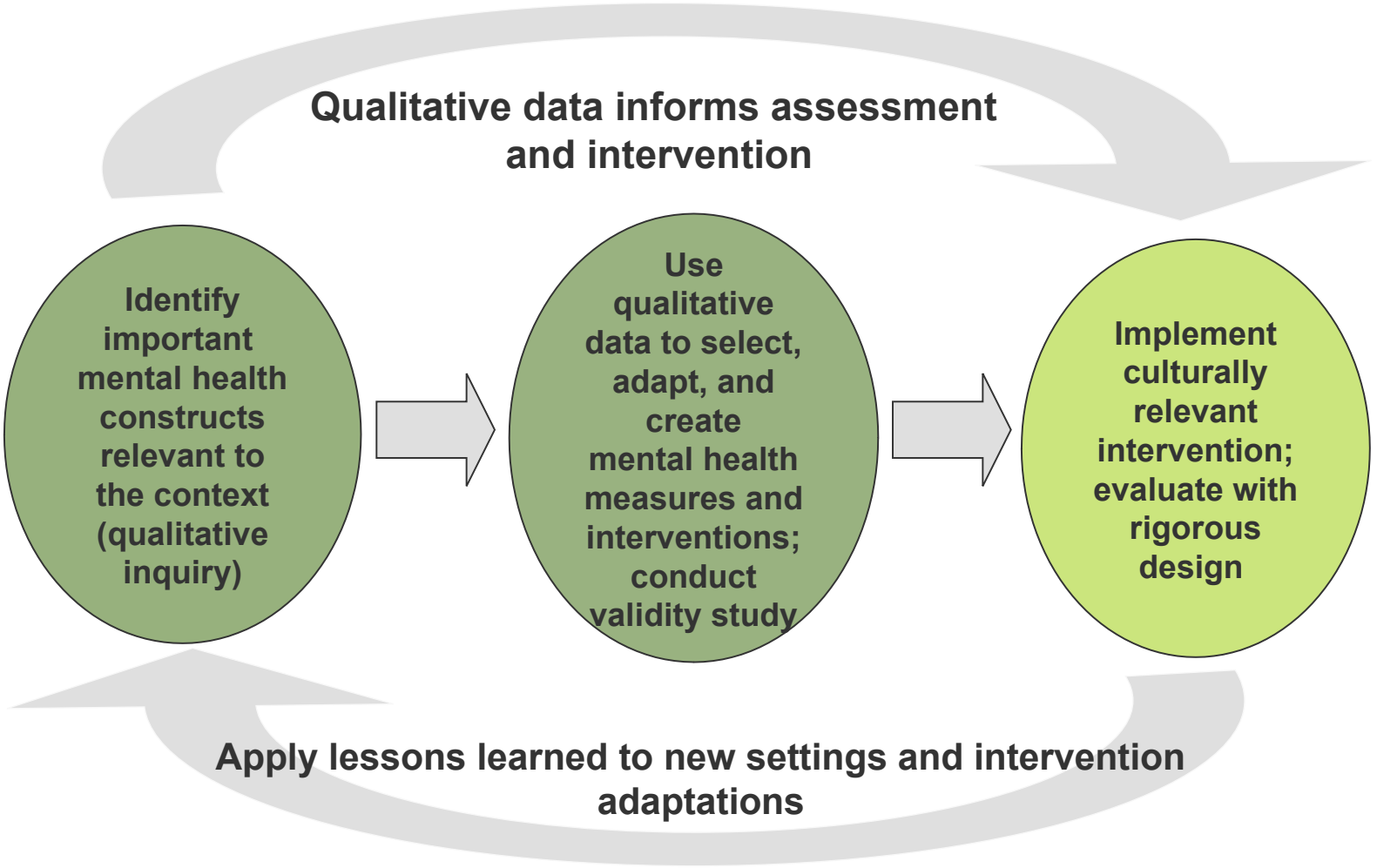
- 27%–34.9% in Uganda (Bayer et al., 2007; Okello et al, 2007)
- 55% in Nepal (Kohrt et al., 2008)

Conflict-affected children:

- 23%–70% in Palestine,10%–30% in Iraq, 5%–8% in Israel (Dimitry L, 2012)
- 54%–62% in Rwanda (Neugebauer et al, 2009)

- Still little research that examines:
  - The longitudinal pattern of mental health adjustment
  - The role of **post-conflict** stressors and **protective** factors (Betancourt & Khan, 2008)
  - **Interventions** to promote mental health, prevention, intergenerational work

A Model for Designing and Evaluating Mental Health Services in Diverse Cultural Settings



Current Work

- **Children Affected by Communal Violence/Armed Conflict**
  - Sierra Leone, Chechen IDPs, Ethiopia-Eritrea border, N Uganda
  - Longitudinal study of Sierra Leonean former child soldiers and other war-affected youth (3 waves of data collected 2002-2008 (Child Development, 2010; JAACAP, 2010; Social Science & Medicine, 2009)
    - Randomized controlled trial published in JAACAP in 2014; U19 HUB
- **Children Affected by HIV/AIDS, ECD home visiting for extreme poverty**
  - Rwanda
    - Evaluation of an evidence-based family-strengthening intervention for families affected by HIV (AIDS Care, Pediatrics)
    - Early Childhood Development (ECD) home-visiting integrated into the Rwandan National Poverty Reduction Strategy
- **U.S. Refugee populations (Somali, Somali Bantu and Bhutanese refugees)**
  - Boston Children's Hospital Center for Refugee Trauma and Resilience (CRTR)-linked to National Child Traumatic Stress Network (SAMSHA)

SIERRA LEONE

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Funding Support

USAID/DCOF
NIMH
NICHD
USIP
UBS

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- Fr. Joseph Bangura
- Ishmael Charles

Youth Commission
- Ministry of Youth
- Ministry of Social Welfare & Gender

CAPS
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The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.
GUINEA
LIBERIA
ATLANTIC OCEAN
SIERRA LEONE
NORTHERN
EASTERN
WESTERN AREA
SOUTHERN
Mamou
Kindia
Médina Dula
Dubréka
Tabili
Coyah
Fandié
Forécariah
Konta
Kukuna
Madina Jct.
Kambia
Rokupr
Mange
Mambolo
Kortimaw Is.
Lungi
Int'l Airport
Pepel
Freetown
Ferry
Wellington
Hastings
Songo
Waterloo
York
Rotifunk
Bradford
Masiaka
Port Loko
Lunsar
Shenge
Plantain Is.
Banana Is.
Yawri Bay
Sembehun
Sierromco Mokanje
Gbangbatok
Nitti
Sherbro River
Turtle Is.
Sherbro I.
Bonthé
Sherbro Strait
Bauya
Moyamba
Mateboi
Batkanu
Gbinti
Karina
Pendembu
Makeni
Binkolo
Magburaka
Mile 91
Yonibana
Kamakwie
Kamalu
Kabala
Koinadugu
Musaia
Bafodia
Falaba
Gberia Fotombu
Fadugu
Bendugu
Banian
Bambaya
Kurubonla
Alikalia
Bumbuna
Yombiro
Kayima
Bendou Bodou
Tefeya
Yomadu
Koidu-Sefadu
Koundou
Masingbi
Matotoka
Yengema
Njaiama-Sewafe
Njaiama
Tongo
Gandorhun
Koindu
Yele
Tungie
Mongeri
Falla
Panguma
Bomi
Kailahun
Buedu
Manowa
Giehun
Pendembu
Boajibu
Bendu
Lago
Segbwema
Daru
Kenema
Tokpombu
Blama
Dambara
Njala
Taiama
Mano
Gerihun
Bo
Tikonko
Bumpe
Kpetewoma
Koribundu
Matru
Sumbuya
Potoru
Gorahun
Pujehun
Zimmi
Kongo
Bendaja
Sulima
Robertsport
Lake Piso
Bopolu
Bomi-Hills
Kle
Bong
Lake Mabesi
Lake Mape
Great Scarcies
Little Scarcies
Kolente
Loila
Kaba
Mongo
Seli
Bagbe
Niger
Meli
Mabole
Rokel or Seli
Pampana
Moa
Taia
Sewa
Waanje
Mano
Moro
Loja
Saint Paul
SIERRA LEONE
National capital
Provincial capital
City, town
Major airport
International boundary
Provincial boundary
Main road
Secondary road
Railroad
0 20 40 60 80 km
0 10 20 30 40 50 mi
10°00'
9°30'
9°00'
8°30'
8°00'
7°30'
7°00'
6°30'

Compound Adversity: Sierra Leone

Population: 7,557,212
% Urban: 42.1
Median Age: 19.1
Life expectancy at birth: 59 years
Infant mortality rate (per 1,000 live births): 66.7
Maternal mortality rate (per 1,000 live births): 1360 Highest in the world
Children > 5 Underweight: 18.2%
GDP per capita (US$): $1,600
Human Dev. Index Rank: 184 out of 189
% Youth unemployed/underemployed: 70%
% Youth literacy, male: 58.7%
% Youth literacy, female: 37.7% **Ebola outbreak (2014-2015):** 8,705 confirmed cases 3,956 confirmed deaths; health systems strain

Source: CIA, 2019; UNDP, 2018; EVD report, World Bank Data (2010)

Background

- Civil War 1991-2002
  - Massive population displacement (more than 50% of population) (UNDP, 2006)
  - An estimated 15,000 to 22,000 children of all ages were associated with armed groups (McKay and Mazurana 2004)
  - National Committee for Disarmament, Demobilization and Reintegration (NCDDR) estimates that nearly 4,600 children were formally demobilized
- Deliberate attempts to sever familial/community connections
- 2002 peace accords

"Mohammad is crying," drawing by former child soldier, Sierra Leone

The Return Home

Demobilization, Disarmament & Rehabilitation (DDR) 2002

Interim Care Centers

- Care and support through care centers
- Psychosocial activities to prepare for reintegration
- Family tracing/reunification; Community sensitization
- Community reintegration; follow-up support

*many youth returned home without formal services

Research Design

STUDY AIMS: Identify **RISK & PROTECTIVE** processes in children's psychosocial adjustment and community reintegration to inform programming and policy

- Qualitative and Quantitative data collection
- ***To ground this research in the local cultural context***
- Sierra Leonean youth, community representatives, caregivers, social workers & local staff involved in questionnaire development & research design
- Local research team
- Social work follow-up

(Betancourt et al, *Comparative Education Review*, 2009; *Social Science &Medicine*, 2009; *Child Development* 2010; *J of the Am Acad of Child & Adolescent Psychiatry* 2010)

Project Progress To Date: Research Design & Respondents

Wave 1
(2002)

Study Sample:
- 395 youth
  - ICC Served (n=259)
  - Community (n=136)
- Mean Age = 14.8yrs (SD=2.3)
- 24% Female
- 5 Districts

Problems/Lessons Learned

Analyses of the community sample indicated 50% were former combatants who had self-reintegrated.

Wave 2
(2004)

Study Sample:
- 336 youth
  - ICC Served (n=151)
  - Community (n=58)
  - Self-reintegrated (n=127)
- Mean Age = 16.5 yrs. (SD=2.7)
- 27% Female
- 6 Districts
- Post war caregivers (N=354)

Problems/Lessons Learned

Data collection was cut short due to the death of the IRC's country director.

- 49% of wave 1 youth were not assessed at wave 2

Wave 3
(2008)

Study Sample:
- 387 youth
  - ICC Served (n=183)
  - Community (n=87)
  - Self-reintegrated (n=117)
- Mean Age = 20.9 yrs. (SD=3.4)
- 25% Female
- 6 Districts
- Post war caregivers (N=331)
- Intimate partners

Problems/Lessons Learned

Analyses of the study sample indicated that 10 participants had died since wave 1

Wave 4
(2016-2017)

Study Sample:
- 354 youth*
  - ICC Served (n=181)
  - Community (n=29)
  - Self -reintegrated (n=136)
- Mean Age* = 27.9 yrs. (SD=3.7)
- 3 Districts
- Post war caregivers
- Intimate Partners
- Biological Children

Problems Faced & Lessons Learned

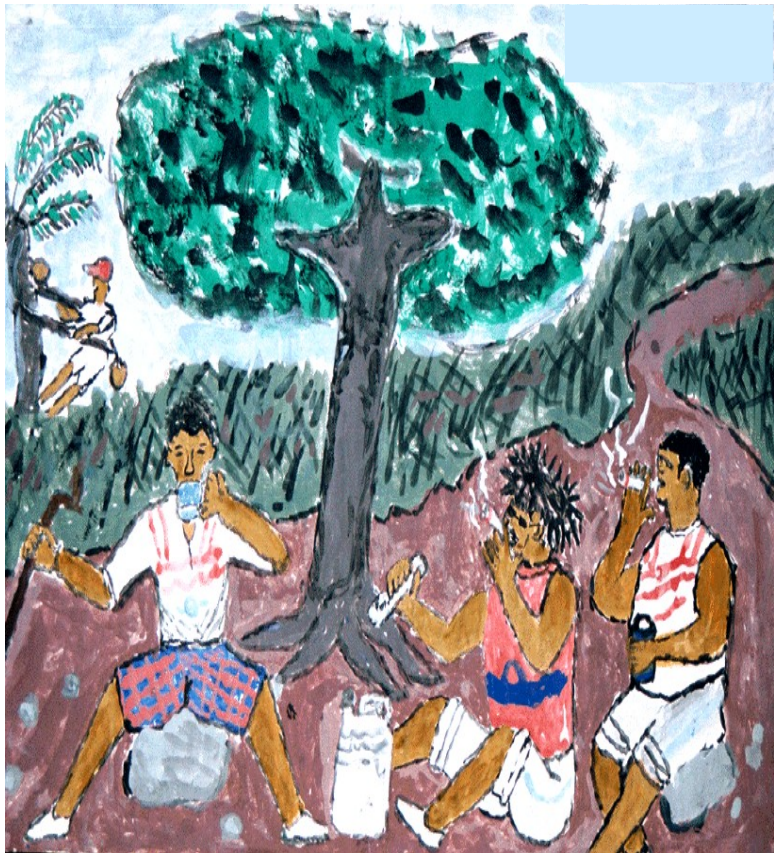
- Ebola Virus Disease outbreak
- Design & adaptation of child measures

Full Sample N = 529 Wave 4 Retention Rate: 67%

Findings: War Experiences

(Betancourt et al, Child Development, 2010; JAACAP 2010)

- Average **age of abduction** was **10.3 years** (SD = 3.0)
- Average **length of time** with fighting forces was **4.1 years** (SD = 2.4)
- Violence exposures similar in males and females apart from **sexual violence: 45% of female ex-RUF and 5% of male** ex-RUF reported rape/sexual violence
- More than a quarter of the sample **(26.9%, n=70) reported having killed or injured** others during war
- **50%** of former RUF youth reported being **forced to use drugs or alcohol**



Painting of rebels using drugs, child in ICC Sierra Leone

Internalizing			
	War experiences	Post-conflict hardships	Protective Factors
Baseline			
Intercept	34.94***	34.94***	35.01***
Age first involved in fighting	0.32+	0.34+	0.29
N of years in fighting forces	0.56*	0.55*	0.42+
Witness violence	0.22	0.12	0.05
Killed/injured others in war	0.26	-0.37	-0.28
Victim of rape/sex assault	4.60*	4.25+	4.34*
Stigma of being child soldier		1.22**	0.89
Daily hardship score		-0.26	-0.24
Social support			0.29
Working, not in school			-0.27
Cumulative school attendance			-0.1
Avg. community acceptance			-1.21**
Change over time			
Intercept	0.3	0.47	0.47
Age first involved in fighting	-0.35*	-0.29*	-0.27+
N of years in fighting forces	-0.33+	-0.26	-0.21
Witness violence	-0.04	-0.02	0.02
Killed/injured others in war	1.22+	0.47	0.34
Victim of rape/sex assault	-0.15	-0.39	-0.38
Stigma of being child soldier		0.26	0.22
Daily hardship score		1.38***	1.33***
Social support			0.08
Working, not in school			-0.22
In school at time of assessment			
Intercept			0.6
Level of community acceptance at time of assessment			
Intercept			-0.86*

Longitudinal Analyses of Outcomes among Ex-CAAFAG (N= 260)

Internalizing
(anxiety & depression)

Baseline higher internalizing:

- Longer with armed group
- Victim of rape
- Stigma

Increasing internalizing:

- Young age at time of first involvement
- Many daily hardships

Protective factors

- Higher community acceptance at baseline
- Community acceptance improves over time

Externalizing			
	War experiences	Post-conflict hardships	Protective Factors
Baseline			
Intercept	19.67***	19.68***	19.72***
Age first involved in fighting	-0.21	-0.2	-0.22
N of years in fighting forces	-0.05	-0.05	-0.13
Witness violence	0.2	0.12	0.16
Killed/injured others in war	0.66	0.2	0.21
Victim of rape/sex assault	3.73+	3.48+	3.58+
Stigma of being child soldier		0.89*	0.73+
Daily hardship score		-0.26	-0.17
Social support			-0.24
Working, not in school			-1.33
Cumulative school attendance			-0.22
Avg. community acceptance			-0.60+
Change over time			
Intercept	-0.29	-0.22	-0.09
Age first involved in fighting	0.09	0.11	0.12
N of years in fighting forces	0.04	0.07	0.1
Witness violence	0.29	0.29	0.22
Killed/injured others in war	1.16*	0.93+	0.90+
Victim of rape/sex assault	-0.64	-0.7	-0.78
Stigma of being child soldier		-0.01	0.03
Daily hardship score		0.51+	0.4
Social support			0.38
Working, not in school			1.15+
In school at time of assessment			
Intercept			1.01
Level of community acceptance at time of assessment			
Intercept			-1.08***

Longitudinal Analyses of Outcomes among Ex-CAAFAG (N= 260)

Externalizing (hostility)

Baseline higher externalizing:

- Stigma

Increasing externalizing

- Killed/injured others

Protective factors

- Increases in community acceptance

Longitudinal Analyses of Outcomes among Ex-CAAFAG (N= 260)

Adaptive/Prosocial Behavior	War experiences	Post-conflict hardships	Protective Factors
Baseline			
Intercept	59.32***	59.33***	58.80***
Age first involved in fighting	-0.05	-0.03	0.05
N of years in fighting forces	-0.2	-0.19	0.06
Witness violence	-0.32	-0.37	-0.4
Killed/injured others in war	1.93+	1.53	1.24
Victim of rape/sex assault	0.58	0.42	0.83
Stigma of being child soldier		0.42	0.91
Daily hardship score		0.59	0.46
Social support			-0.03
Working, not in school			0.95
Cumulative school attendance			1.50**
Avg. community acceptance			1.69*
Change over time			
Intercept	-0.89**	-0.95**	-0.55
Age first involved in fighting	-0.12	-0.15	-0.23+
N of years in fighting forces	-0.06	-0.09	-0.15
Witness violence	0.18	0.26	0.03
Killed/injured others in war	-2.60***	-1.88*	-1.29+
Victim of rape/sex assault	0.34	0.63	0.13
Stigma of being child soldier		-0.91**	-0.61+
Daily hardship score		-0.24	0.03
Social support			0.93*
Working, not in school			0.38
In school at time of assessment			
Intercept			2.69***
Level of community acceptance at time of assessment			
Intercept			1.93***

Adaptive/Prosocial Behavior

Baseline higher adaptive/prosocial behavior:

- More years in school
- Higher community acceptance

Decreasing adaptive/prosocial behavior:

- Killed/injured others
- Stigma

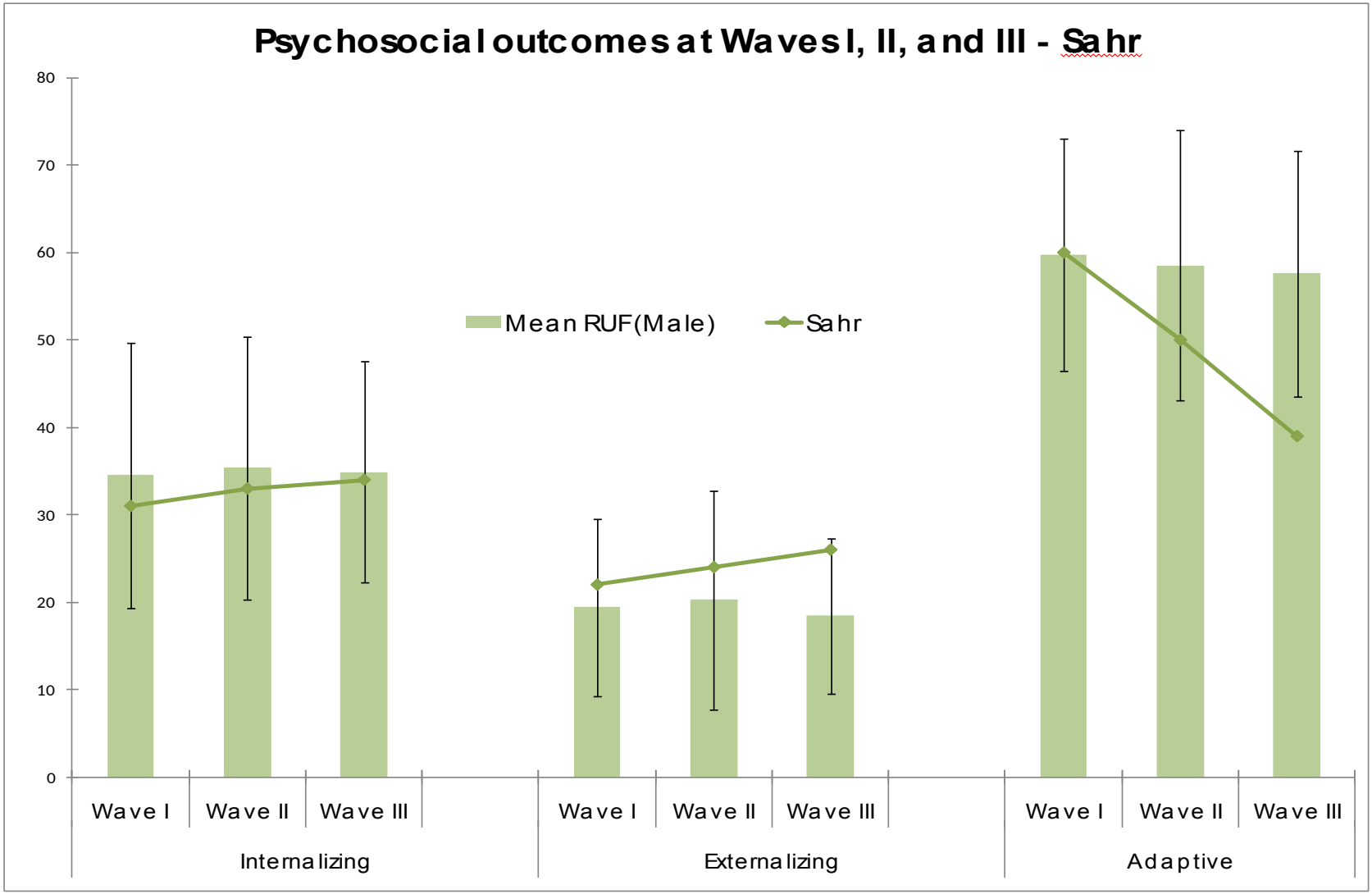
Protective factors

- Increases in community acceptance
- Remaining in school
- Social support

Sahr

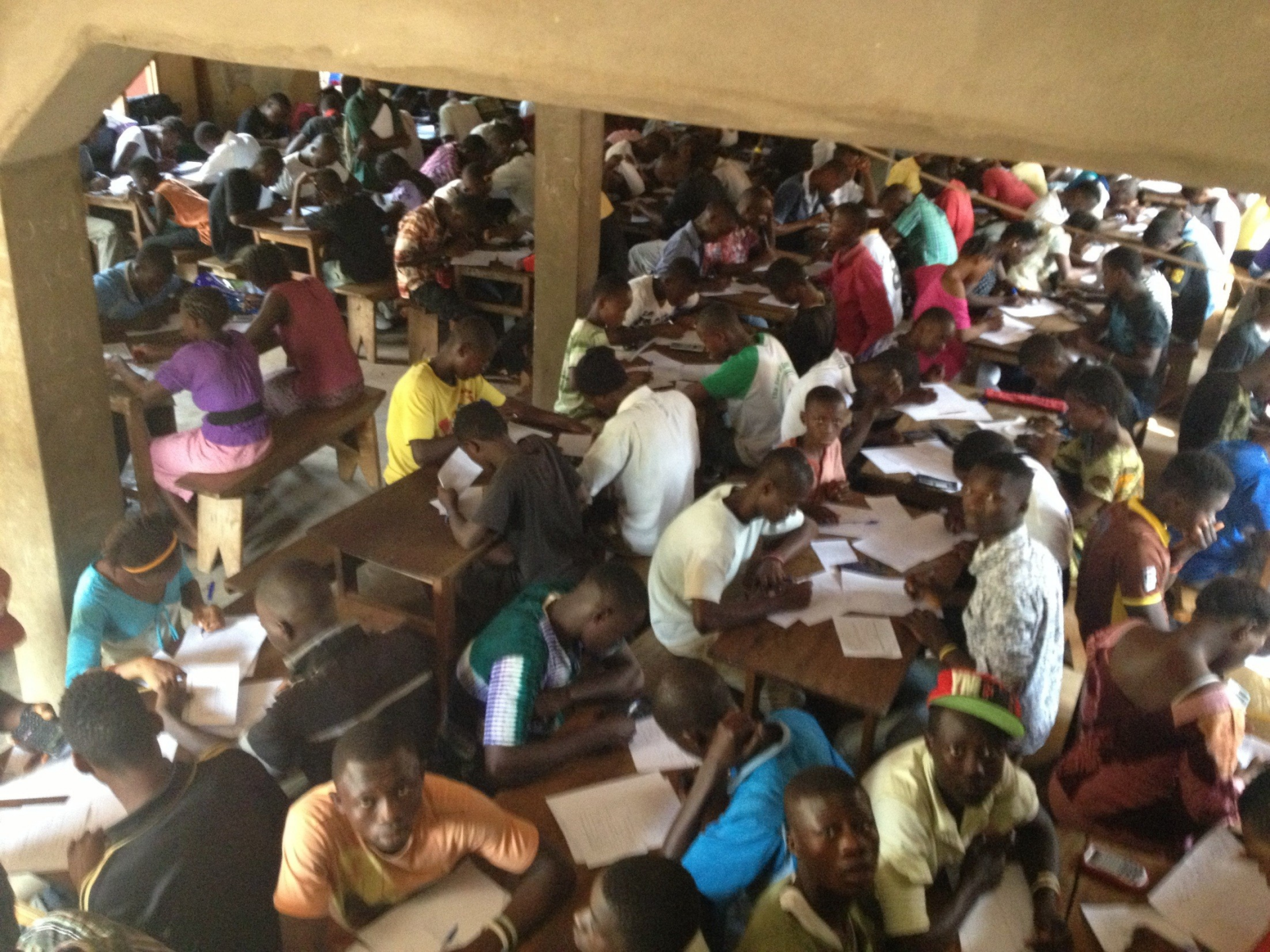
- Male, 17 years old and living in provinces
- Abducted by RUF as a toddler; taken from his grandmother
- Spent 4 years with RUF witnessing massacres, bombings, amputations and shootings. Tasked with spying and information gathering.
- Fed food laced with drugs by RUF
- After war, first spent 2 years with foster mother, then reunited with mother, grandmother and uncle
  - Mother and grandmother love him dearly: “He came back to us because he loved us,” they say.
  - Mother struggled with mental health problems (*poil at*)
- In following years, Sahr had difficulties reintegrating with community
  - Considered to be “troublesome” by uncle
  - Little community acceptance (community members called him names, beat him in attempt to “correct” him)
  - Stole things
- He also had difficulty coping with everyday stress
- He dropped out of school and remained unemployed
- His mother says he was an agreeable boy before being abducted. Now sometimes threatens others by pulling a knife

How is Sahr's experience reflected in the data?



Summary of Findings

- Poor outcomes greatest in those with an accumulation of **war-related and post conflict risk factors**:
  - **War Experiences:** surviving rape, (depression/ anxiety) participation in injuring/killing others (hostility, deficits in prosocial behavior), death of caregiver (depression/anxiety)
  - **Post-conflict factors:** Stigma, poor school access, daily hardships, low social support
  - **Constellation of symptoms/impairments that impede school and social role functioning:** poor emotional regulation/anger, interpersonal deficits, hopelessness/risky behavior

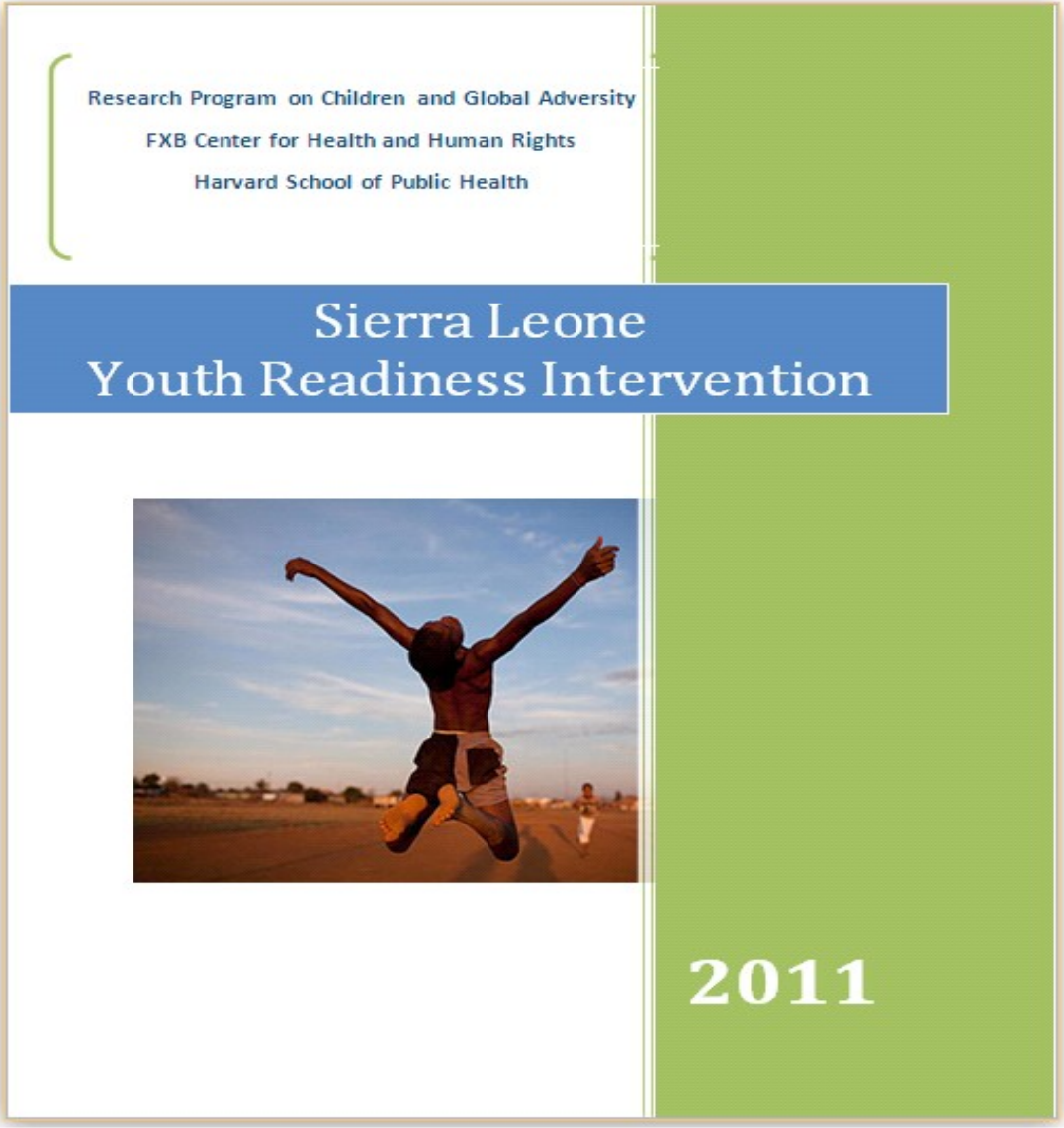


EducAid fees

- Excellent attendance
- Excellent behaviour
- Excellent effort

Contextual Realities

- **Limited human resources** suggest delivery by lay health workers with very basic level of mental health training ; group work
- **Comorbidity and histories of complex, trauma** (family separation, repeated war experiences in childhood, loss etc.) would need to inform services development
- Intervention would need to **link to opportunities for employment or education**



YRI

- **Transdiagnostic intervention** informed by longitudinal study
- **Evidence-Based Components** from many other intx with **children affected by violence**
- A **group tx model** designed to be administered by a **wide range of providers**

Collaborators:
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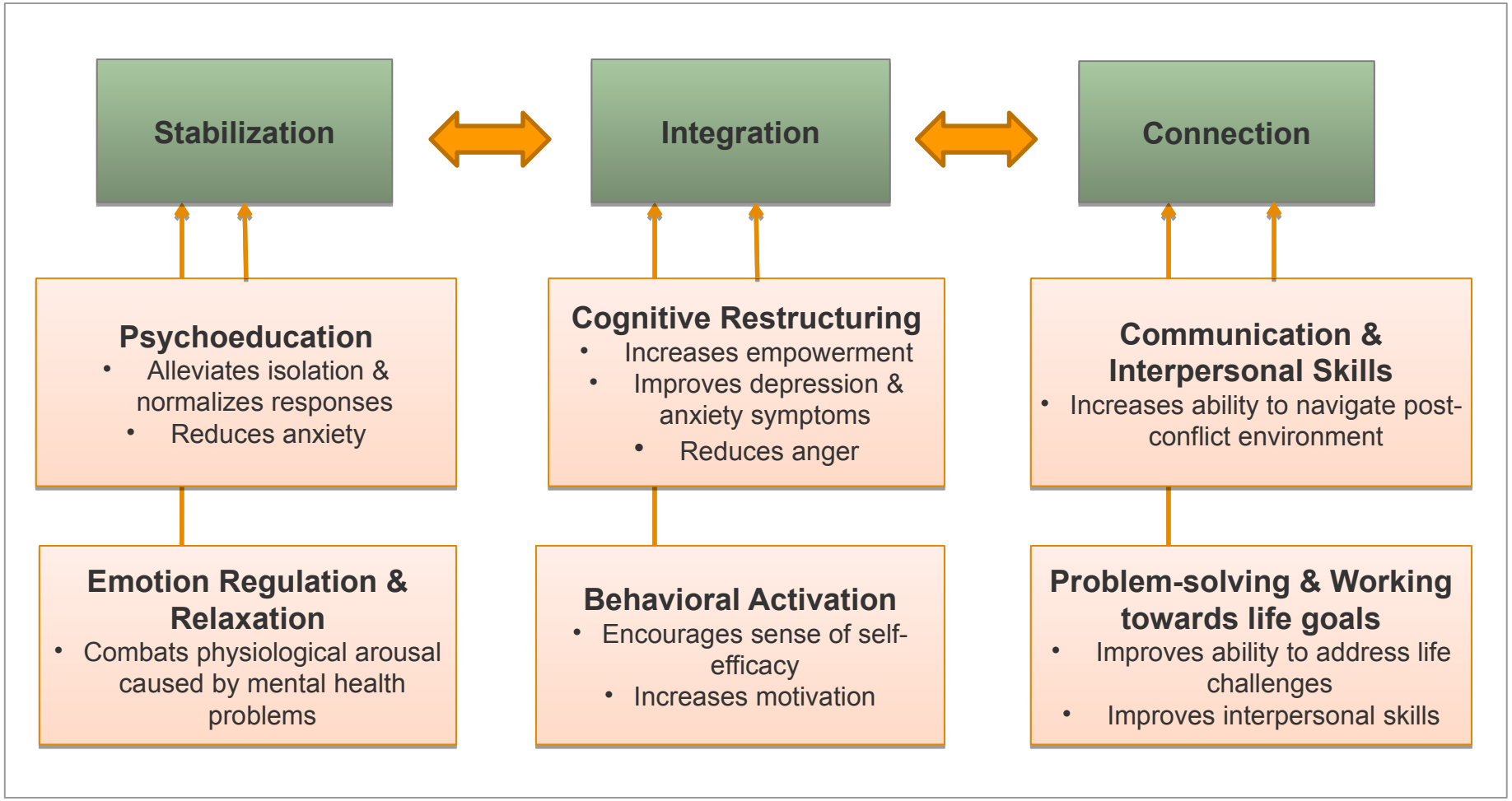
YRI Theory of Change



Making the Transition from the Evidence Base to Local Relevance

- These treatments have robust evidence of effectiveness in the US and UK

- paucity of data in low and middle income countries, particularly war-affected regions

YRI Intervention Plan

STAGE A: Kapu sense noh kapu wod

EDUCATION & OUTREACH

- **Wan tik broom noh dae sweep** (Community Meeting)
- **Leh we join togedah** (Invitation to join & screening)
- **Fambul tik ken ben, but enoba broke / Tit en tong mus jam** (Family Focus)

STAGE B: Yu get pawa for cheng yu layf

SKILL BUILDING FOR SUCCESS – YOUTH GROUP SESSIONS

1. **Kapu sense, noh kapu wod** (Engagement)
2. **Sabi noh get worri** (Education)
3. **Rain noh dae fodom nah wan man domot** (Beliefs Bodies Behaviors)
4. **If yu tek tem kill anch, yu go see im gut** (Staying Cool Under Pressure)
5. **Put u yai dong so u go si u nos** (Relaxation & Behavioral Activation)
6. **If yu was yu han fayn yo go it wit big pipul** (Interpersonal Skills)
7. **If yu noh kno usaie yu komot, yu for kno usaie yu dae go** (Review)
8. **Good wod pull good kola** (Focus on the Positive)
9. **Tinap no dae stop u fo dance** (Relapse Prevention)
10. **Tem gor gladi en go befoe** (Celebration)

Interactive, group-based activities

Wan tik broom noh dae sweep

Community Meeting

Community consensus on intervention & psycho-education

Potential Activities:

Consider the use of an introductory bonding activity to help community members become acquainted with one another and with the facilitators. For example, you could have a calabash that people hold as it is passed around.

"We get for tek tem tok word nah lek wata, if yu troway, you no go able gedar am."

☐ **Set an agenda**

1. Provide an overview of what will happen at this meeting. Each topic will be expanded later in the meeting; this is merely a list of the topics to be covered.
   - Discuss general ways that people react after upsetting experiences
   - Discuss how these reactions may look in youth
   - Facilitators describe in general how skills can be built to manage these problems and reactions
   - Discuss how community members can provide support for youth in their community.
2. Ask for suggestions from community members for other topics they would like to add to the agenda to be discussed at this meeting.

☐ **Identify areas of concern**

1. Facilitators should begin a discussion about how people may feel and react to upsetting experiences. Use open ended discussion, with probes like:
   - When something painful has happened to you, how do you feel?
   - How do you find yourself interacting with others?
2. Youth are important as they are the future of our community. Thus, it's important to think about how we can help them to find

Module 3
Keeping Your Cool

Learning about stress:

- Identifying triggers
- Skills in emotion regulation/ dealing with anger
- Coping skills

☐ **Identify early warnings**	1. Suggest that for most people, becoming stressed, worried, or agitated is a gradual process. 2. Explain that early detection of body triggers can help notify group members to use a tool to calm them down. 3. If you are using a metaphor like water coming to a boil (see script below), identify what the "early stages" of stress/anxiety/irritability would be as the temperature changes and how this would relate to the process of stress and changes in the body. 4. Ask group members what their own early triggers are. Group members who don't know can be asked to attend to this as practice.  **Example Script:** *Just like water comes to a boil gradually, most people don't go from totally calm to very agitated or stressed immediately, but we often don't notice those early warning signs. For example, when I am feeling irritated my neck starts to get hot—that's when I know I need to count to ten! What are your early warning signs that you are beginning to get stressed/anxious/irritable?*
☐ **Review Breathing**	1. Ask the group 'What is a coping strategy that we've already learned that you could use when you feel stress or feel like the water is starting to boil?' If it is not mentioned, prompt the group to think about deep breathing as a coping skill. 2. Make sure that group members know how to take deep, diaphragmatic breaths before teaching any other strategies. Deep breathing involves the belly, not the chest, and should be slow (no more than 8-10 breaths per minute).

Capacity Building and Sustainability:

Importance of strong local partnerships

Clinical Training

Importance of practice in the local language

Local examples relevant to the target population

A Common-Elements Based Intervention for Violence-Affected Youth (JAACAP, 2014)

NEW RESEARCH

Journal of the American Academy of CHILD & ADOLESCENT PSYCHIATRY

A Behavioral Intervention for War-Affected Youth in Sierra Leone: A Randomized Controlled Trial

Theresa S. Betancourt, ScD, Ryan McBain, ScD, Elizabeth A. Newnham, PhD, Adeyinka M. Akinsulure-Smith, PhD, Robert T. Brennan, EdD, John R. Weisz, PhD, Nathan B. Hansen, PhD

Objective: Youth in war-affected regions are at risk for poor psychological, social, and educational outcomes. Effective interventions are needed to improve mental health, social behavior, and school functioning. This randomized controlled trial tested the effectiveness of a 10-session cognitive-behavioral therapy (CBT)–based group mental health intervention for multisymptomatic war-affected youth (aged 15–24 years) in Sierra Leone. **Method:** War-affected youth identified by elevated distress and impairment via community screening were randomized (stratified by sex and age) to the Youth Readiness Intervention (YRI) (n = 222) or to a control condition (n = 214). After treatment, youth were again randomized and offered an education subsidy immediately (n = 220) or waitlisted (n = 216). Emotion regulation, psychological distress, prosocial attitudes/behaviors, social support, functional impairment, and posttraumatic stress disorder (PTSD) symptoms were assessed at pre- and postintervention and at 6-month follow-up. For youth in school, enrollment, attendance, and classroom performance were assessed after 8 months. Linear mixed-effects regressions evaluated outcomes. **Results:** The YRI showed significant postintervention effects on emotion regulation, prosocial attitudes/behaviors, social support, and reduced functional impairment, and signif-

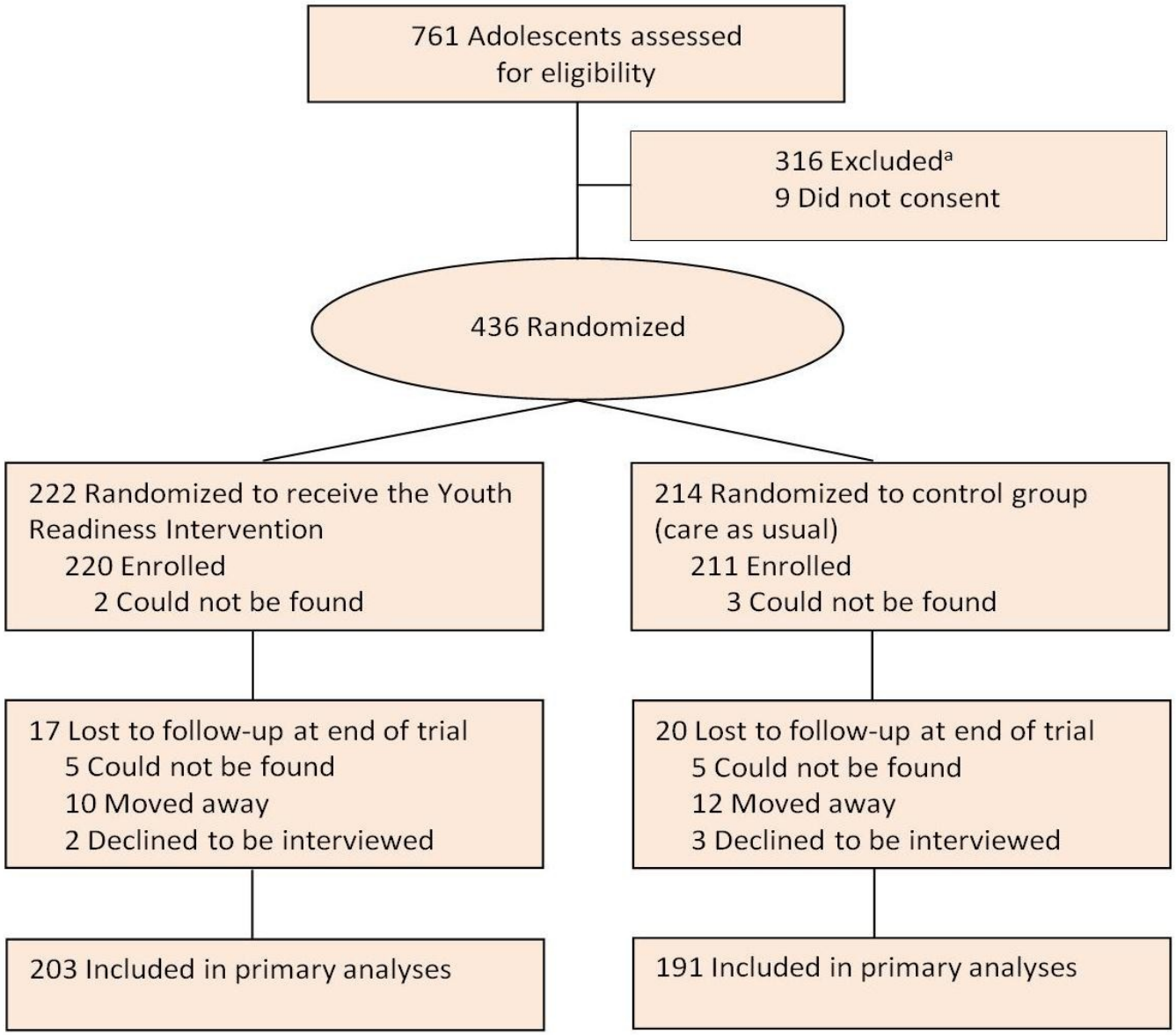
Randomized Controlled Trial N=436 youth: Aug-Oct 2012 (Western Area)

Inclusion Criteria:

- Elevated distress (.5 SD above previous cohort mean on a total distress/problems score)
- Some impairment in day to day functioning
- School intending
- Males and females ages 15-24 (UN def.)

(stratification by age and gender)

Figure 1. Flow Diagram of Study Participants (screened 761 youth)



[a]Did not meet inclusion criteria (described in study eligibility criteria)

Table 2. Intervention Effectiveness Estimates

Outcome	Scale Information	Treatment Effect: Post	Symptom Severity Interaction: Post	Treatment Effect: 6 months	Symptom Severity Interaction: 6 months
Emotion Regulation	DERS 23 items, 1-5	β = 0.109 (0.026, 0.191) P = 0.01, δ = 0.31	β = 0.200 (0.006, 0.394) P = 0.04, δ = 0.59	β = 0.015 (-0.092, 0.122) P = 0.79, δ = 0.04	β = 0.269 (0.073, 0.464) P = 0.007, δ = 0.82
Prosocial Behavior	OMPA 18 items, 0-3	β = 0.149 (0.057, 0.240) P = 0.001, δ = 0.38	β = 0.088 (-0.114, 0.289) P = 0.40, δ = 0.22	β = 0.007 (-0.116, 0.129) P = 0.92, δ = 0.02	β = -0.106 (-0.314, 0.103) P = 0.32, δ = -0.27
Functional Impairment	WHODAS 12 items, 0-4	β = -0.175 (-0.299, -0.050) P = 0.006, δ = -0.35	β = -0.028 (-0.275, 0.218) P = 0.82, δ = -0.05	β = -0.053 (-0.211, 0.105) P = 0.51, δ = -0.10	β = -0.124 (-0.376, 0.127) P = 0.33, δ = -0.23
Psychological Distress	OMPA 28 items, 0-3	β = -0.009 (-0.185, 0.166) P = 0.92, δ = -0.01	β = -0.419 (-0.801, -0.037) P = 0.03, δ = -0.55	β = -0.012 (-0.245, 0.220) P = 0.92, δ = -0.02	β = -0.312 (-0.715, 0.092) P = 0.13, δ = -0.40
Social Support	ISSB 25 items, 0-4	β = 0.119 (0.009, 0.229) P = 0.03, δ = 0.26	β = 0.179 (-0.069, 0.428) P = 0.16, δ = 0.40	β = 0.066 (-0.086, 0.218) P = 0.39, δ = 0.14	β = 0.264 (0.009, 0.520) P = 0.04, δ = 0.60

Treatment effect reported as per-item difference between treatment and control groups. Regression coefficients (β) are unstandardized. 95% confidence interval reported in parentheses. Effect size for the treatment effect is reported as δ, equivalent to standardized mean difference.

Moderators examined: age, gender, severity (i.e. upper quartile)

Table 3. Schooling Outcomes

Schooling Outcomes at 8-Month Follow-up

Outcome[a]	Range	Treatment Effect	P Value, Effect Size[c]
School Enrollment	Yes/No	2.184 (1.191, 3.177)	P<0.001, OR=8.88
Academic Performance[b]	1-5	-0.954 (-1.807, -0.102)	P=0.03, δ= -1.31
School Attendance	1-3	3.553 (0.989, 6.118)	P<0.007, OR=34.93

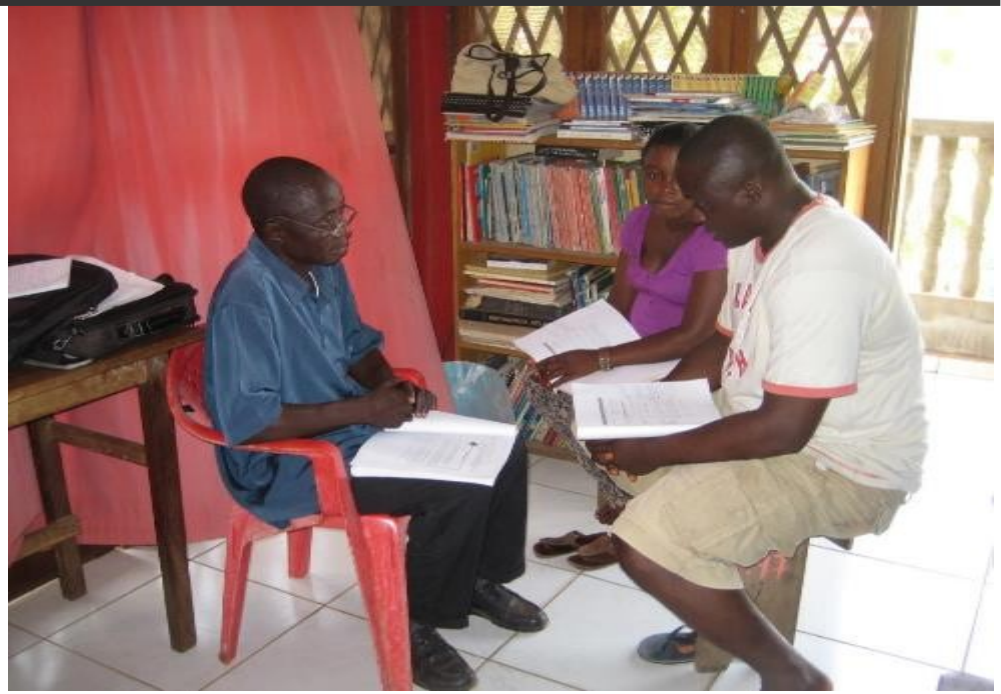
- At 8-month follow-up, 74 youth had maintained enrollment in school. These individuals comprised **28.8% (n=64) of YRI participants versus 4.7% (n=10) of controls**.
- **YRI recipients 6x more likely to persist in school**
- Among youth in school, blinded assessments with teachers indicated that YRI youth demonstrated significantly **better classroom performance** as well as **attendance**.

"I [didn't] know how to interact with people, I was so aggressive.. but since I went through [the YRI] my life has changed"

-YRI female participant, 16 years old

Alternate Delivery Platforms and Implementation Models for Bringing Evidence-Based Behavioral Interventions to Scale for Youth Facing Adversity in West Africa(NIMH U19)

- **Youth FORWARD Research partnership and regional hub**
- **Advancement of implementation science**
-
- **Mental health services research for youth exposed to war, community violence, EVD and other adversities**



Youth FORWARD
wants to integrate it's YRI into a youth employment program platform

Provides psychosocial intervention

Provides youth employment promotion program

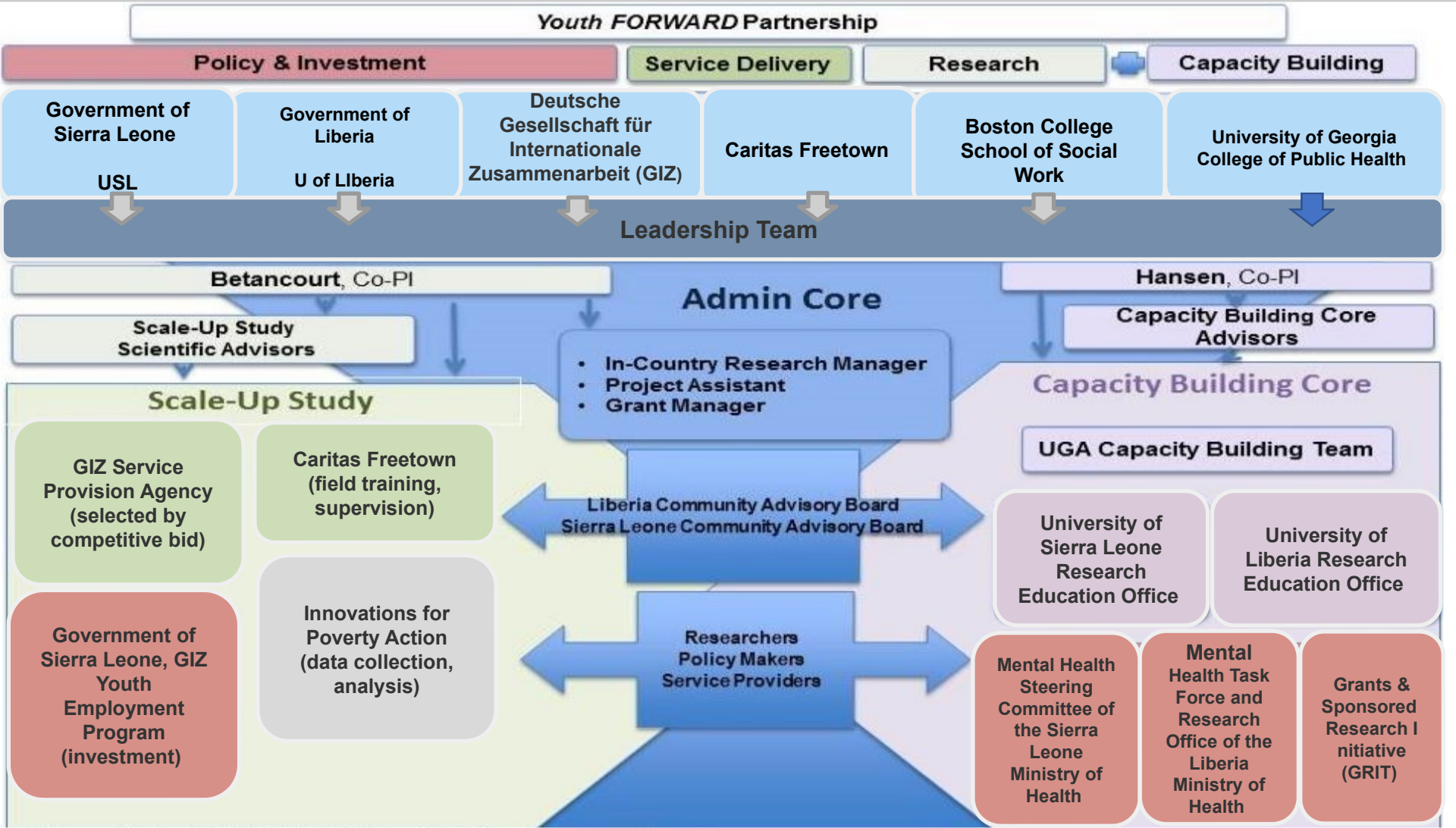
GIZ
wants to incorporate psychosocial competency training into its EPP

Sierra Leone's youth meeting emotion dysregulation and functional impairment criteria: 40%

Youth FORWARD
(Youth **F**unctioning and **O**rganizational Success for **W**est **A**frican **R**egional **D**evelopment)

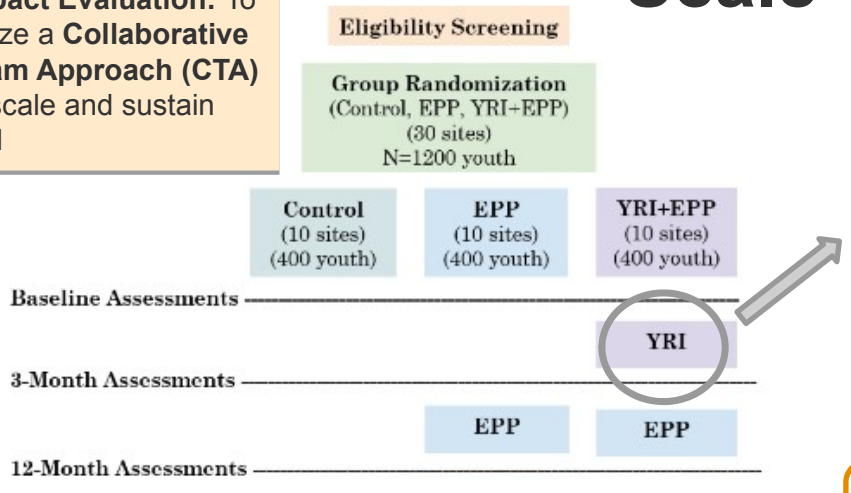
Annual Scale-Up Hubs Meeting

New Delhi, India | November 27-30, 2018



Youth FORWARD Hybrid Type II Scale-Up Study

AIM 1- Implementation Impact Evaluation: To utilize a **Collaborative Team Approach (CTA)** to scale and sustain YRI



AIM 2 - Implementation Process Evaluation: To identify internal and external factors influencing the **integration of the YRI into EPP programs via a process evaluation** documenting barriers and facilitators

AIM 3 - Clinical Effectiveness: To compare **clinical effectiveness** of YRI when delivered via the EPP platform to results of our previous randomized control trial (RCT) of YRI as measured by improved emotion regulation and reduced functional impairments among high-risk youth

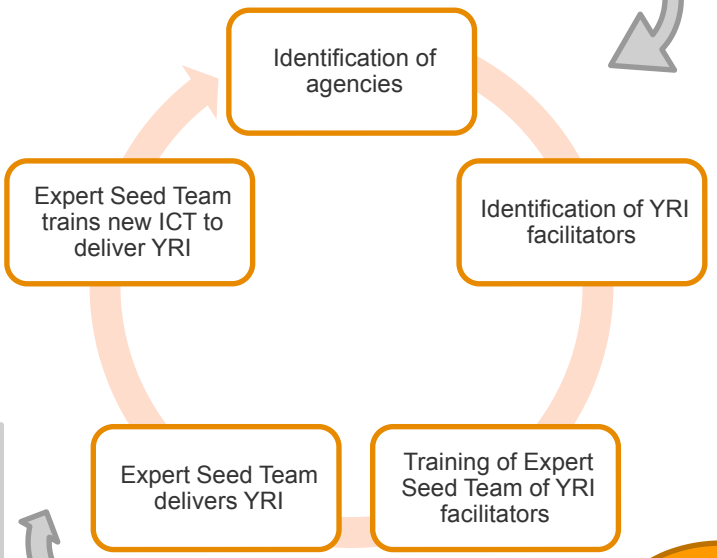
EFFECTIVENESS

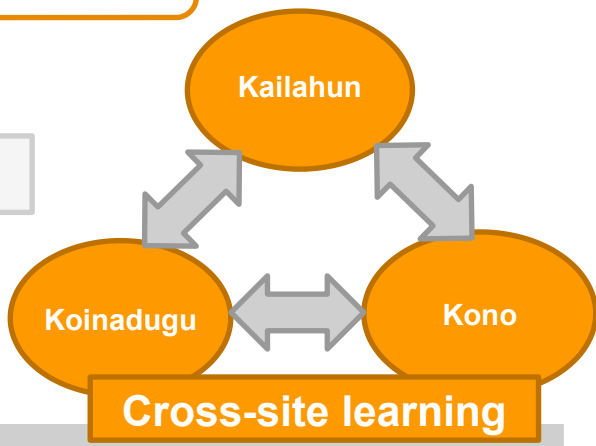
Delivered by YRI facilitators via ICTs

Expert Seed Team becomes supervisors of new ICT

Supervision and fidelity monitoring create a feedback loop of quality improvement

IMPLEMENTATION





NEW RESEARCH

Journal of the American Academy of
CHILD & ADOLESCENT
PSYCHIATRY

Stigma and Acceptance of Sierra Leone's Child Soldiers: A Prospective Longitudinal Study of Adult Mental Health and Social Functioning

Theresa S. Betancourt, ScD, Dana L. Thomson, PhD, Robert T. Brennan, EdD, Cara M. Antonaccio, MSPH, Stephen E. Gilman, ScD, Tyler J. VanderWeele, PhD

Objective: To investigate the associations of war and postconflict factors with mental health among Sierra Leone's former child soldiers as adults.

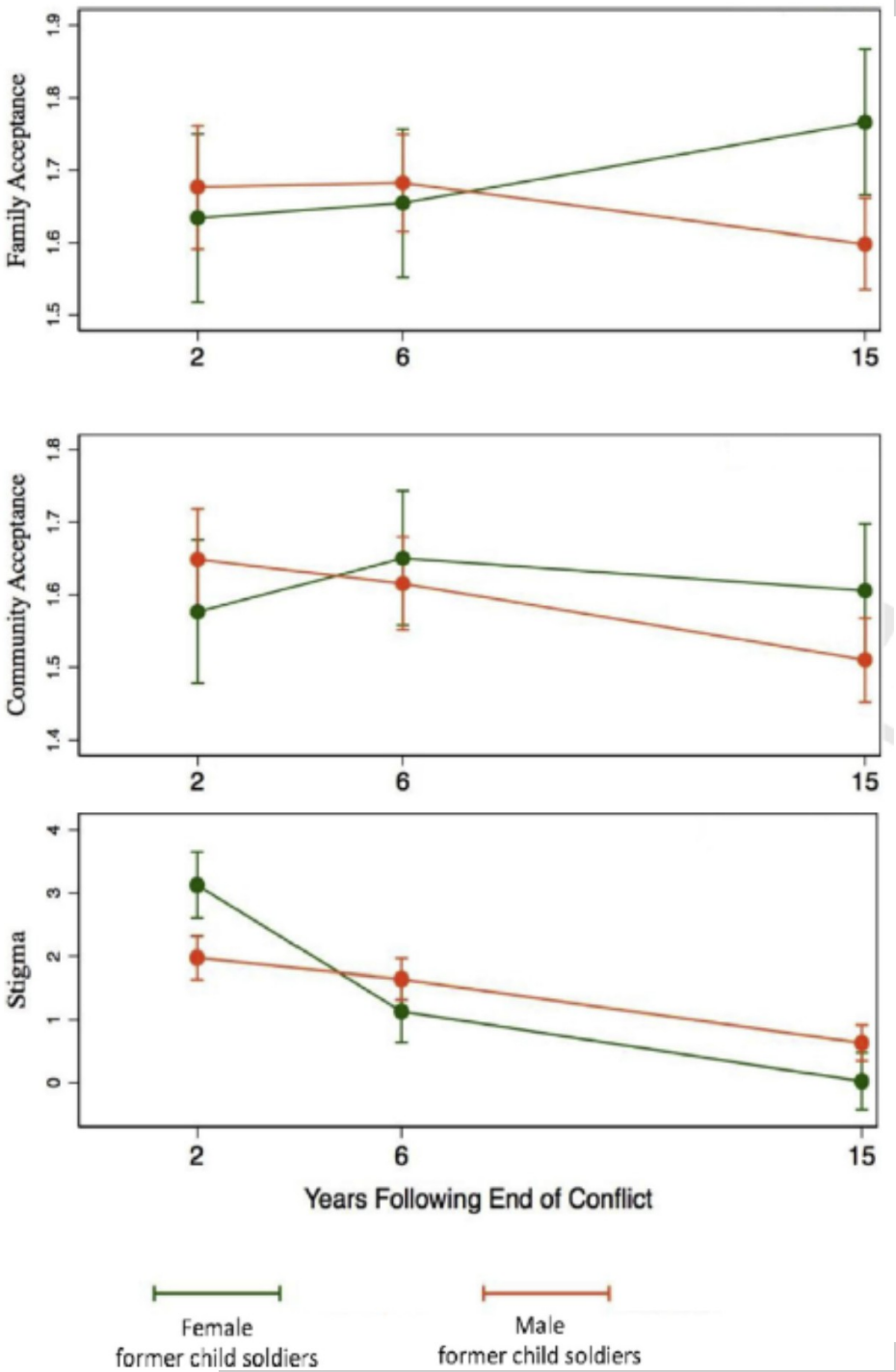
Method: In 2002, we recruited former child soldiers from lists of soldiers (aged 10–17 years) served by Disarmament, Demobilization, Reintegration centers and from a random door-to-door sample in 5 districts of Sierra Leone. In 2004, self-reintegrated child soldiers were recruited in an additional district. At 2016/2017, 323 of the sample of 491 former child soldiers were reassessed. Subjects reported on war exposures and postconflict stigma, family support, community support, anxiety/depression, and posttraumatic stress symptoms.

Results: Of the subjects, 72% were male, with a mean age of 28 years. In all, 26% reported killing or injuring others; 67% reported being victims of life-threatening violence; 45% of female subjects and 5% of male subjects reported being raped; and 32% reported death of a parent. In 2016/2017 (wave 4), 47% exceeded the threshold for anxiety/depression, and 28% exceeded the likely posttraumatic stress disorder threshold. Latent class growth analysis yielded 3 trajectory groups based on changes in stigma and family/community acceptance; "Improving Social Integration" (n = 77) fared nearly as well as the "Socially Protected" (n = 213). The "Socially Vulnerable" group (n = 33) had increased risk of anxiety/depression above the clinical threshold and possible PTSD, and were around 3 times more likely to attempt suicide.

Conclusion: Former child soldiers had elevated rates of mental health problems. Postconflict risk and protective factors related to outcomes long after the end of conflict. Targeted social inclusion interventions could benefit the long-term mental health of former child soldiers.

Key words: child soldiers, Sierra Leone, conflict, stigma, global mental health

Community and Social Processes are shifting with time in males and females (N = 323)



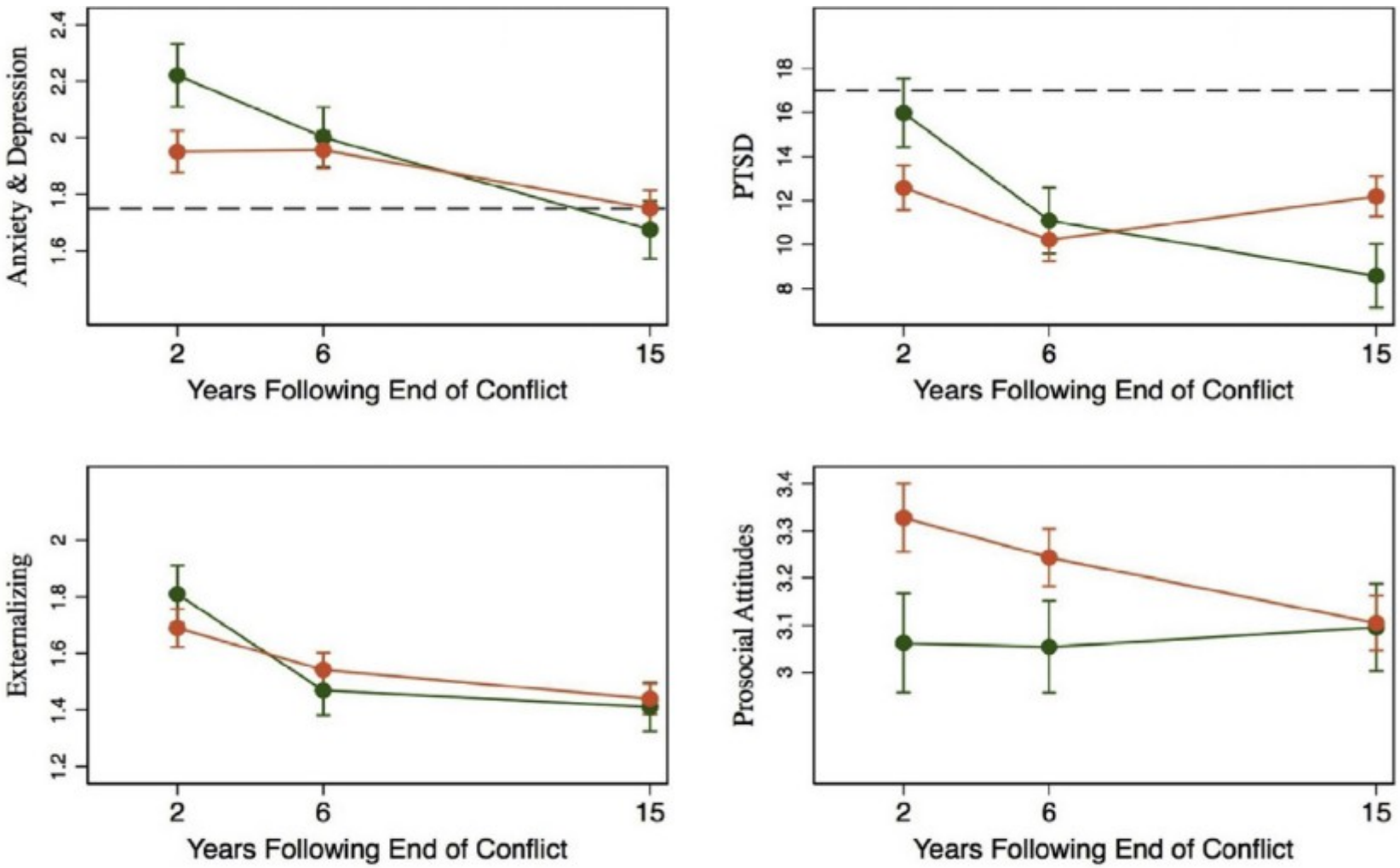
Overall, mean levels of social factors diminished over time.

- Perceived **stigma** due to being a child soldier d**iminished**
- **Community and family acceptance diminished slightly**

Differences by sex:

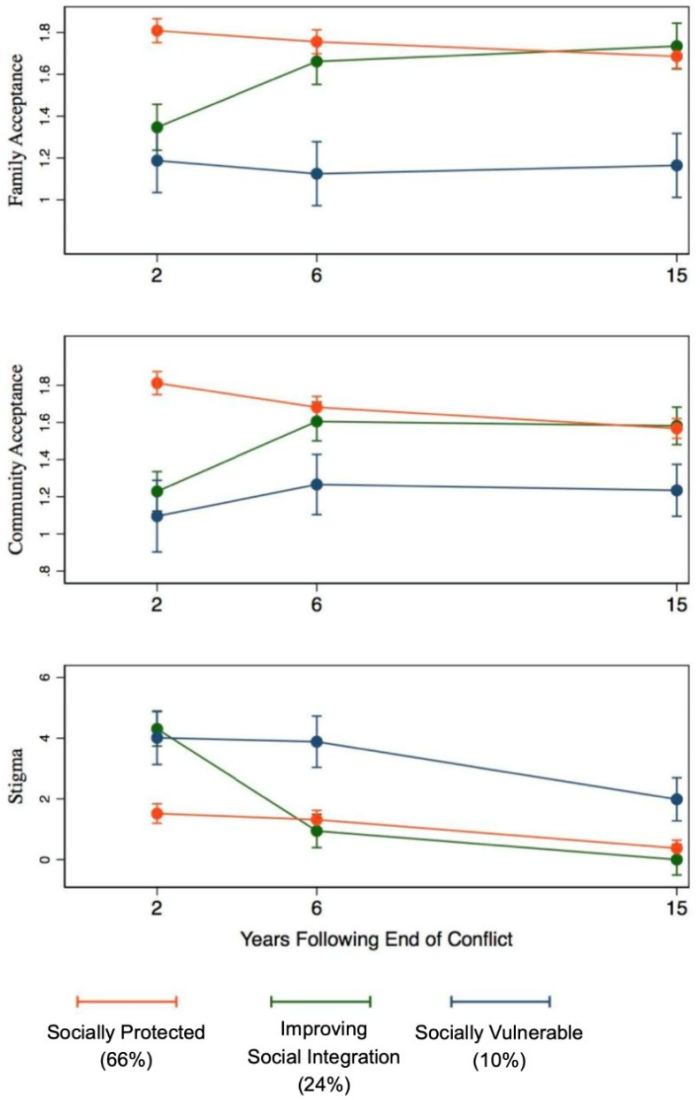
- **Females** reported **higher stigma** and **lower** acceptance **at T2** but **lower stigma** and **higher** acceptance **at T4** compared to male counterparts

Mean Levels of Mental Health Problems Over Time are also shifting in males and females
(N = 323)



Despite continued mental health challenges, family and community factors continue to have important links to life outcomes

- At T4, **mental health problems remained high** in the full sample:
  - **47%** exceeded the threshold for **anxiety/depression**
  - **28%** exceeded the threshold for likely **PTSD**
- Yet, **family and community dynamics** continue to play **important roles** in who is doing better or worse over time:
- Latent class growth analysis yielded **3 trajectory groups based on changes in stigma and family/community acceptance over time**:
  - "**Socially Protected**" (66%)
  - "**Improving Social Integration**" (24%)
  - "**Socially Vulnerable**" (10%)



Estimated Odds Ratios for Mental Health and Life Outcomes by Social Integration Trajectory Group (N=323)

	Mental Health Outcomes			Social Functioning Outcomes				
	Anxiety/ Depression	PTSD	Ever Attempted Suicide	Perpetrator of IPV[a]	Substance Use	Ever in Trouble with Police	Employed	Completed Primary School
Trajectory Group:								
Socially protected (n=213, 66%)	-	-	-	-	-	-	-	-
Improving social integration (n=77, 24%)	.75	.79	.81	1.36	1.12	3.39	.55	1.89
Socially vulnerable (n=33, 10%)	2.17	2.41	2.96	2.44	1.72	4.53	1.12	1.39
Male	1.10 (.61, 1.97)	1.70 (.90, 3.23)	1.01 (.38, 2.70)	5.52 (2.05, 14.83)	5.66 (2.62, 12.23)	5.03 (1.20, 21.05)	.66 (.37, 1.19)	4.59 (2.20, 9.56)
Age at T4	.92 (.87, .98)	.96 (.89, 1.03)	1.03 (.92, 1.15)	.92 (.84, 1.01)	1.02 (.95, 1.09)	1.06 (.91, 1.24)	1.09 (1.02, 1.16)	.82 (.75, .89)
War experiences (cumulative)	1.02 (.81, 1.28)	1.27 (.99, 1.63)	1.19 (.76, 1.88)	1.20 (.86, 1.68)	1.06 (.80, 1.39)	1.53 (.96, 2.43)	.94 (.74, 1.18)	.93 (.67, 1.28)

The **Improving Social Integration** group was generally not significantly different from the Socially Protected group

The **Socially Vulnerable** group, compared to the Socially Protected group, was

- 2x more likely to experience levels of anxiety/depression above clinical threshold
- 2x more likely to experience possible PTSD
- Over 4x times more likely to have been in trouble with the police
- Nearly 3x times more likely to have attempted suicide

Note: "Socially Protected" was the omitted (reference) group for logistic regressions, which also controlled for gender (male), age at T4, and cumulative war experiences. Odds ratios and confidence intervals were estimated using 30 imputed datasets. Estimated probability values and Benjamini-Hochberg adjusted probability values for logistic regression predicting mental health and life outcomes by social integration trajectory group are presented in Table S4, available online. Correlation coefficient matrix for mental health and social functioning outcomes is presented in Table S5, available online.

[a] Logistic regressions predicting intimate partner violence (IPV) were run on a subsample (n=194) of participants who reported having ever had an intimate partner

Violence & Adversity Intergenerationally

VIEWPOINT

Theresa S. Betancourt, ScD, MA
Department of Global Health and Population, Harvard School of Public Health, Boston, Massachusetts.

The Intergenerational Effect of War

The exposure of children to violence is widespread. More than 1 billion children and adolescents today live in regions affected by armed conflict.[1] Even in more developed areas, young people are increasingly exposed to violent actions, images, and settings.

To what extent does exposure to violence scar children? There are 2 common perspectives. The first is the idea that "violence begets violence" and that children exposed to violence at a young age will grow up to be more violent adults.[2] The second is the "resilience hypothesis," which asserts that coping in the face of violence is possible with the right support, thus mitigating its effect on quality-of-life outcomes.[3] A deeper understanding of these perspectives on the intergenerational effect of war is central to the work of health care professionals around the world.

There is a growing body of evidence for how and when violence is propagated across generations that

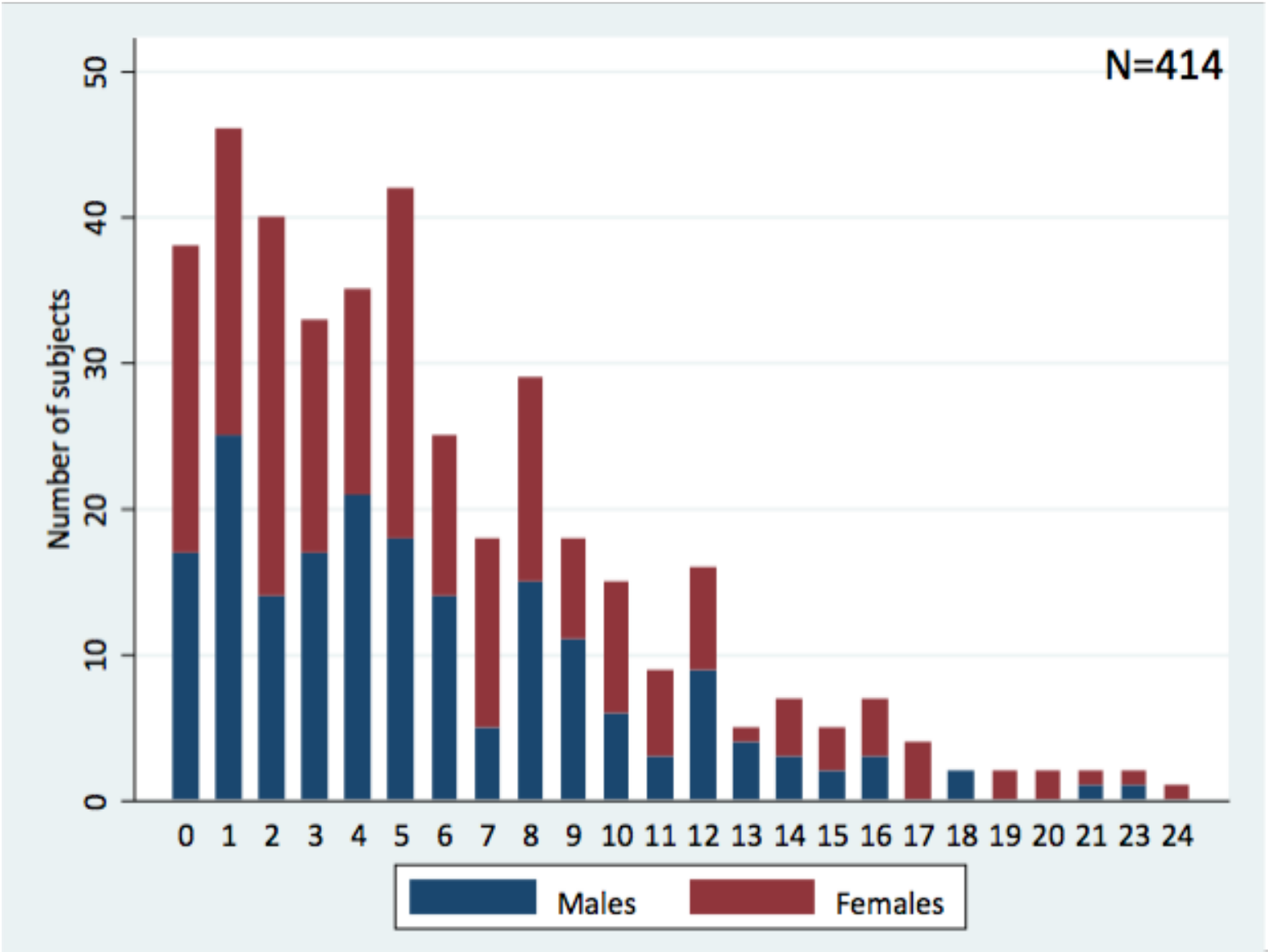
issued tool kits, have sold their materials for quick money only to return to a life on the street.

Rather than reflecting laziness, these types of behavior are manifestations of the mental health consequences of war. Numerous studies of war-affected youth show that a high level of exposure to violence is often associated with a foreshortened sense of the future that can lead a young person to sell the very tools given to him or her in the hopes of promoting economic self-sufficiency.

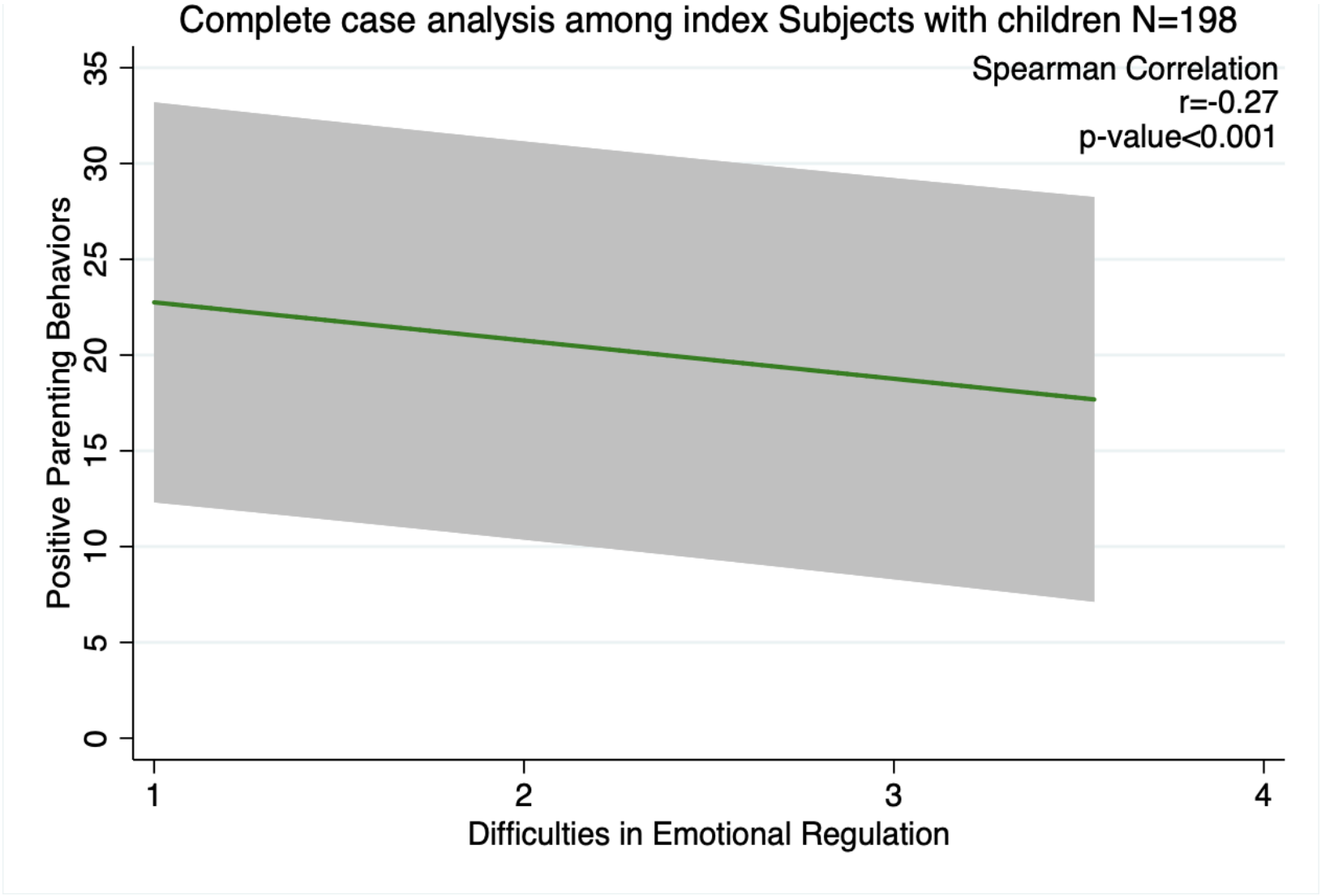
Modern neuroscience has illustrated how this may occur: the prefrontal cortex is still under tremendous development in adolescence through young adulthood. When an individual is exposed to extreme and repeated violence or "toxic stress," consequences emerge at the level of physiology and brain function, disrupting self-regulatory capacities and elements of executive functions and problem solving necessary for healthy functioning. Intergenerational effects are

The Next Generation

Children of War-Affected Youth



Parental emotional dysregulation inversely associated with positive parenting



Parental emotion dysregulation associated with children's externalizing symptoms

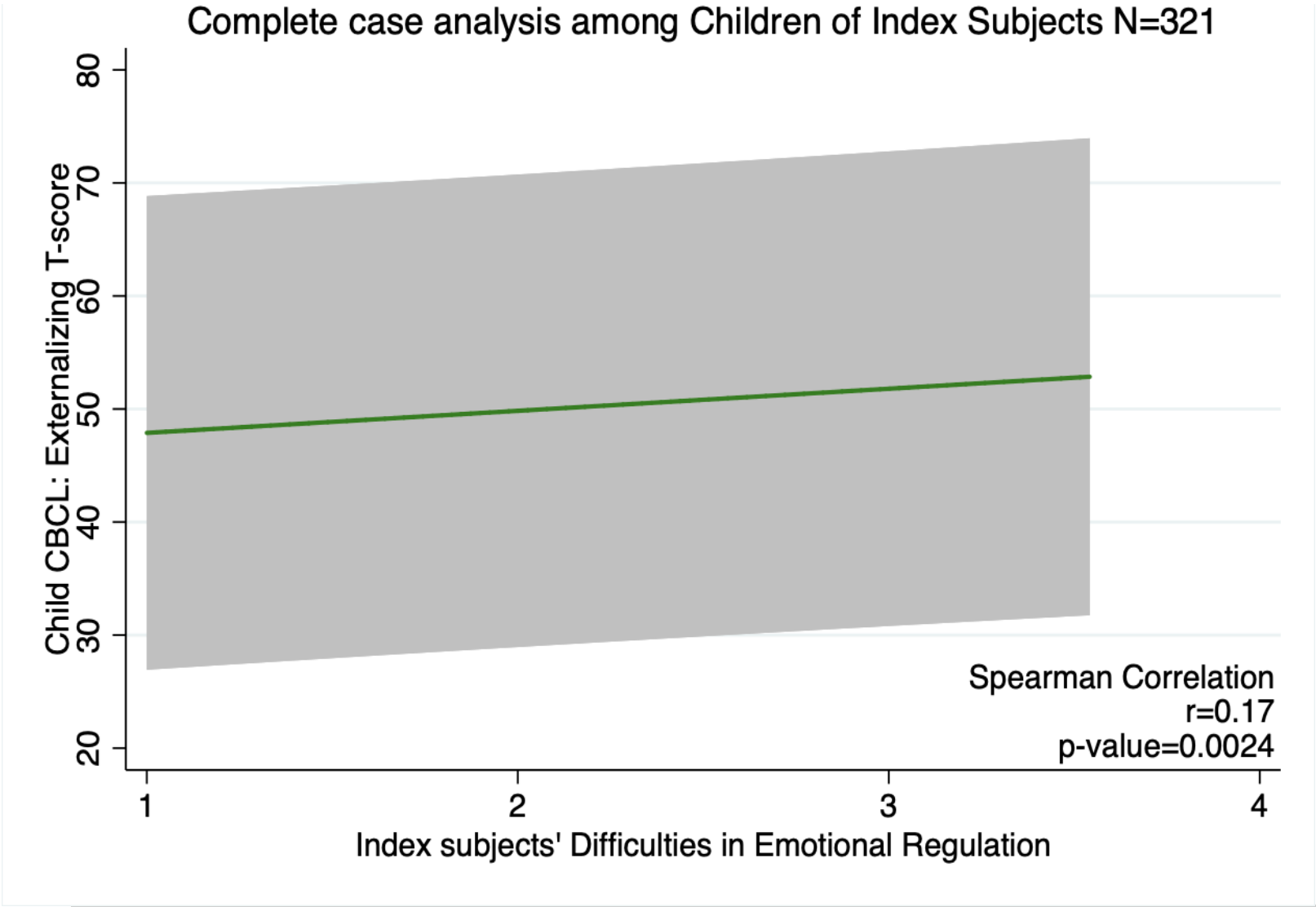


Photo courtesy of Laurie Wen

STRONG FAMILIES, THRIVING CHILDREN

Sugira Muryango RWANDA

Compound Adversity: Rwanda

Background:

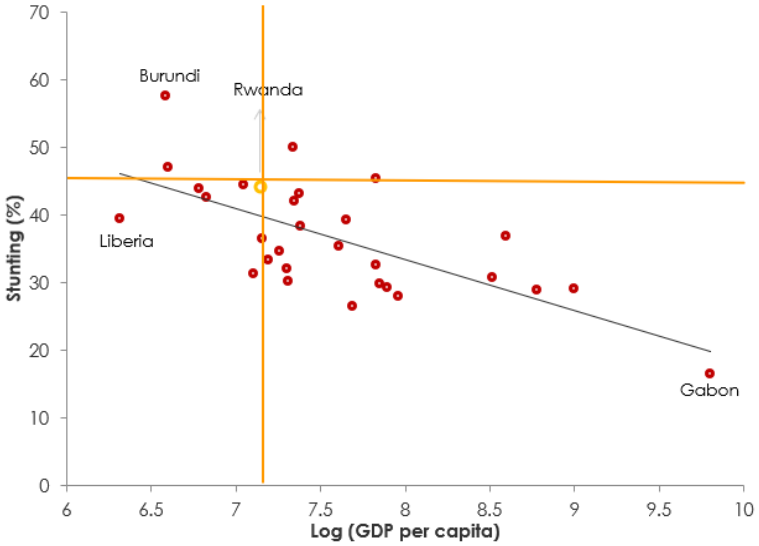
- **11.9 million inhabitants**; ~53% less than 19 yrs old **Progress in addressing infant and child mortality**:
  - Under-five mortality stands at 50/1,000, down from 76 in 2010 and 196 in 2000
  - But deficits remain: Ex: **High under-five stunting** rates (38%)
- **Compound adversities**: 1994 genocide, the HIV/AIDS epidemic, extreme poverty

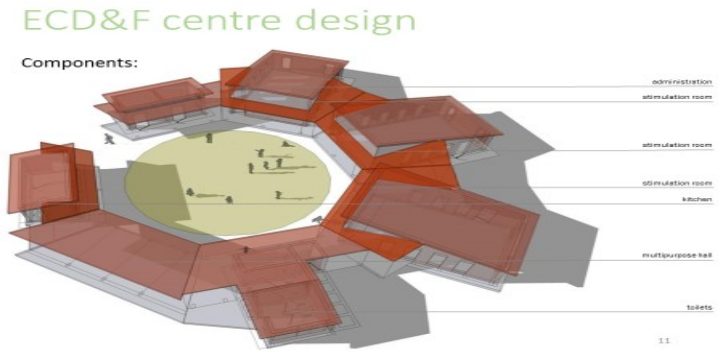
Country challenges:

- Chronic malnutrition (stunting)
  - Rwanda among the highest stunting rates (BDI, ETH, MAD, MWI)
  - Strong negative correlation between income levels and stunting
- Early childhood development
- Neonatal mortality
- Quality of education
- Prevention of violence against children

Country strengths:

- Political stability; Strong governance
- Fiscal and administrative decentralization
- Strong political will (Rwandan National ECD Policy Goal, Economic Development and Poverty Reduction Strategy: EDPRS-II)





THE JOURNAL OF CHILD PSYCHOLOGY AND PSYCHIATRY

ACAMH THE ASSOCIATION FOR CHILD AND ADOLESCENT MENTAL HEALTH

Journal of Child Psychology and Psychiatry **:* (2017), pp **–** doi:10.1111/jcpp.12729

Family-based promotion of mental health in children affected by HIV: a pilot randomized controlled trial

Theresa S. Betancourt,[1] Lauren C. Ng,[2,3] Catherine M. Kirk,[1] Robert T. Brennan,[1] William R. Beardslee,[4] Sara Stulac,[5,6] Christine Mushashi,[7] Estella Nduwimana,[7] Sylvere Mukunzi,[7] Beatha Nyirandagijimana,[7] Godfrey Kalisa,[7] Cyamatare F. Rwabukwisi,[7] and Vincent Sezibera[8]

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THE LANCET
Global Health

Integration of prevention of violence against children and early child development

Mikton, C., MacMillan, H., Dua, T., & Betancourt, T. S.

Despite important scientific advances in how violence against children can disrupt healthy early development,[1] the study of these issues has developed in relative isolation. Both areas are increasing in prominence,[2,3] but so far there has been little call for their integration, despite the important connections between them. Without close integration, scarce resources are at risk of

Large-scale roll-out of programmes on early child development and prevention of violence against children are often within the same sectors, stakeholders, and professional groups. For instance, the health, social, educational, and child protection sectors are likely to be included, often training health-care providers, social service personnel, and educators who contribute to

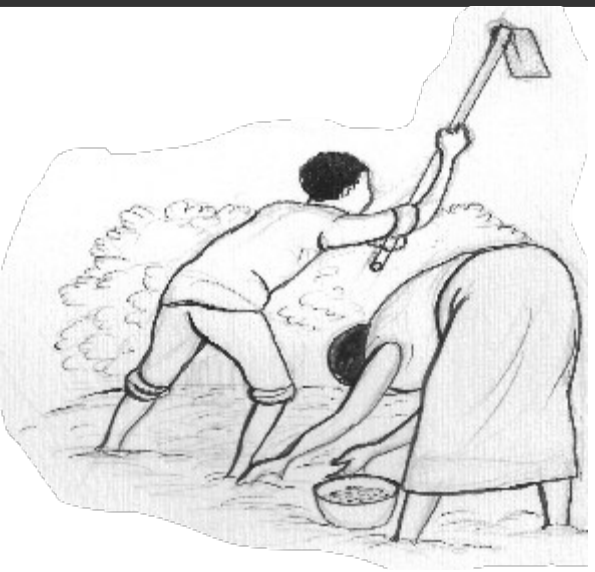
Sugira Muryango targets families in extreme poverty with young children (6-36 months)

Support **responsive parenting** to **promote ECD** & **prevent violence** through **active coaching** and **father engagement**

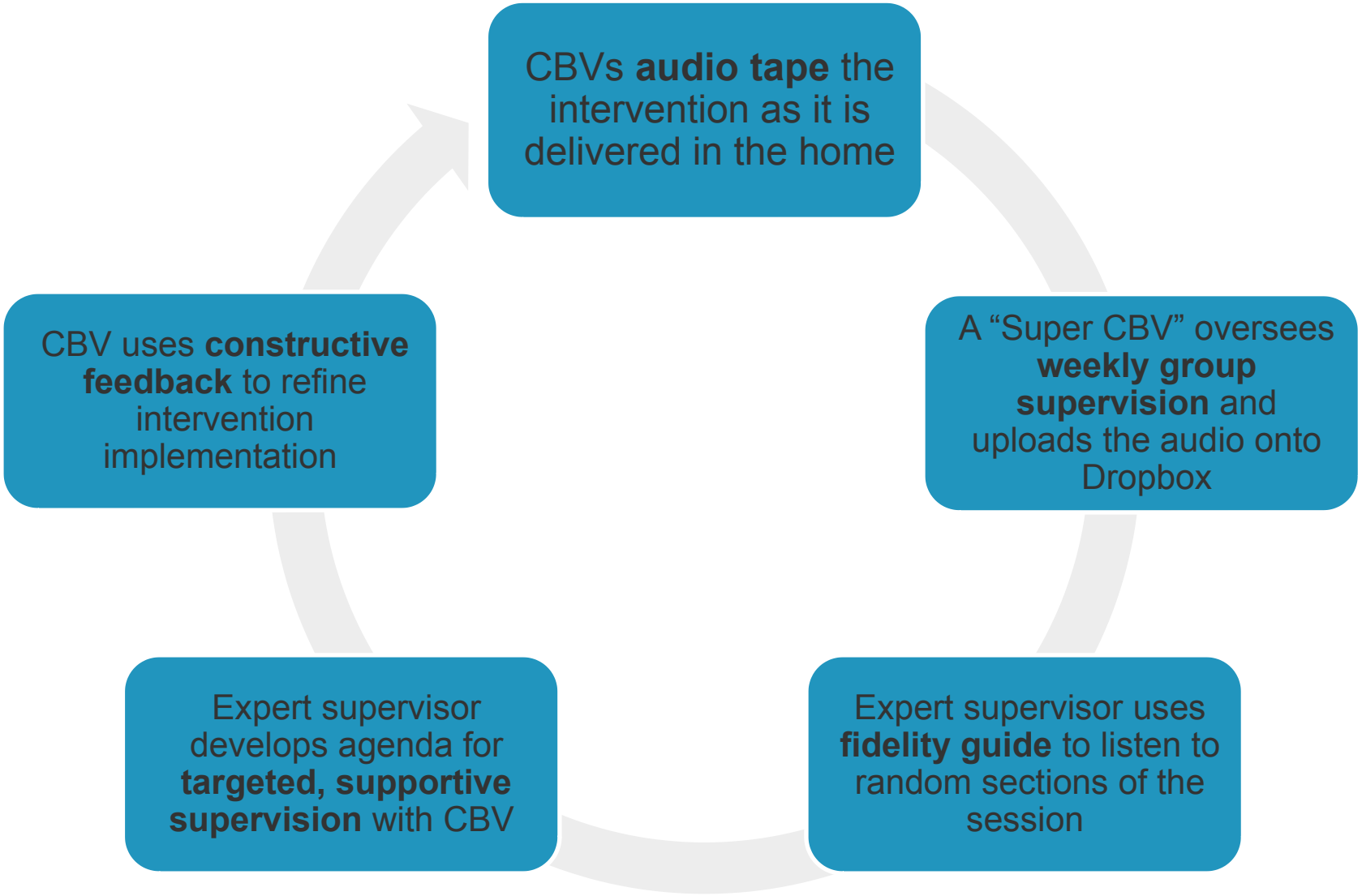
Characteristics:

- **In-home coaching**
- **Standard content** on responsive caregiving, nutrition, hygiene **(WHO Care for Child Dev)**
- BUT ALSO: **problem solving, conflict resolution, stress management**
- **Navigation** of **formal/non-formal resources & supports**
- **Flexible** for all **family types**
- **Father engagement** emphasized in timing, visuals and messaging
- **Complementary** to ECD Centers, community sensitization and home-based child care initiatives

With a United Family Anything is Possible



Fidelity Monitoring: Rwanda



Sugira Muryango Preliminary Results

PILOT 1

- Pre-post design (no comparison group)
- Delivered by bachelor's degree level interventionist
- 20 households, 22 children

Need for prevention

LAYERING INTO THE POVERTY REDUCTION STRATEGY/VISION UMURENGE (VUP) SYSTEM

PILOT 2

- Pre-post design (randomized comparison group)
- Delivered by lay community workers
- 38 households, 39 children

Transition to Scale with Local Gov't

Cluster Randomized Trial (CRT)

- Pre-, post-, 12-month follow-up design (randomized comparison group)
- Delivered by lay community workers
- **1049 households in CRT trial**

Key findings CRT: Child outcomes

More stimulation in the home Higher scores on the the HOME inventory (Cohen's d =0.78) and OMCI (Cohen's d=0.29)

Increase of 1.2 playful activities during the last 3 days (Cohen's d = 0.71)

Dietary Diversity: Consumption of 0.44 extra food groups in last 24 hrs. (Cohen's d=0.34)

Increased care seeking for diarrhea (OR: 2.2 (95% CI: 1.5, 3.1)

Increased care seeking for fever (OR:3·3, 95% CI:2·3, 4·8)

Key Findings CRT: Family environment

Decrease in child exposure to violent child discipline (OR:0·34, 95% CI:0·22, 0·51)

Increase in child exposure to non-violent discipline (OR:1·9, 95% CI:1·3, 3·0).

Reduced victimization to intimate partner violence among mothers (OR: 0.52 (95% CI: 0.24, 1.10)

Decrease in mothers & fathers meeting clinical criteria for depression/ anxiety (OR: 0.82 (95% CI: 0.67, 0.94)

HOME: Home Observation for Measurement of the Environment
OMCI: Observation of Mother-Child Interaction

PLAY Collaborative

Sugira Muryango Expansion Program

FUNDERS

The LEGO Foundation

Conditionally Funded:

Grands Défis Canada
Grand Challenges Canada

Submitted:

USAID
FROM THE AMERICAN PEOPLE

the ELMA foundation

GOV PARTNERS

MIGEPROF

NECDP
GAHUNDA MBONEZAMIKURIRE Y'ABANA BATO

National Commission for Children

IMPLEMENTERS

FXB Rwanda
François - Xavier Bagnoud

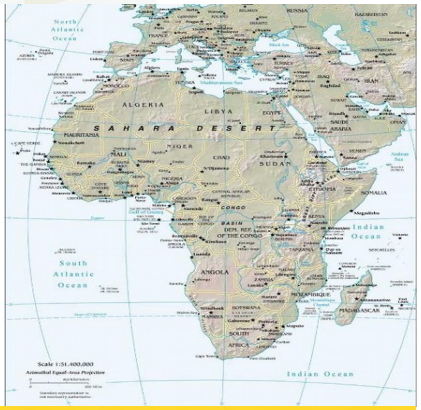
BOSTON COLLEGE
SCHOOL OF SOCIAL WORK

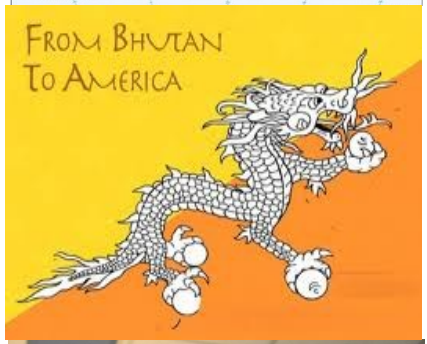
The Family Strengthening Intervention:

Bhutanese: Springfield, MA
Somali Bantu: Lewiston, ME

National Institute on Minority Health and Health Disparities

- Community Based Participatory Research (CBPR)
- **Co-developed a home visiting family-based preventive intervention** for Somali Bantu and Bhutanese refugees in New England **"for refugees by refugees"**
- **Community Health Workers** and **research assistants from the communities**
- **Pilot Study** (N= **80 families**) to test feasibility, acceptability and effectiveness
- Hybrid Type II **Effectiveness-Implementation Study** (N= **300 families**); Process evaluation, fidelity monitoring
- **Community Advisory Boards**: parents, youth
- Opportunities linked to the US **Affordable Care Act** (ACA)



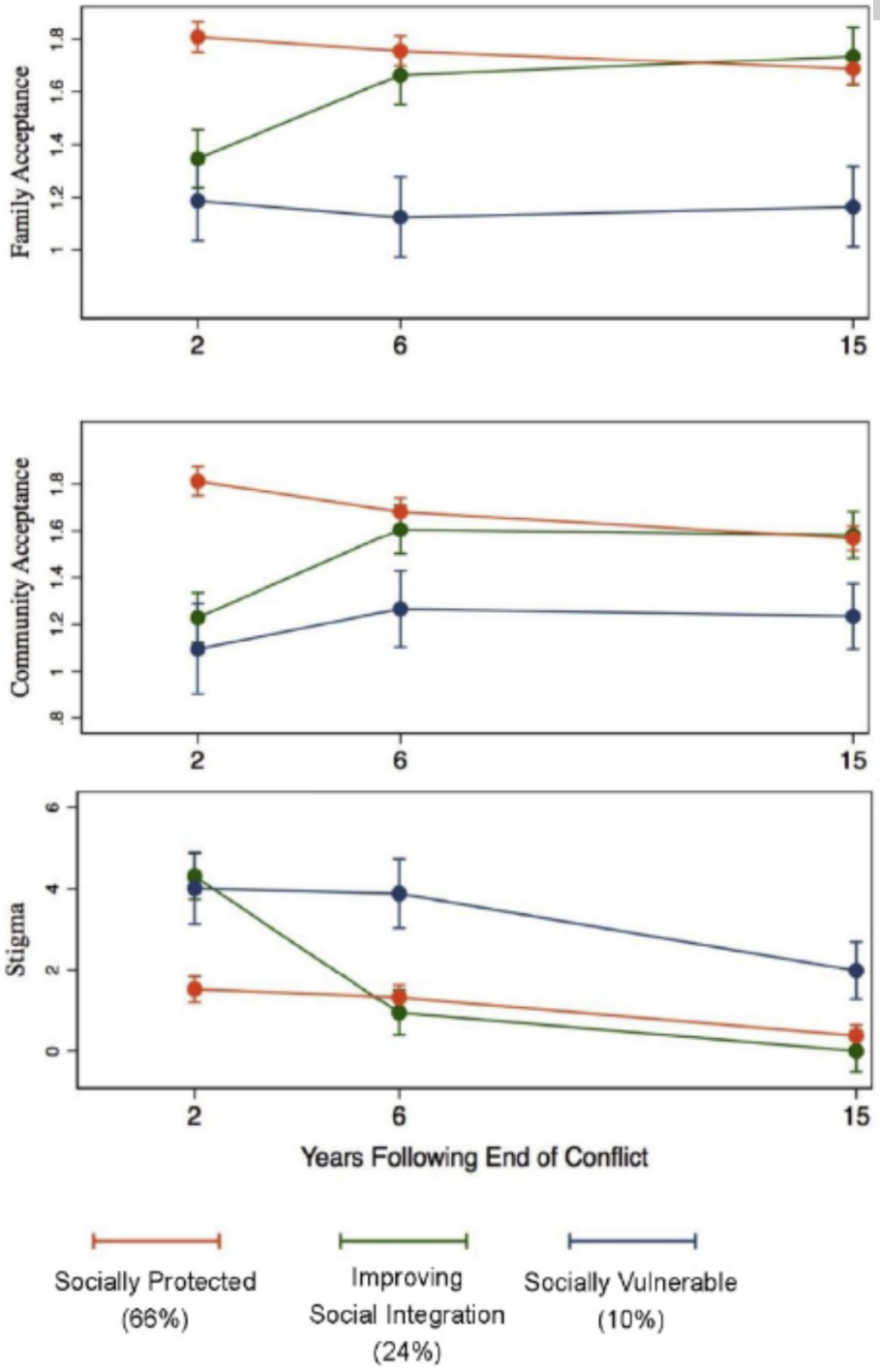


In Summary

- Value to the global **evidence base** that we **understand processes shaping risky and resilient mental health and developmental trajectories** among children and families affected by war
- Draw research to understand **leverage points for intervention development (build on strengths; mitigate intergen transmission)**
- Big questions remaining re: **transitioning evidence-based interventions to SCALE via new delivery platforms; opportunities for innovation (i.e. education, livelihoods programming, poverty reduction/social protection strategies)**
- **Implementation science questions** are the big issues moving forward (testing **STRATEGIES for transitioning to scale**, **human resources** and **supervision** strategies, **maintain quality, cost,** etc.)
- **Building local capacity** with universities; governments will take **collaboration** with major **development actors** and **government and civil society** to achieve **sustainability and impact**

Thank you!

Latent Group Classification of Social Integration Trajectories Estimated by Full Information Maximum Likelihood (N = 323)



Overall, former child soldiers showed improvements over time in anxiety and depression:

- Mean anxiety and depression scores decreased (percentage above cut-off: 63% at T2 → 47% at T4)
- Mean PTSD symptom scores decreased (percentage above cut-off: 36% at T2 → 28% at T4)

Differences by sex:

- Although females had higher depression, anxiety, and PTSD scores compared to male counterparts at T2, females show greater improvement in these indicators.