IMPROVING CHILD AND ADOLESCENT MENTAL HEALTH: OPPORTUNITIES AND CHALLENGES FOR MULTI-LEVEL CULTURALLY CONGRUENT PREVENTIVE INTERVENTIONS,

Leyla Ismayilova, PhD
Associate Professor
OUTLINE

- Overview of the three studies
- Challenges, opportunities and future directions

Economic strengthening and family coaching intervention on child protection outcomes in rural Burkina Faso

Multi-media family-focused drug prevention among at-risk adolescents in Kazakhstan

Family-focused mental health prevention interventions for children from orphanages in Azerbaijan
APPROACH TO INTERVENTION RESEARCH

- Adapting theory-driven and evidence-based interventions to the local risk factors and socio-cultural context of low- and middle-income countries/LMIC countries;

- Developing delivery mechanisms suitable and sustainable in the local circumstances and existing services;

- Given the limited resources of LMIC countries, developing cost-effective solutions relying on existing formal and informal systems of support.
An elephant is like a big snake.

What are you saying! It is like a sheath of leather!!

Your all wrong!!! It's actually like a little furry mouse.

Actually, No!
It's a tree stump!

The Elephant & blind sages by Blanca Marti for Equilibre
INTERVENTION COMPONENTS

1. Economic-empowerment strategies
   - Asset-based strategies

2. Strengthening family-level protective mechanisms
   - Parents or other adult family members

3. Trauma-informed mental health care
Multi-component interventions are often tested as ‘bundles’ making it difficult to disentangle the contributions of individual components.

Study design: Multiphase Optimization Strategy/MOST (Dr. Linda Collins), allows testing the independent effects of different intervention components or modalities to identify their most optimal combination;
CHILD PROTECTION IN BURKINA FASO: INTEGRATING ECONOMIC STRENGTHENING AND FAMILY COACHING INTERVENTIONS
BACKGROUND

- **Ultra-poverty and food insecurity** in Nord Region of Burkina Faso, especially during dry season
  
  - Children living in extreme poverty are at risk of violence and exploitation (hazardous labor), especially when separated from families due to work, religious schooling or marriage.

- **Study aim:** to test the effects of economic empowerment intervention, alone and in combination with family coaching component, on child protective and mental health outcomes among ultra-poor families.

STUDYING MENTAL HEALTH IN A DEVELOPING ECONOMY

Leyla Ismayilova finds family counseling reduces mistreatment of children in Burkina Faso

Exposure to violence, deprivation, and other adverse childhood experiences affect multiple mental health outcomes among children with effects that are often long lasting. SSA Assistant Professor Leyla Ismayilova shows in new research in the Western African country of Burkina Faso how those conditions affect children's emotional well-being and how a program to intervene has brought significant improvements, including an important reduction in abusive family environment and children's reports of depression.

"Harsh or non-supportive parenting practices, often highly prevalent among families living in adverse circumstances and chronic stress associated with family-level poverty, can even further undermine children's psychological functioning and weaken children's abilities to adapt and deal with trauma," she says.

Children in Burkina Faso, one of the 48 least developed countries, are particularly vulnerable to exploitation. Burkina Faso has one of the highest rates of child labor in the world and a 2012 survey found that 2.25 million or 37.8 percent of children ages 5-14 in Burkina Faso were working to augment the incomes of their families.

In addition to stresses outside of home, Ismayilova's article recently published in *PLoS ONE* has shown that almost half of the child participants (44 percent) in Burkina Faso experienced physical violence and 58 percent reported emotional violence at home, including when parents were abusing children by making them stand on their knees or depriving them of food as punishment. Such exposure to violence in the family was among the strongest factors connected to poor mental health among these children, including increased symptoms of depression, higher symptoms of trauma, and lower self-esteem.

Although relationships between stress brought on by poverty and mental health have been well-documented, practitioners in developing nations still lack effective, culturally appropriate, and low-cost intervention tools that could strengthen the way families can deal effectively with the stress, she says.

The path to social work was an unusual one for Ismayilova, who grew up in Baku, the capital of the Azerbaijan, a republic in the Caucasus region of the former Soviet Union.
METHODOLOGY
- Yatenga Province, Barga Commune, Nord Region
- Located near the Sahel and (food crisis due to low soil productivity and cyclical droughts)
- Selected due to high level of poverty and limited economic opportunities.
STUDY DESIGN

Screening for eligibility (n=1,967 households, 15 villages)

Ineligible (3 villages/1,607 HH)

Randomization at village level (12 villages, N=360 child-mother dyads)

Control arm ‘Wait List’
4 villages, 120 dyads

Trickle Up arm (Economic only)
4 villages, 120 dyads

Trickle Up+ arm (Economic + Family C.)
4 villages, 120 dyads

12-month and 24-month follow-up interviews (Fall, 2015/2016);
Lost to follow: n=16 (W2) and n=46 (W3) children
Retention rate 95.6% (W2) and 87.2% (W3)

n=115 (95.8%)
n=112 (93%)
n=117 (97.5%)
**TRICKLE UP**

Economic empowerment strategies **FOR WOMEN**, based on Graduation approach:

1. **Savings group** formation and training
2. **Livelihood** planning and training
3. **Seed capital grants** to jump-start or expand a livelihood activity (e.g. vending, animal husbandry)
4. Monthly one-on-one **mentoring and coaching** and weekly support during savings groups meetings

**Implementing Partners:** Trickle Up and Aide aux Enfants et aux Familles Démunies/ADEFAD

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**TRICKLE UP+**

Family Coaching on Child Protection Issues FOR ALL HOUSEHOLD MEMBERS

- Cultural beliefs about child violence
- Alternatives to physical discipline
- Importance of education, particularly for girls
- Risks of sending children away from home
- Negative consequences of early marriage
RESULTS
<table>
<thead>
<tr>
<th><strong>TABLE 1: BASELINE CHARACTERISTICS (N=360)</strong></th>
<th>Frequency (n)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHILD’s age in years (10-15), mean</strong></td>
<td>12.6 (SD=1.5)</td>
<td></td>
</tr>
<tr>
<td>Child’s gender (girls)</td>
<td>166</td>
<td>46%</td>
</tr>
<tr>
<td>Promised in marriage (among girls)</td>
<td>8</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Education (past year):</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conventional (classical) school</td>
<td>221</td>
<td>61%</td>
</tr>
<tr>
<td>Religious school (Madrassa/Quranic school)</td>
<td>64</td>
<td>14%</td>
</tr>
<tr>
<td>Not attending any school</td>
<td>84</td>
<td>23%</td>
</tr>
<tr>
<td><strong>MOTHER’s age in years (18-74), mean</strong></td>
<td>37.13 (SD=9.6)</td>
<td></td>
</tr>
<tr>
<td>Mother’s literacy (able to read and write)</td>
<td>10</td>
<td>3%</td>
</tr>
<tr>
<td>Religion (Muslim)</td>
<td>353</td>
<td>98%</td>
</tr>
<tr>
<td>Polygamous marriage</td>
<td>142</td>
<td>39%</td>
</tr>
<tr>
<td>Household has electricity</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Severe hunger</td>
<td>162</td>
<td>45%</td>
</tr>
</tbody>
</table>
INTERVENTION OUTCOMES
<table>
<thead>
<tr>
<th>Economic and Food Insecurity Outcomes</th>
<th>Economic Intervention (Trickle Up alone)</th>
<th>Economic + Child Protection Intervention (Trickle Up Plus)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate [95% CI]</td>
<td>Estimate [95% CI]</td>
</tr>
<tr>
<td>Household assets</td>
<td>1.34*** [1.0; 1.7]</td>
<td>1.7*** [1.3; 2.1]</td>
</tr>
<tr>
<td>Savings amounts</td>
<td>27,187.92***</td>
<td>29,512.29***</td>
</tr>
<tr>
<td>(in West African CFA franc, ~$50)</td>
<td>[24,340.3; 30,035.5]</td>
<td>[26,664.7; 32,359.9]</td>
</tr>
<tr>
<td>Savings (livestock values), in CFA (~$120)</td>
<td>70,427.50***</td>
<td>69,100.00***</td>
</tr>
<tr>
<td></td>
<td>[58,158.8; 82,696.2]</td>
<td>[56,831.3; 81,368.7]</td>
</tr>
<tr>
<td>Expenditures on children, in CFA</td>
<td>8,579.50**</td>
<td>8,106.05**</td>
</tr>
<tr>
<td></td>
<td>[3,438.7; 13,720.3]</td>
<td>[3,084.1; 13,128.0]</td>
</tr>
<tr>
<td>Hunger Score (0-16) (reported by women)</td>
<td>-1.98*** [-2.84, -1.11]</td>
<td>-1.3** [-2.14, -.45]</td>
</tr>
<tr>
<td>Hunger Score (0-12) (reported by children)</td>
<td>-0.28 [-1.06; 0.51]</td>
<td>-1.10** [-1.80; -.41]</td>
</tr>
</tbody>
</table>

** p < 0.01, *** p < 0.001
<table>
<thead>
<tr>
<th>Variables</th>
<th>Trickle Up vs Control</th>
<th>Trickle Up+ vs Control</th>
<th>Trickle Up+ vs Trickle Up</th>
<th>ICC Snijders-Bosker R-squared</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adjusted mean difference [95% CI]</td>
<td>Cohen's d</td>
<td>p</td>
<td>Adjusted mean difference [95% CI]</td>
</tr>
<tr>
<td><strong>Depression (CES-DC) Scale</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 months</td>
<td>-1.57 [-4.08,0.93]</td>
<td>-0.14 .218</td>
<td>-3.78 [-5.97,-1.59]</td>
<td><strong>-0.41 .001</strong></td>
</tr>
<tr>
<td>24 months</td>
<td>-1.04 [-4.32,2.24]</td>
<td>-0.10 .533</td>
<td>-3.58 [-6.71,-0.45]</td>
<td><strong>-0.39 .025</strong></td>
</tr>
<tr>
<td><strong>Trauma Symptoms† (CRIES-8 Scale)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 months</td>
<td>0.64 [0.38,1.08]</td>
<td>.095 .562</td>
<td><strong>0.62 [0.41,0.92]</strong></td>
<td><strong>.018</strong></td>
</tr>
<tr>
<td>24 months</td>
<td>0.97 [0.70,1.34]</td>
<td>.847 .69</td>
<td>0.69 [0.45,1.05]</td>
<td>.085</td>
</tr>
<tr>
<td><strong>Physical violence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 months</td>
<td>1.34 [0.49,3.65]</td>
<td>.562 .64</td>
<td>0.64 [0.22,1.84]</td>
<td>.412</td>
</tr>
<tr>
<td>24 months</td>
<td>0.48 [0.17,1.31]</td>
<td>.150 .35</td>
<td><strong>0.35 [0.12,1.00]</strong></td>
<td><strong>.050</strong></td>
</tr>
<tr>
<td><strong>Emotional violence only (without physical)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 months</td>
<td>0.59 [0.15,2.33]</td>
<td>.452 .84</td>
<td>0.84 [0.20,3.58]</td>
<td>.815</td>
</tr>
<tr>
<td>24 months</td>
<td>0.59 [0.25,1.36]</td>
<td>.213 .52</td>
<td><strong>0.52 [0.28,0.95]</strong></td>
<td><strong>.033</strong></td>
</tr>
</tbody>
</table>


DISCUSSION
CONCLUSIONS

- Economic intervention for women reduces poverty-related stress and improves mother’s empowerment status, BUT has a limited effect on children (the burden of household activities shifts to children);

- Integrating economic intervention with family-focused child protection component reduces exposure to violence and improves child’s emotional well-being.
LIMITATIONS

Implementation of Economic Empowerment Program
- Small number of local markets limit the opportunities for livelihood development
- Teaching basic accounting is challenging due to low literacy levels

Implementation of Child Protection Sensitization
- Structural barriers (e.g., lack of sufficient spots for girls in village schools, limiting the potential benefits of sensitization).

- Impacts on children are stronger in non-polygamous households, suggesting intervention modifications needed for polygamous contexts.
BÜTÖV AİLƏ (FAMILY TOGETHER): MENTAL HEALTH PREVENTION FOR CHILDREN FROM INSTITUTIONS REUNITING WITH THEIR FAMILIES IN AZERBAIJAN
Children Without Parental Care in CEE/CIS Region:

- The highest number of children in institutional care worldwide – up to 1.3 million children
- 42% of all children living in institutional care globally
- 75% have one or both parents living;
- 60% due to family poverty;
- Poor developmental and mental health outcomes

CEE /CIS – Central and Eastern Europe and the Commonwealth of Independent States

(UAFA, 2012; UNICEF, 2015)
MENTAL HEALTH CONSEQUENCES OF INSTITUTIONAL CARE

❖ Poor developmental and mental health outcomes due to:
  ▪ High staff-to-child ratio, social deprivation, and multiple and unstable caregivers.

❖ Limited life opportunities as adults, struggle to adjust to the society and are more likely to develop mental illness or addiction.

❖ In Russia, children who leave residential care:
  ▪ 1 in 3 children becomes homeless, 1 in 5 ends up with a criminal record,
  ▪ 1 in 10 commits suicide, and 1 of 10 young juvenile offenders was raised in an institution.

Ecological Factors (e.g., poverty; racial tension; war; neighborhood violence; natural disaster)

Chronicity (Single vs. Multiple events) & Developmental Period

Directly experienced or witnessed potentially traumatic events

Genetic vulnerabilities, temperament, & neurodevelopment

“Trauma” (potentially traumatic events)

Toxic Stress

Trauma & Stressor Related Disorder
SOCIOCULTURAL CONTEXT:
LOW STATUS OF WOMEN; STIGMA AROUND DIVORCE

Vulnerabilities

Domestic Violence
Substance Use
Forced Marriages

Reasons for Institutionalization

Lack of economic means
Lack of social support
Lack of institutional support

Barriers to Reunification

Lack of economic means
Child difficult to manage
Lost confidence in parenting

Chronic Emotional Distress: Shame, Trauma, Sense of Inferiority; Guilt, Insecurity
RECOMMENDATIONS FOR THE INTERVENTION

For families affected by poverty, it is crucial to integrate family-focused psycho-social interventions with economic empowerment strategies to:

- promote family stability
- reduce poverty-induced parental stress
- increase permanency of family placement

- focus on strengthening child-parent relationships and addressing the issues of rebuilding attachment and trust
- address emotional distress among parents and children
- use group-based approach to increase social support
- empower women to decrease stigma and isolation of divorced women
“OPTIMIZING PREVENTION APPROACHES FOR CHILDREN REINTEGRATING FROM ORPHANAGES IN AZERBAIJAN”

The Eunice Kennedy Shriver National Institute of Child Health and Human Development /NICHD and Fogarty International Center/FIC (R01HD099847)

Study aims: To prevent mental health problems among 7-12 children from orphanages reunited with their biological or extended families in Azerbaijan, the study will refine and test three evidence-based intervention approaches:

1. family strengthening intervention;
2. linkage to mental health services; and
3. economic empowerment (in the form of Child Savings Accounts).

Primary outcomes (symptoms of depression, anxiety; disruptive behaviors; post-traumatic symptoms; and disturbances of attachment)
**MOST DESIGN**

**FACTORIAL DESIGN: \(2^3 = 8\) EXPERIMENTAL CONDITIONS**

<table>
<thead>
<tr>
<th>Group</th>
<th>Usual Care</th>
<th>Bütöv Ailø (Families Together) Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standard De-I model</td>
<td>Trauma-informed Family Strengthening</td>
</tr>
<tr>
<td>1.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>2.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>3.</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>4.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>5.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>6.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>7.</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>8.</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Adapted an evidence-based intervention developed by Dr. Gorman-Smith, UChicago

- Multi-family group model (12 sessions)
- Strengths-based approach
- Added modules on emotion regulation, parental stress management and gender norms.

Trained social workers and family support workers at the SOS Children’s Villages.

Illustrated Story:
Catch them when they are good!
2) Mental Health component:
The National Mental Health Center (under the Ministry of Health), a network of public mental health clinics.

- Multidisciplinary teams mental health teams (psychiatrist, child psychologist, social worker, and school teacher)
- Attachment, Regulation, & Competency (ARC) Framework
  - Through engagement, psychoeducation, routines, & rituals

3) Economic Strengthening component

- Child Saving Accounts (Dr. Ssewamala): 2:1 match, up to $20 per month
  * $12 = $770 per year
- Financial education for caregivers and for children (8 sessions)
- Linkage to public social services
CHRONIC STRESS IN YOUNG CHILDREN

- Corrosive effect of stress (via Hypothalamic-Pituitary-Adrenocortical (HPA) System) on parts of the brain associated with learning & executive functioning
  - AD/HD-like symptoms
  - Language & learning challenges
  - Mood & behavioral regulation
  - Hyper/Hypo aroused

- The Cambridge Neuropsychological Test Automated Battery (CANTAB) to measure Cognitive Development (working memory, information processing and emotion recognition) and Executive Functioning (Attention, Planning and Cognitive Flexibility)
  - largely independent of cultural and language differences
MULTI-MEDIA FAMILY-BASED
DRUG ABUSE AND HIV/STI
PREVENTION INTERVENTION
FOR AT-RISK YOUTH IN
KAZAKHSTAN

Completed pilot study (2012-2016): R34 funded by National Institute of Drug Abuse /NIDA (R34DA033201)

- ClinicalTrials.gov Identifier: NCT01969305

Target population: at-risk 13-17 year-old adolescents from communities with high availability of heroin in Almaty, Kazakhstan.

Study aims: to adapt and test acceptability and feasibility and to estimate the effect size parameters on sexual risk behaviors and substance use;

Study Design: 2-arm RCT with 3 waves (baseline, 3 and 6 months)
LOCAL PREVENTION APPROACH IN KAZAKHSTAN

The country’s prevention efforts are limited to a knowledge-based and universal approach

- Schools and community centers offer health information (delivered by medical personnel) about HIV and drug use
- Does not equip at-risk youth with skills required to deal with situations of risk exposure
- Do not target risk groups of youth

Absence of skills-based HIV and drug use prevention programs for at-risk youth in Kazakhstan

Parents, who represent a significant protective force in a family-oriented culture of Central Asia, are largely excluded from youth prevention efforts.

- Build on extended family networks in drug-affected communities.
ADAPTATION PROCESS

conducted a series of focus of groups with youth (n=20) and caregivers (n=20) to collect information about youth’s risk behaviors and family interactions;

- Two Community Collaborative Boards/CCB (Expert Board and Youth Board):

  - 8-10 experts in the field (health education specialists, professionals working with youth and families);
LIMITATIONS & OPPORTUNITIES

Preliminary effects on key youth-level and caregiver-level mediators:

- Poor supervision (-0.80 (0.35)*)
- Positive parenting (0.81 (0.37)*)
- Peer pressure to use drugs (-0.28 (0.12)*)
- Binge drinking (Odds ratios/ OR=0.18 (0.14)*)

HOWEVER,

Risk behaviors were primarily observed among adolescents who had a history of trauma and among children from economically impoverished households.
ACKNOWLEDGEMENTS:

Special thanks to families, who participated in the studies, local partners, Community Board members and the study teams:

- **in Azerbaijan**: Azerbaijan Social Work Public Union (Aytakin Huseynli, Gulnara Panahova and Lamiya Rzayeva); the National Mental Health Centre /Psixi Sağlamlıq Mərkəzi (Dr. Narmin Hajiyeva, Dr. Fuad Ismayilov, Parvin Muslimzade), and the SOS Children’s Villages / SOS Uşaq Kəndlərî (Rashad Huseynov, Javid Shahmaliyev)

- **in Burkina Faso**: Trickle Up (Jo Sanson, Alexice To, Rachel Nanema), Josh Chaffin (WRC) and Aide aux Enfants et aux Familles Démunies /ADEFAD (Traoré Marie-Renée)

- **in Kazakhstan**: The Global Health Research Center of Central Asia (Dr. Assel Terlikbayeva, Dr. Elena Rosental)

- **in the U.S.**: UChicago (Dr. Deborah Gorman-Smith, Dr. Franklin Cosey-Gay and graduate students Eleni Gaveras, Susy Gomez, Veronica Philips, Emma Heidorn and Emily Claypool); Columbia University (Dr. El-Bassel, Dr. Steven Schinke), UCLA (Dr. Leyla Karimli), affiliates of the Child Protection in Crisis /CPC Learning Network (Mark Canavera, Dr. Fred Ssewamala, and Dr. Lindsay Stark) and many many others.

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[Image of logos for NIH, UBS, NEF, UNICEF, CHAS, The University of Chicago School of Social Service Administration, and Children & Violence Evaluation Challenge Fund]