RELATIONSHIP DYNAMICS AND PARTNER SUPPORT ARE ASSOCIATED WITH ART ADHERENCE IN MALAWI

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RELATIONSHIP QUALITY AND HIV CARE ENGAGEMENT

- Higher relationship quality is linked to better health.\(^1\)

- **Positive** relationship dynamics (e.g., unity, satisfaction) are associated with higher uptake of HIV testing and partner disclosure, and lower viral load.\(^2-4\).

- **Negative** relationship dynamics (e.g., intimate partner violence) are associated with lower HIV care engagement and ART adherence.\(^5\)

There is a dearth of research on relationship dynamics and adherence to ART among couples in sub-Saharan Africa.

This information is necessary to identify intervention targets for couples living with HIV.

In the U.S., couples-based interventions have been effective at reducing risky sex and at improving ART adherence.\(^6\)\(^7\)

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1. **Aim 1** To describe how couple relationships affect engagement in HIV care and treatment

2. **Aim 2** To examine whether relationship dynamics and partner support are associated with engagement in care and treatment (i.e. ART adherence)

3. **Aim 3** To develop a preliminary intervention for couples targeting engagement in care and treatment
CONCEPTUAL FRAMEWORK

Contextual Variables
- Structural
- Social
- Treatment-related

Relationship Variables
- Communication
- Trust
- Intimacy
- Satisfaction
- Social support
- Violence/conflict
- Power dynamics

Dyadic interaction model adapted from Karney et al. 2010

Dyadic capacity to work collaboratively around HIV

Adherence to ART

Individual-level Variables (Partner A)
- Knowledge/beliefs
- Socio-demographics
- Alcohol use

Individual-level Variables (Partner B)
- Knowledge/beliefs
- Socio-demographics
- Alcohol use
THE UMODZI M’BANJA PROJECT

- “Unity in the Family”
- High rates of marriage/cohabitation\(^8\)
- HIV prevalence of 16%\(^9\)
- Test-and-treat rolled out in June of 2016\(^{10}\)

ELIGIBILITY

1. In a non-polygamous union for at least six months

2. Age 18 or older

3. Have at least one partner on ART for two months ("index patient")

4. Disclosure of HIV and ART status to primary partner
STUDY PROCEDURES

- Two recruitment sites:
  - An urban clinic at a district hospital (7000+ patients)
  - A rural clinic at a private hospital (4000+ patients)
- Index patients were recruited in waiting rooms when attending appointments
- Separate, private interviews (single visit)
MEASURES AND ANALYSIS

- **Outcome variables:**
  1. Self-reported 30-day adherence (bean method)
  2. Partner’s estimate\(^{11}\) of patient’s 30-day adherence (bean method)
     Dichotomized as 90-100% adherence or less

- **Explanatory variables:**
  1. Relationship dynamics (e.g., intimacy, trust, unity, satisfaction, commitment)
  2. Social support from partner (general and treatment-specific)
     Computed couple-level means, continuous variables

- **Analysis plan:** Multivariable logistic regression using generalized estimating equations (GEE), controlling for the clustering of persons within couples

11. Johnson et al., 2011. *JAIDS*
BACKGROUND CHARACTERISTICS (N=211 COUPLES)

- **Mean Age**: 40.5
- **Married**: 100%
- **Mean Relationship Duration (years)**: 12.5
- **Taking ART**: 98.9%
- **N=352**

### Education
- None: 13.7%
- Primary: 67.1%
- Secondary: 16.6%
- Higher: 2.6%

### Couple HIV Status
- Discordant: 33.2%
- Concordant: 66.8%

### Mean Time on ART (years)
- 4.84
PREVALENCE OF ADHERENCE TO ART

**SELF-REPORTED ADHERENCE**
- 90-100% adherence: 95.6%
- Less than 90% adherence: 4.4%

**PARTNER-REPORTED ADHERENCE**
- 90-100% adherence: 96.1%
- Less than 90% adherence: 3.9%
Adjusted For:
gender, age, years of education, household wealth index, relationship duration, couple HIV status, treatment regimen complexity, and length of time on ART

Results not shown: Intimacy, trust, and commitment were not significantly associated with adherence
ADJUSTED ODDS RATIOS: PARTNER SUPPORT AND SELF-REPORTED ADHERENCE

Adjusted For:
gender, age, years of education, household wealth index, relationship duration, couple HIV status, treatment regimen complexity, and length of time on ART

General Partner Support
- 1.12
- 1.02

HIV Treatment-Specific Partner Support
- 1.12
- 1.04

1.23
1.21
ADJUSTED ODDS RATIOS: RELATIONSHIP DYNAMICS AND PARTNER-REPORTED ADHERENCE

**Adjusted For:**
gender, age, years of education, household wealth index, relationship duration, couple HIV status, and length of time on ART

**Results not shown:** Trust was not significantly associated with adherence
ADJUSTED ODDS RATIOS: PARTNER SUPPORT AND PARTNER-REPORTED ADHERENCE

Adjusted For:
- gender, age, years of education, household wealth index, relationship duration, couple HIV status, treatment regimen complexity, and length of time on ART
DISCUSSION

- Positive relationship dynamics (unity, sexual satisfaction) were associated with better adherence in Malawian couples.
- Partner social support was also associated with better adherence; little difference between general and treatment-specific support.
- Findings were consistent for both outcomes of adherence.
STRENGTHS & LIMITATIONS

- **Limitations**
  - Cross-sectional data
  - Self-selection bias; potentially higher functioning couples
  - Social desirability bias in self-reported adherence (hair biomarker data being processed)

- **Strengths**
  - Dyadic data collection and analysis which helps to mitigate bias from a single partner’s report
  - Adds to the literature on importance of couple relationships and adherence to ART in sub-Saharan Africa
Interventions that incorporate relationship-building exercises might improve adherence to ART in couples.

Longitudinal research is needed to examine temporality, change, and mediating pathways.
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