

Ludwig, S. *Improving Relationship Empathy Among Seroconcordant Couples Living with HIV in Rural Mozambique: A Cluster-Randomized Study on the Homens Para a Saúde+ (HoPS+) Program*. Masters Thesis. Vanderbilt University; 2023.

Keywords: HIV, seroconcordant partners, empathy, male engagement, antenatal care

Background: Mozambique is one of the countries hardest hit by the HIV epidemic with a significant portion (12.5%) of adults 15 years and older being HIV positive. Women are infected with HIV at higher rates than men are. This can cause issues during pregnancy, at birth, and for the child post-birth. Partner support is a key facilitator to engaging in the healthcare system, including relationship empathy, which can have a positive impact on health outcomes.

Interventions that focus on male (and partner) engagement through the improvement of concepts like partner empathy and the elimination of existing barriers can help change healthcare-seeking barriers. The *Homens Para Saúde+* (HoPS+, "Men for Health " in English) program is a couples-counseling program that is based on curriculum from a previous program, CouplesConnect. The couples-counseling focuses on areas like sexual health and well-being, communication, and trust.

Methods: This study was a cluster randomized control trial in the Zambezia province of Mozambique. 24 health facilities were randomized to either the control group, which was standard ANC services, or to the intervention which was the standard services, plus counseling. Each clinic had 45 partners, for a total of 1,079 couples. Couples were given a questionnaire at baseline, 6 months, and at 15-18 months. This questionnaire included questions about topics like social support, HIV stigma and knowledge, relationship empathy, and others. This analysis focuses on relationship empathy, measured by an adapted version of the empathy scale, the Interpersonal Relativity Index. Mean affective and cognitive empathy scores from baseline to 6 months were compared using paired t-tests.

Results: While there were some significant decreases and increases in scores for a few groups, overall there was little to no overall significant changes after the intervention. Reasons for this may include duration of intervention or a lack of desire to improve or change behavior.

Conclusion: While the *HoPS+* intervention did not improve overall empathy, there is still evidence that interventions targeting empathy are still important. Empathy, combined with the other subscales measured, may provide insight for the best methods for relationship improvement and to the overall value of partner support and the *HoPS+* intervention.

Figures and Tables in Presentation:

Figure 1. *Difference in Baseline to 6-Month Cognitive and Affective Empathy Mean Scores.*

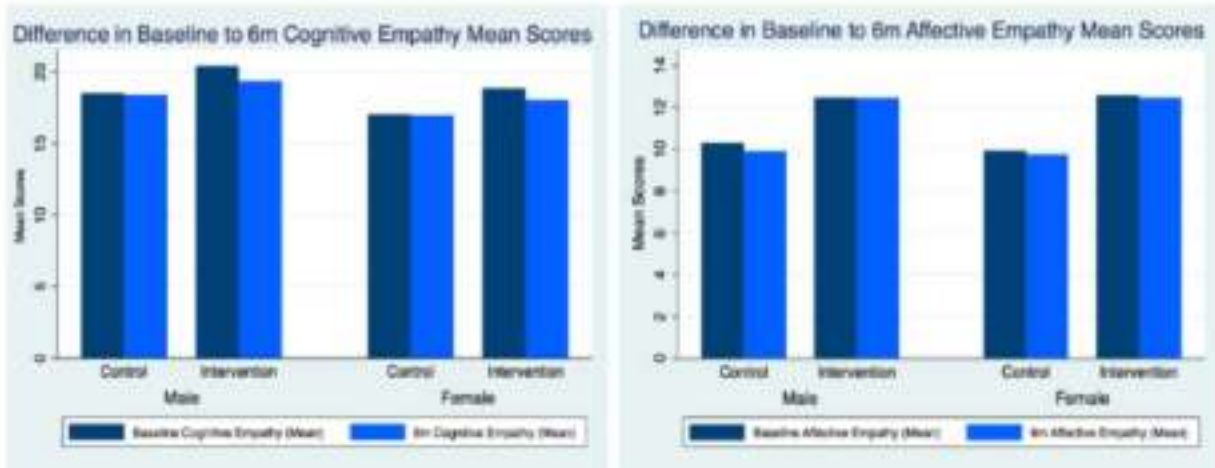


Figure 2. *Baseline to 6-Month Cognitive and Affective Scores.*

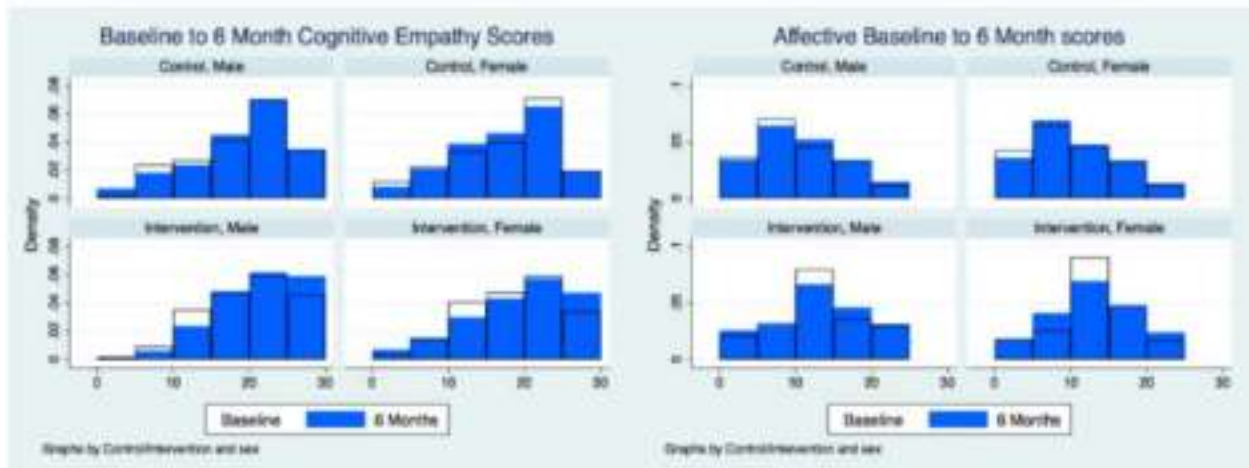


Table 1. (Thesis Appendix 1) *Four Subscales of the Interpersonal Reactivity Index [IRI] (Davis, 1983).*

Appendix 1. *Four Subscales of the Interpersonal Reactivity Index [IRI] (Davis, 1983)*

Subscales	
(1) Perspective-Taking (PT):	Assesses the tendency to spontaneously adopt the psychological point of view of others.
(2) Fantasy (FS):	Taps respondents' tendencies to transpose themselves imaginatively into the feelings and actions of fictitious characters in books, movies, and plays.
(3) Empathic Concern (EC):	Assesses "other-oriented" feelings of sympathy and concern for unfortunate others
(4) Personal Distress (PD):	Measures "self-oriented" feelings of personal anxiety and unease in tense interpersonal settings.

Table 2. (Thesis Appendix 2) *Validated Cognitive and Affective Empathy Subscales.*

Appendix 2. *Validated Cognitive and Affective Empathy Subscales.*

Cognitive Subscale:
5. I really get involved with the feelings of the characters in a novel. (FS)
16. After seeing a play or movie, I have felt as though I were one of the characters. (FS)
21. I believe that there are two sides to every question and try to look at them both. (PT)
23. When I watch a good movie, I can very easily put myself in the place of a leading character. (FS)
25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while. (PT)
26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me. (FS)
28. Before criticizing somebody, I try to imagine how I would feel if I were in their place. (PT)
Affective Subscale:
6. In emergency situations, I feel apprehensive and ill-at-ease. (PD)
10. I sometimes feel helpless when I am in the middle of a very emotional situation. (PD)
13. When I see someone get hurt, I tend to remain calm. (PD) (-)
14. Other people's misfortunes do not usually disturb me a great deal. (EC) (-)
17. Being in a tense emotional situation scares me. (PD)
18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them. (EC) (-)

Table 3. (Thesis Table 1) *Baseline Demographics.*

Table 1. Baseline Demographics of Participants

	Total	Control	Intervention	p-value
	N=2,158	N=1,108	N=1,050	
Sex				
Male	1,079 (50%)	554 (50%)	525 (50%)	p=1.00
Female	1,079 (50%)	554 (50%)	525 (50%)	
Age				p=0.30
<20	282 (13.1%)	142 (12.8%)	140 (13.3%)	
20-24	675 (31.3%)	340 (30.7%)	335 (31.9%)	
25-30	766 (35.5%)	387 (34.9%)	379 (36.1%)	
31-34	238 (11.0%)	141 (12.7%)	97 (9.2%)	
35-44	162 (7.5%)	79 (7.1%)	83 (7.9%)	
45-54	33 (1.5%)	18 (1.6%)	15 (1.4%)	
55+	2 (0.1%)	1 (0.1%)	1 (0.1%)	
Relationship Status				p=0.76
Living Together	1,097 (50.8%)	561 (50.6%)	536 (51.0%)	
Married	399 (18.5%)	207 (18.7%)	192 (18.3%)	
Single	658 (30.5%)	339 (30.6%)	319 (30.4%)	
NA	4 (0.2%)	1 (0.1%)	3 (0.3%)	
Level of Education				p<0.001
College/Higher Education	74 (3%)	37 (3%)	37 (4%)	
Completed Primary School (Grade 7)	186 (9%)	110 (10%)	76 (7%)	
Completed Secondary School (Grade 10)	90 (4%)	47 (4%)	43 (4%)	
Some Primary School (Grades 1-7)	1,262 (58%)	611 (55%)	651 (62%)	
Some Secondary School (Grades 8-10)	236 (11%)	115 (10%)	121 (12%)	
None	308 (14%)	188 (17%)	120 (11%)	
NA	2 (0%)	0 (0%)	2 (0%)	

Job Type				p<0.001
Domestic	545 (25%)	255 (23%)	290 (28%)	
Farmer	1,080 (50%)	570 (51%)	510 (49%)	
Fisher	183 (8%)	71 (6%)	112 (11%)	
Trader	186 (9%)	113 (10%)	73 (7%)	
Other	159 (7%)	96 (9%)	63 (6%)	
NA	5 (0%)	3 (0%)	2 (0%)	
	Total	Control	Intervention	p-value
	N=2,158	N=1,108	N=1,050	
Study Status				p=0.68
Completed	1,430 (66%)	736 (66%)	694 (66%)	
Died	36 (2%)	21 (2%)	15 (1%)	
Formally withdrew	6 (0%)	4 (0%)	2 (0%)	
Informally withdrew	570 (26%)	282 (25%)	288 (27%)	
Moved out of catchment area	13 (1%)	8 (1%)	5 (0%)	
Transferred	103 (5%)	57 (5%)	46 (4%)	

Table 4. (Thesis Table 2) Changes in scores from baseline to 6 months, by intervention group and sex.

Table 2. Change in scores from baseline to 6 months, by intervention group and sex.

Control		*significant p-value
Gender:	Change in Cognitive Score:	Change in Affective Score:
Male	baseline (mean=19.2, SD=6.7), 6 months (mean=18.7, SD=6.3), t(326) = -1.66, p=.098	baseline (mean=10.2, SD=5.6), 6 months (mean=9.8, SD=5.6), t(332) = -1.22, p=.22
Female	baseline (mean=17.3, SD=7), 6 months (mean=17.0, SD=6.5), t(380) = -0.68, p=.50	baseline (mean=9.7, SD=5.5), 6 months (mean=9.6, SD=5.7), t(384) = -0.27, p=.79
Intervention		
Male	baseline (mean=20.8, SD=5.8), 6 months (mean=19.5, SD=5.7), t(185) = -2.57, p=.01*	baseline (mean=12.9, SD=6.2), 6 months (mean=12.3, SD=6.1), t(176) = -1.34, p=.18.
Female	baseline (mean=18.6, SD=6.5), 6 months (mean=17.6, SD=6.4), t(203) = -1.90, p=.06.	baseline (mean=13.1, SD=6.0), six months (mean=12.6, SD=5.0), t(217) = -1.19, p=.23

Table 5. (Thesis Table 3) Significant Cognitive and Affective Scores, by age, group, sex.

Table 3. Significant Cognitive and Affective Scores, by age, group, sex.

Cognitive Scores *significant p-value		Affective Scores *significant p-value	
Control Age (sex)	Intervention Age (sex)	Control Age (sex)	Intervention Age (sex)
<20 (Female) 20-24 (Male) 20-24 (Female) 35-44 (Male) 31-34 (Female): baseline (mean=8.9 SD=5.5) 6m(mean=11.1 SD = 6.0) t(29)=2.16, p=.04.*	35-44 (Female)	<20 (Male) <20 (Female) 20-24 (Female) 25-30 (Male) 31-34 (Female)	<20 (Male) <20 (Female) 20-24 (Male) 25-30 (Male) 35-44 (Male) 35-44 (Female) 45-54 (Male)

Table 6. (Thesis Table 4) *Baseline to 6-Month Results by Group and Clinic, summary of significant results.*

Table 4. *Baseline to 6-Month Results by Group and Clinic, summary of significant results.*

Control		
Clinic:	Change in Cognitive Mean Score (p-value, mean difference):	Change in Affective Mean Score (p-value, mean difference):
<u>Gile</u> CS II		p=.05, +1.67
<u>Gonhanc</u> CS III		p=.04, +1.06
<u>Inhassunge</u> CS I	p<.001, -3.5	p<.001, -2.72
<u>Pebanc</u> CS II	p=.03, +2.17	p=.05, -1.76
Intervention		
<u>Mixixine</u> CS III	p=.002, -3.92	
<u>Naburi</u> CS III	p=.0007, -3.84	p=.01, -2.53
<u>Pele-Pele</u> CS	p=.03, +1.75	