

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

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University of California  
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invest *in*  
knowledge



DIGNITAS



# DISCLOSURES

I have no conflicts or disclosures to report.

# RELATIONSHIP QUALITY AND HIV CARE ENGAGEMENT

- Higher relationship quality is linked to better health.<sup>1</sup>
- Positive relationship dynamics (e.g., unity, satisfaction) are associated with higher uptake of HIV testing and partner disclosure, and lower viral load.<sup>2-4</sup>
- Negative relationship dynamics (e.g., intimate partner violence) are associated with lower HIV care engagement and ART adherence.<sup>5</sup>



# COUPLES-BASED INTERVENTIONS FOR HIV

- 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.<sup>6-7</sup>



# STUDY AIMS

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

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

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

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

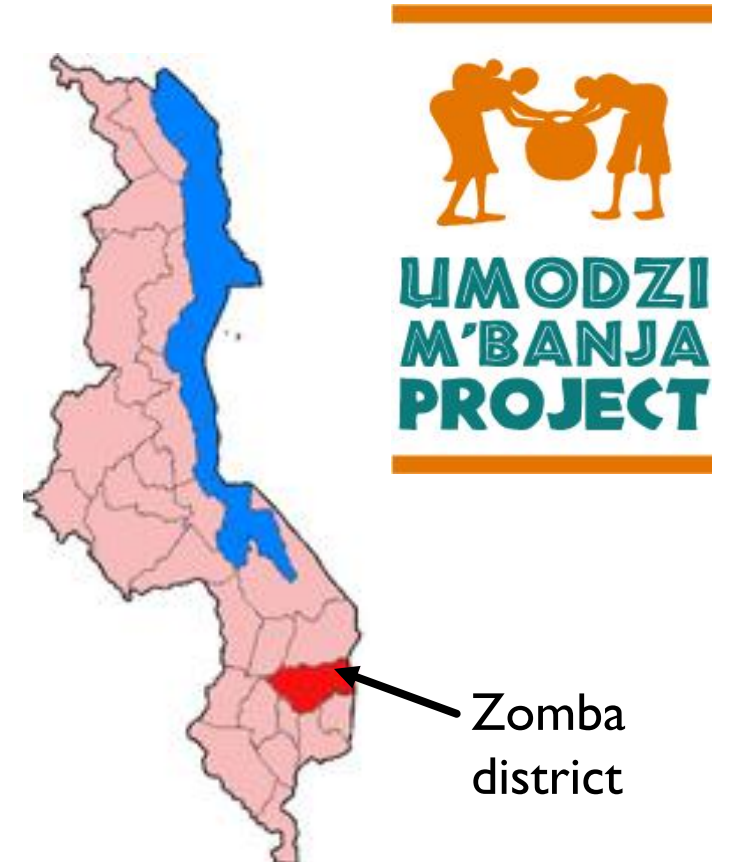
*Dyadic capacity to work collaboratively around HIV*

**Adherence to ART**

Dyadic interaction model  
adapted from  
Karney et al. 2010

# THE UMODZI M'BANJA PROJECT

- “Unity in the Family”
- High rates of marriage/cohabitation<sup>8</sup>
- HIV prevalence of 16%<sup>9</sup>
- Test-and-treat rolled out in June of 2016<sup>10</sup>



# 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<sup>11</sup> 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

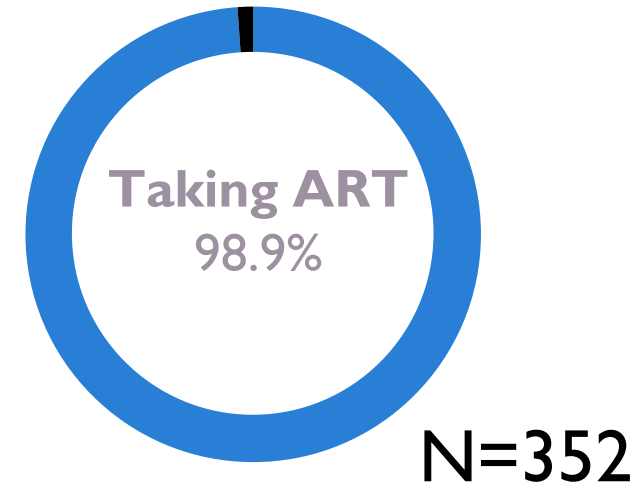
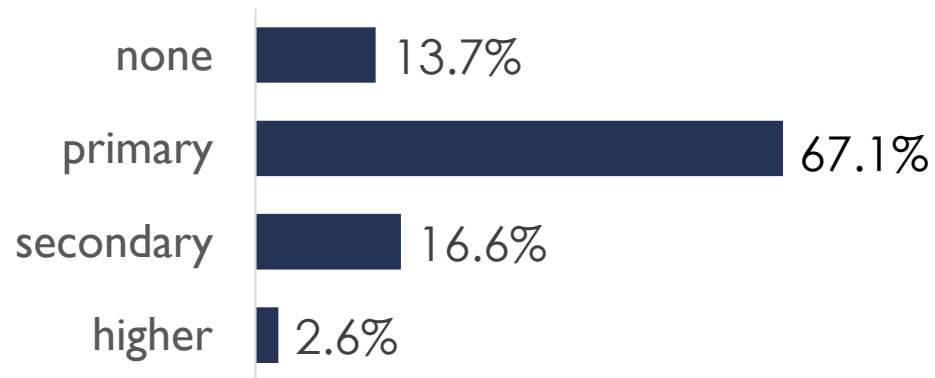
# BACKGROUND CHARACTERISTICS (N=211 COUPLES)

mean  
**Age** **40.5**



mean  
**Relationship  
Duration (years)** **12.5**

## Education



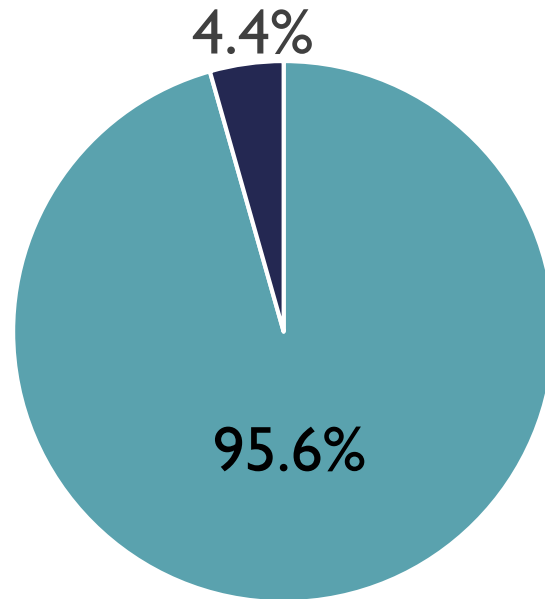
## Couple HIV Status



mean  
**Time on  
ART (years)** **4.84**

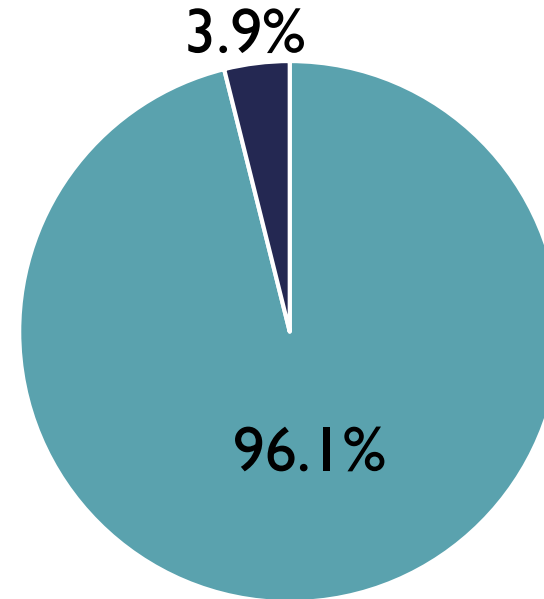
# PREVALENCE OF ADHERENCE TO ART

## SELF-REPORTED ADHERENCE



- 90-100% adherence
- Less than 90% adherence

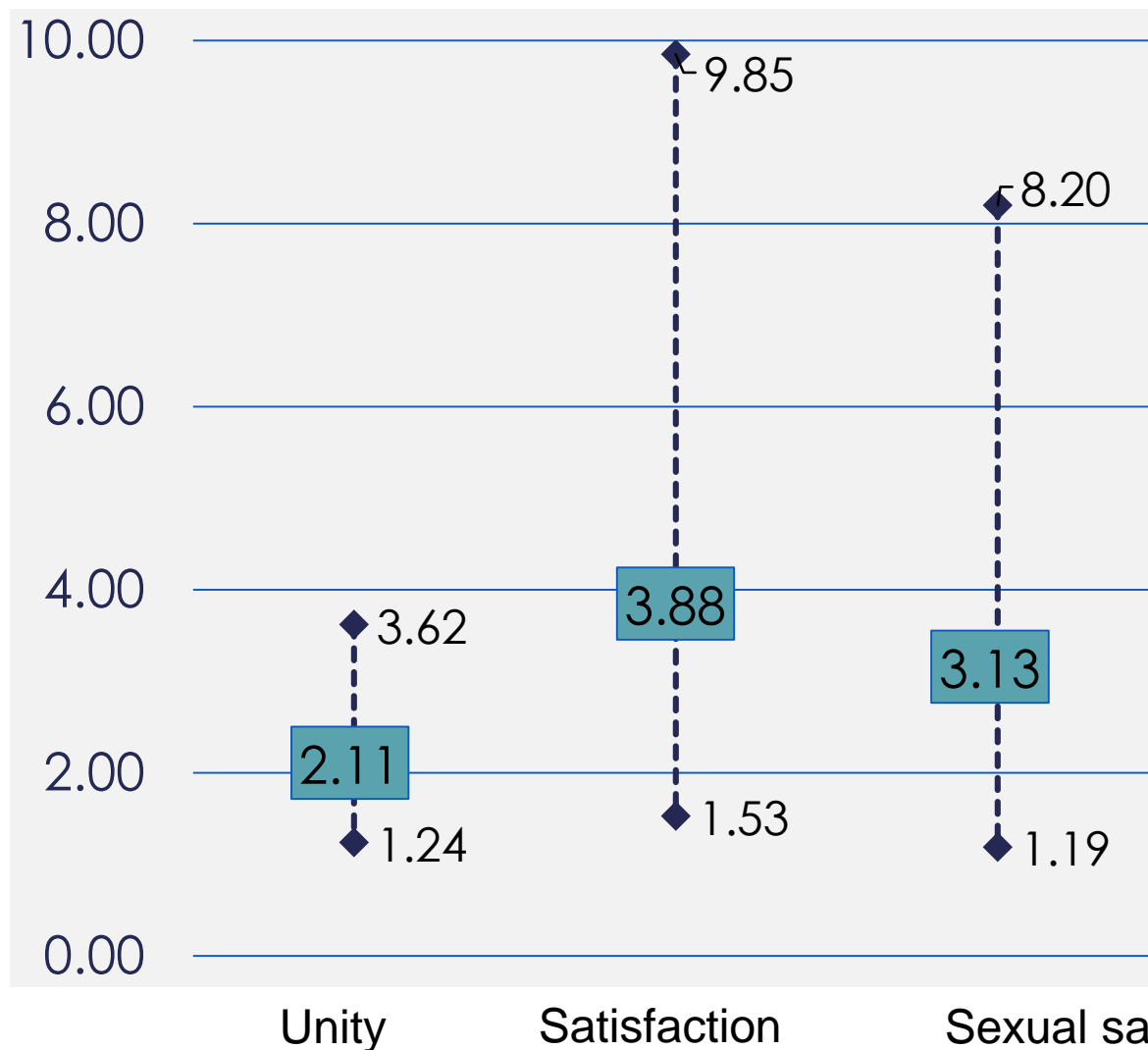
## PARTNER-REPORTED ADHERENCE



- 90-100% adherence
- Less than 90% adherence

# ADJUSTED ODDS RATIOS: RELATIONSHIP DYNAMICS AND SELF-REPORTED ADHERENCE

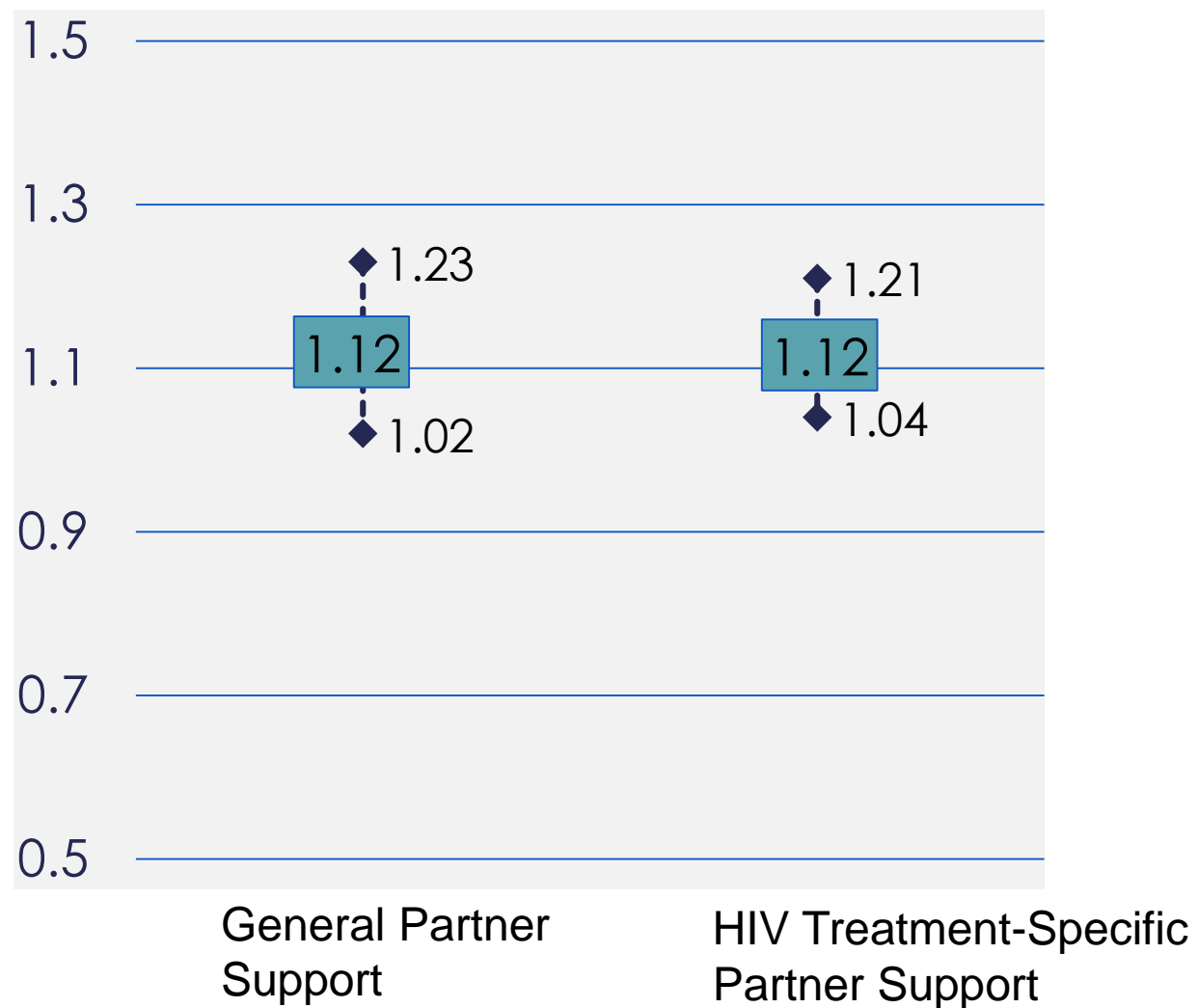
**Adjusted For:**  
gender, age, years of education, household wealth index, relationship duration, couple HIV status, treatment regimen complexity, and length of time on ART



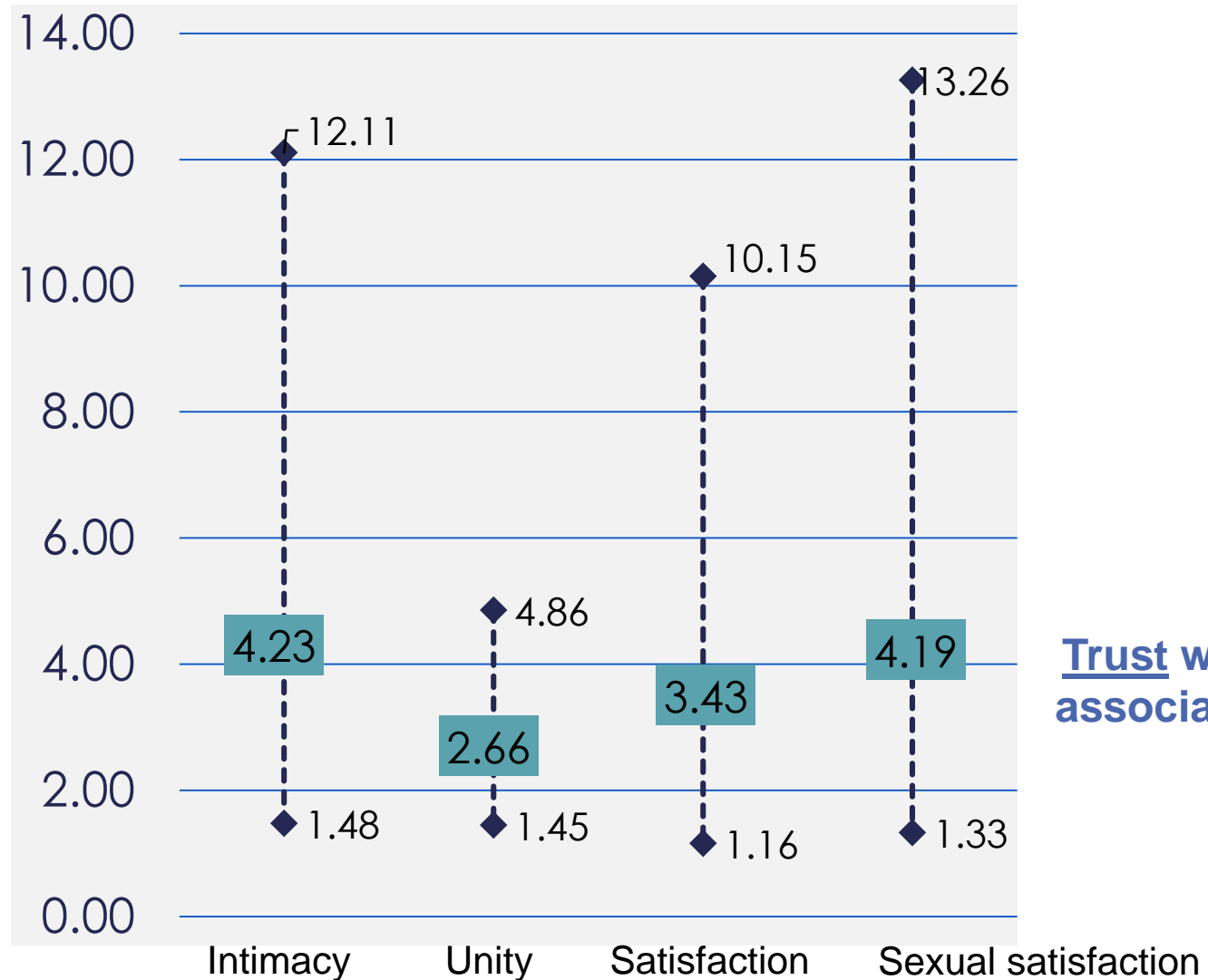
**Results not shown:**  
Intimacy, trust, and commitment were not significantly associated with adherence

# 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



# ADJUSTED ODDS RATIOS: RELATIONSHIP DYNAMICS AND PARTNER-REPORTED ADHERENCE

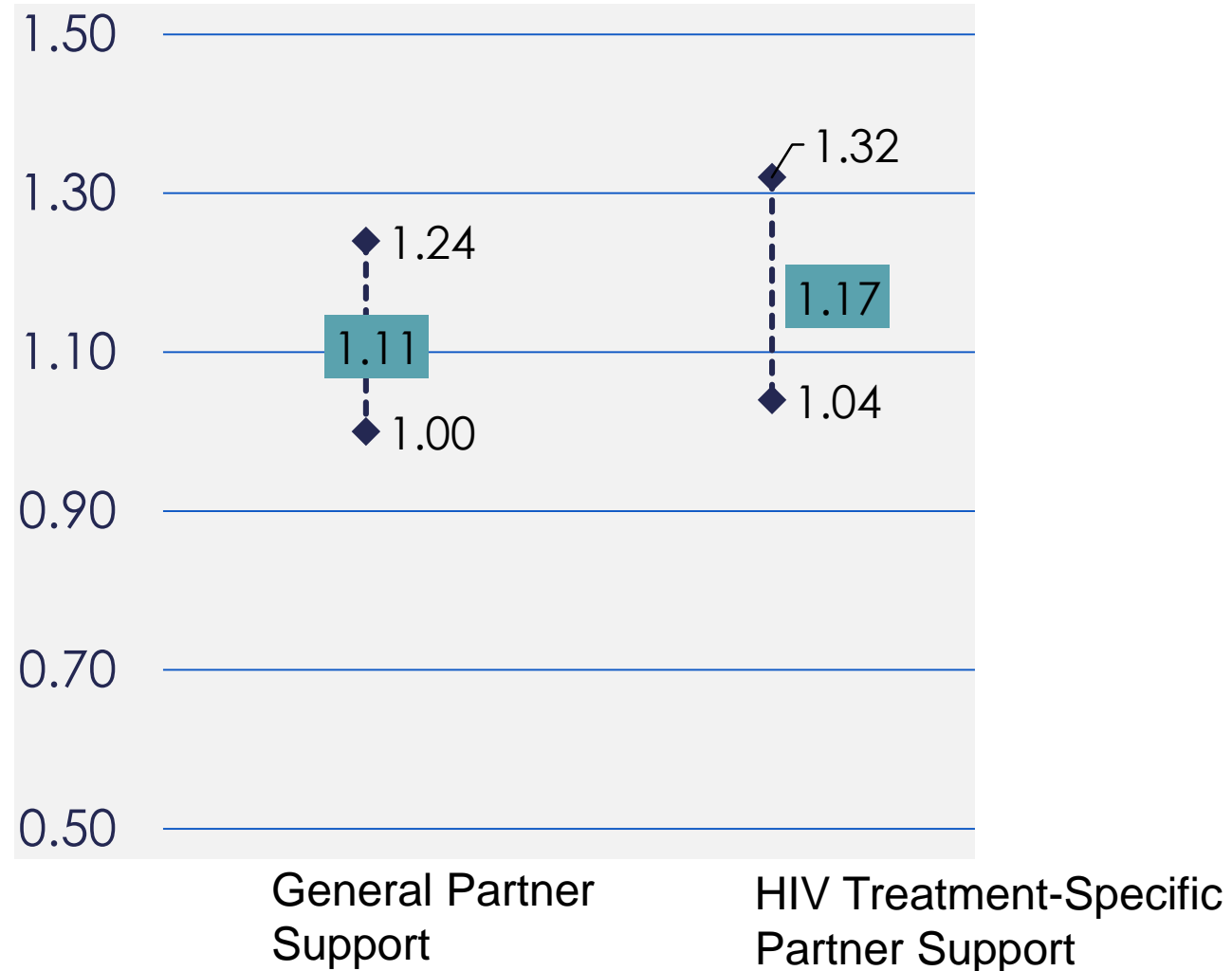


**Adjusted For:**  
gender, age, years of education, household wealth index, relationship duration, couple HIV status, and length of time on ART

**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

# FUTURE DIRECTIONS

- Interventions that incorporate relationship-building exercises might improve adherence to ART in couples
- Longitudinal research is needed to examine temporality, change, and mediating pathways



# ACKNOWLEDGEMENTS



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