CHETANA INTERVENTION

Good Evidence – Medication Adherence

INTERVENTION DESCRIPTION

Goals of Intervention
- Reduce adherence barriers

Intended Population
- Persons with HIV (PWH)

Brief Description

The *Chetana* adherence intervention is a comprehensive wellness program to increase medication adherence for PWH. The intervention has 3 components: (1) "positive living" groups to discuss topics including yoga, nutrition, information about local community and medical resources, stigma, and legal assistance; (2) peer-led adherence groups to enable participants to obtain social support and learn techniques from each other; and (3) individual counseling using motivational interviewing (MI) techniques to help address individual barriers and family situations that PWH who are adherence challenged unwilling to share with the group in a participant-centered, non-judgmental format. The first hour of each session consists of an adherence support group session that is peer led by a PWH and study counselor. The second hour consists of positive living group topics presented by subject matter experts. Participants are given a meal and refreshments during the group sessions and receive reimbursement for their transportation costs to each session. Participants also receive a certificate of completion and personal yoga mat that they keep following participation.

Theoretical Basis
- Social Cognitive Theory
- Motivational Interviewing (MI)

Intervention Duration
- Ten 2-hour in-person group sessions and six 30-minute individual (either in person or over the phone) sessions over 6 months
    - Sessions were held biweekly for the first 3 months and once a month for the last 3 months

Intervention Settings
- Group sessions held in local community spaces not associated with HIV services
- Individual sessions held in person or over the phone

Deliverer
- Peer facilitator with HIV
- Master's-level counselors trained in MI
- Community members participating in the study:
    - Legal expert
    - Community resources expert
    - Nutritionist
    - Therapeutic yoga expert
    - Medical doctor in internal medicine

Delivery Methods
- Counseling (MI)
- Group discussion
- Presentation
- Skills building

Structural Components
There are no structural components reported for this study.

INTERVENTION PACKAGE INFORMATION

The intervention package is not available at this time. Please contact **Maria Ekstrand**, Department of Medicine, Center for AIDS Prevention Studies, University of California, 550th Street, 3rd Floor, Box 0886, San Francisco, CA 94143, USA.

Email: maria.ekstrand@ucsf.edu for details on intervention materials.

EVALUATION STUDY AND RESULTS

Study Location Information
The original evaluation was conducted in the state of Karnataka, India.

Key Intervention Effects
- Reduced viral load (VL)
- Increased medication adherence

Study Sample*
The intervention group (analytic) sample of n = 188 is characterized by the following:
- *47% male*
- *Mean age of 39 years*
- *Median time since HIV diagnosis, 57 months*
- *Median time on ART, 32 months*
- *30% of persons had ≥ 10 years of schooling*

The comparison group (analytic) sample of n = 225 is characterized by the following:

- *53% male*
- *Mean age of 39 years*
- *Median time since HIV diagnosis, 56 months*
- *Median time on ART, 41 months*
- *36% of persons ≥ 10 years of schooling*

Recruitment Settings

Non-governmental organizations (NGOs), hospital physicians, and government anti-retroviral therapy (ART) Centers in the Karnataka state cities of Bangalore, Chikkaballapur, Kolar, and Mysore.

Eligibility Criteria

Participants were eligible if they were at least 18 years of age, currently on ART medication, fluent in the local language of Kannada, resided within 40 km of the intervention sites, and self-reported to be adherence-challenged. Adherence-challenged was defined as reported <90% adherence to ART medication over the past 30 days or reported ≥2 treatment interruptions of at least 48 hours each in the past year.

Assignment Method

Four hundred and ninety-six participants met eligibility criteria and were enrolled and assigned to either the Chetana intervention arm or the control arm. Eighty-three participants did not have 12-month follow-up data. Two hundred and forty participants were randomly allocated to one of nine Chetana intervention groups while 256 participants were randomly assigned to one of 10 control groups.

Comparison Group

The comparison group received standard care from the ART center and four 1-hour positive living group instructional sessions (these sessions were also provided to the intervention group) in yoga, nutrition, medical issues, legal issues, and information about community resources for PWH. These sessions occurred at least one month apart for the first 6 months of the study.

Relevant Outcomes Measured and Assessment Time

- Medication adherence (defined and measured in the study as proportion of pills taken in the past month using the Visual Analogue Scale [VAS]) was measured at 12-month follow up.
- Viral load (VL) assessed as undetectable (<100 copies/mL) was measured at 12-month follow-up.

Participant Retention

Chetana Intervention:

- 78% retained at 12 months

Control:

- 88% retained at 12 months

Significant Findings on Relevant Outcomes

- Intervention participants were significantly more likely than control participants to be virally suppressed (52.7% vs 40.8%, p = 0.017) at the 12-month follow-up visit.

- In adjusted analyses, the odds of viral suppression at the 12-month follow-up visit among intervention participants was almost twice as likely as that of control participants (Adjusted Odds Ratio (AOR) = 1.98; 95% Confidence Interval (CI): 1.22 - 3.23, p = 0.006).*
- Intervention participants were significantly more likely than control participants to report ≥95% adherence using VAS (83.5% vs. 73.8%, p = 0.017).
- In adjusted analyses, the odds of adherence using VAS among intervention participants were about twice as likely as that of control participants (AOR = 1.86; 95% CI:1.09 - 3.15, p = 0.022).*

Considerations

Additional significant positive findings on non-relevant outcomes

- Participants in the intervention group were more likely to have eliminated all individual adherence barriers (62.2% vs. 45.3%, p = 0.001; AOR = 2.33; 95% CI: 1.51 - 3.62, p<0.001).*
- Participants in the intervention group were significantly more likely to have eliminated all clinic attendance barriers (83.0% vs. 70.7%, p = 0.003; AOR = 2.01; 95% CI: 1.20 - 3.38, p = 0.008).*
- This study did not meet the best-evidence criteria because missing values were not imputed.

Non-significant findings on relevant outcomes

- None reported

Negative findings

- None reported

Other related findings

- The odds of having undetectable VL at the 12-month follow-up for female participants were nearly twice as likely as male participants (AOR = 1.94; 95% CI:1.24 - 3.05, p = 0.004).*
- There were no significant differences between the intervention and control groups in treatment interruptions in the past 6 months, family-level adherence barriers, social/structural adherence barriers, and regimen/clinic adherence barriers.

Implementation research-related findings

- None reported

Process/study execution findings

- Intervention content was developed in part from pilot data collected via focus groups with sub-optimally adherent participants in a previous cohort study during a formative research phase.
- Ongoing supervision included both planned and unplanned observations by the study coordinators.
- The authors suggest that the Chetana intervention uses low-cost strategies (e.g., peer-led adherence support, yoga, motivational interviewing) and thus can be implemented by local non-governmental organizations. The authors argue that Chetana is both scalable and sustainable in this and similar settings.

Adverse events

- None reported

*Odds Ratios were adjusted for gender and location on all outcomes, as well as for the pre-intervention value on outcomes with pre-intervention variability.

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REFERENCES AND CONTACT INFORMATION

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