Applying Cognitive Behavioral Therapy in Low and Middle Income countries: Trials, Advances, and Implementation Strategies

Abstract Body:
Children and adolescents (under 18 years) in low and middle income countries (LMIC) are exposed to challenges, traumas and stressors that increase their risk for mental health problems such as forced migration, forced labor, witnessing of murder and mass killings, lack of food and shelter, rape, torture, loss and separation from family, recruitment and use by armed forces, physical abuse, and family and sexual violence[1-3]. An increasing number of randomized controlled trials in LMIC have demonstrated the effectiveness of evidence-based treatments (EBTs), many CBT-based. However, few studies have focused on youth, attempted to extend CBT for mental health to include a focus on behavioral change for health conditions (HIV risk), or incorporated research questions that could inform how these CBT interventions can be scaled up for population reach and sustainment utilizing task sharing (wherein providers are not formally trained in mental health). This symposium presents findings from studies of CBT-based interventions in five contextually diverse LMIC countries (Southern Iraq, Thai-Burma border, Zambia, Tanzania and Kenya).
Dr. Shannon Dorsey will present treatment outcomes from a randomized controlled trial (RCT) of Trauma-focused CBT for children, with a focus on strategies for scale up. Dr. Laura Murray will present results from a RCT in Zambia comparing psychosocial counseling and TF-CBT on HIV-risk behavior in adolescents, as well as mental health and implementation outcomes. Dr. Maythem Alsiary will join us from Iraq and present on a train-the-trainer implementation strategy tested in Iraq and Myanmar with an evidence-based transdiagnostic treatment model[4]. Finally, Dr. Beverly Pringle, an expert from NIH in global mental health, will discuss implications of the presented work for addressing the mental health treatment gap in LMIC, the current and future use of CBT, and future directions for the role of EBT in global mental health.

[1] Lustig SL, Kia-Keating M, Knight WG, Geltman P, Ellis H, Kinzie JD, Keane T, Saxe GN. Review of Child and Adolescent Refugee Mental Health. Journal of the American Academy of Child and Adolescent Psychiatry. 2004; 43(1), 24-36.
[2]Cluver, L.,& Gardner, F. The Mental Health of Children Orphaned by AIDS: A Review of International and Southern African Research. J Child Adoles Men Health. 2007; 19:1-17.
[3]Patel V, Flisher AJ, Hedrick S, McGorry P. Mental health of young people: a global public-health challenge. *The Lancet. 2007: 369 (9569), 1302 - 1313*

- Primary category:
- Secondary category:

Keywords: cognitive behavioral therapy, clinical trials, HIV risk behaviors, implementation research

Learning Objectives:

1. Presented on data novel to the use of CBT in low resource settings.
2. Described the scale-up and sustainability challenges of CBT in low resource settings.
3. Discussed advances and future directions of CBT in the field of global mental health.

Title: *Group Trauma-focused Cognitive Behavioral Therapy in Tanzania and Kenya: Task Sharing and Remote Supervision*

Authors: Shannon Dorsey, Kevin King, Leah Lucid, Prerna Martin, Laura Murray, Augustine Wasonga, Dafrosa Itemba, Rachel Manongi, Cyrilla Amani, & Kate Whetten

Members: Dorsey, Lucid, Martin, and Murray
Non-members: King, Whetten,& Wasonga

Keywords: Task-sharing, TF-CBT, Global Mental Health, Children

Abstract body:
Background: In LMIC, the global mental health treatment gap is large, with children at particular disadvantage[1]. Only a small proportion of the available RCTs testing EBT in LMIC have focused on children. One EBT for child trauma exposure and traumatic grief has a substantial evidence-base in the US and other high-income countries[2], with a growing evidence-base in LMIC. However, trials have been small or focused on individually-delivered treatment, with local, in-person supervision and intensive expert oversight. Testing group-based treatment and lower-intensity supervision (e.g., remote supervision; lower-levels of expert involvement) offer avenues for scale up, such that more children with need receive treatment.

Methods: Six lay counselors in Tanzania and Kenya were trained to provide Trauma-Focused CBT (TF-CBT). All counselors were supervised by 3 experienced lay counselors in Tanzania; who were supervised one hour each week by a US expert (1st author). In each country, 320 orphaned youth (6-13) with PTS and/or grief due to parental death—and one guardian—were randomized to TF-CBT or usual care (Total N=640). TF-CBT was delivered in 12 group sessions in Kiswahili. 8 same-sex children were in each group, with a concurrently run guardian group (conjoint activities in the last 4 sessions). Participants received 2-4 individual visits for imaginal exposure. In each country, half the groups were in rural areas; half in urban areas. Clinical outcomes were assessed pre and post-treatment by child and guardian report. Interviewers were masked to treatment condition.

Results: Analyses supported a country by setting by condition interaction. Effect sizes were largest in rural Kenya (Child-reported PTS; Cohen's *d*=1.52), followed by moderate effects in urban Kenya (*d*=.55), and small effects in urban Tanzania (*d*=.39). There was no treatment effect in rural Tanzania, where all youth improved substantially (to sub-clinical). Contextual factors including food scarcity, participant health, and cultural views of orphans will be discussed. Findings have implications for context and provide some evidence for remote supervision (given effects in Kenya).

1. Saxena S, Thornicroft G, Knapp M, Whiteford H. Resources for mental health: scarcity, inequity, and inefficiency. *Lancet Lond Engl*. 2007;370(9590):878-889. doi:10.1016/S0140-6736(07)61239-2.

2. Cohen JA, Mannarino AP, Deblinger E. *Treating Trauma and Traumatic Grief in Children and Adolescents*. New York City, NY: Guilford Press; 2006.

Title: Implementation challenges and clinical outcomes from a randomized trial of *Trauma-focused Cognitive Behavioral Therapy among orphans and vulnerable children in Zambia*

Authors: Laura Murray, Jeremy Kane, Stephanie Skavenski, Christopher Akiba, & Paul Bolton

Keywords: clinical trial, TF-CBT, Africa, HIV risk behaviors

Abstract body:
Background: In Africa particularly, orphans and vulnerable children (OVC) experience multiple traumatic experiences and stressors, which cause mental health problems that contribute to risk sexual behaviors. Addressing mental health is necessary to ensure well-being of OVC and as part of HIV prevention. This trial compares the effectiveness of psychosocial counseling (PC) and Trauma-Focused Cognitive behavioral therapy (TF-CBT) in addressing OVC outcomes relevant to HIV risk behaviors, substance use, mental and behavioral health, and HIV knowledge and attitudes.

Methods: 610 adolescents (ages 13-17) living in Lusaka who were OVC and exhibited significant HIV risk behaviors were randomized to receive TF-CBT or PC. Primary outcomes were HIV risk behaviors, as measured by the World AIDS Foundation (WAF) survey and substance use. Assessment of outcomes was conducted via Audio Computer Self-Interviewing (ACASI) at baseline, within one month of treatment completion, and 6-months following treatment completion (primary timepoint of interest). Additionally, a qualitative database maintained by study staff captured implementation challenges of TF-CBT and research challenges in conducting the RCT.

Results: The trial is almost complete with final 6-month assessments occurring by end of March 2017. Preliminary baseline analysis suggests a high rate of risky sexual behaviors: among those sexually active, only 40% reported using a condom at their last sexual encounter. Similarly, only 40% reported that their most recent sexual partner had a ever had an HIV test. Approximately half of the adolescents reported substance use;13% who reported injection drug use. Effectiveness analysis will compare change in these outcomes from baseline to 6-month follow-up between the TF-CBT and PC arms. There were significant barriers of client engagement and retention, and challenges implementing TF-CBT in Ministry of Health clinics.

Conclusions: CBT was effectively delivered by lay workers who were not professionally trained, in a diverse context with significant stressors. Several implementation barriers and solutions were addressed that increased the success of CBT implementation.

A Train-the-Trainer Strategy for low-resource contexts to promote scale-up and sustainability

Authors: Maythem Al-Yasiry[1], Laura K. Murray[2], Shannon Dorsey[3], Emily E. Haroz[2], Amanda J. Nguyen[2]
Amir Haydary, Goran Sabir, Salah Hussan

[1] Babylon University /College of Medicine
[2]Johns Hopkins University School of Public Health
[3]University of Washington

Background: There is growing evidence for the effectiveness of CBT delivered in low-resource countries by lay counselors. However, implementation strategies for EBT training are under-developed and expensive, relying heavily on training and oversight by mental health professionals from high-income countries. It is critical to begin to test strategies for broader training and support of counselors that maintains quality, offers more rapid scale up, with greater likelihood of sustainment. Our research team developed a Train-the-Trainer (TTT) approach for an evidence-based transdiagnostic CBT (Common Elements Treatment Approach; CETA) that has been tested in two disparate settings—Southern Iraq and Myanmar.

Methods: Select local CETA supervisors in each country participated in a week-long TTT training led by US-based experts and then 8 were selected to (4 per country) to receive distance training preparation support. Local trainers conducted two trainings per country for counselors (*N*=125). Following a cascading model, the first clinical training in each country was co-led by local trainers and a US-based expert. The second clinical training in each country was led by local trainers only. All counselors completed a 33-item objective CETA knowledge test. Client outcomes for counselors trained by local trainers was benchmarked against client outcomes under the expert trainer (ET) model.

Results: Treatment effect sizes were reduced from the ET model to the TTT; with variation by country. In Myanmar: depression 1.16 (ET) vs. .51 (TTT), PTS: 1.19 (ET) vs. .66 (TTT). In Iraq: Depression, 1.78 (ET) vs. 1.27 (TTT), PTS 2.38 (ET) vs. 1.61 (TTT). On knowledge, counselors demonstrated significant improvement from the pre-training scores, with an average improvement of 26.2% in Iraq ($p<0.001$) and 18.4% in Burma ($p<0.001$), and a total average score of 78% after training.

Conclusions: These findings suggest that local trainers were able to impart CETA knowledge and skill to retain treatment effectiveness, with some country differences, likely due to educational and contextual differences (e.g., safety). TTT cascading implementation approaches are urgent in LMICs to address significant barriers to scale-up and sustainability.