

## BRIEF REPORT

# Dyadic Latent Profile Analyses and Multilevel Modeling to Examine Differential Response to Couple Relationship Education

Patricia N. E. Roberson and Katherine A. Lenger  
University of Tennessee

Tatiana Gray and James Cordova  
Clark University

Kristina Coop Gordon  
University of Tennessee

There are mixed evaluations of couple relationship education indicating that these types of interventions may be more or less effective depending on the couple type and demographic differences. However, this ambiguity requires more investigation with advanced statistical analyses that use a person-centered approach such as mixture modeling. We tested this hypothesis with a sample of different-sex couples ( $N = 455$  couples) who participated in a brief in-home couple intervention. We used dyadic latent profile analysis to determine possible relationship health typologies (RHTs) of presenting couples and multilevel models to examine differential intervention effectiveness between these RHTs. Results indicated there were 3 RHT: Partners Below Average with Wife Much Lower RHT (18%), Partners Below Average with Men Slightly Lower RHT (26%), and Partner Both Above Average RHT, (56%). RHTs did not differ by demographics. Below Average and Wife Lower RHTs responded the best to the brief couple intervention. In sum, we find that a brief intervention that targets the specific concerns of the couples may improve outcomes for multiple RHT.

**Keywords:** relationship education, health care utilization, constructive communication, relationship satisfaction

Couple interventions have been developed to alleviate and prevent relationship distress and promote relationship health in the hopes of increasing family stability (Shadish & Baldwin, 2005). Unfortunately, couples who may be in need of relationship interventions often do not attend due to significant barriers, such as monetary and time constraints as well as negative social stigma or difficulty convincing their partners (Doss, Atkins, & Christensen, 2003). As a result of these barriers, there is a notable lack of economic diversity among couples seeking relationship health

services. These same barriers also limit the economic diversity of couples presenting for research programs for relationship interventions making it unclear if couple treatments are similarly effective across economic differences. To reduce barriers and improve access to care, couple researchers have begun to develop *brief* relationship interventions (e.g., Cordova et al., 2014; Doss et al., 2016; Gordon et al., 2019) that can be delivered flexibly to improve access to care across economic statuses. These couple programs intervene on common areas of relationship distress including couple communication, satisfaction, and intimacy (see Benson, McGinn, & Christensen, 2012; Gordon et al., 2019) and are effective with underserved couples (Cordova et al., 2014; Doss et al., 2016; Gordon et al., 2019).

However, we do not know if there are differences in the relationship health among the couples who present at these brief relationship interventions and whether these initial differences affect their response to the intervention. The use of typologies, or classifications, is a common method when trying to understand couple heterogeneity (e.g., Roberson, Fish, Olmstead, & Fincham, 2015). Couples' relationship health types (RHTs) identify clusters of couples who present similarly on specific variables of interest such as communication style or relationship satisfaction (Fowers, Montel, & Olson, 1996; Roberson et al., 2015; Snyder & Smith, 1986). These types can have long term impacts on relationship stability. Specifically, Fowers et al.'s (1996) "Conflicted" couples

This article was published Online First May 7, 2020.

Patricia N. E. Roberson, College of Nursing, University of Tennessee; Katherine A. Lenger, Department of Psychology, University of Tennessee; Tatiana Gray and James Cordova, Department of Psychology, Clark University; Kristina Coop Gordon, Department of Psychology, University of Tennessee.

The data used in this article is part of a larger study published in *Family Process* (DOI: [doi.org/10.1111/famp.12396](https://doi.org/10.1111/famp.12396)) that examined intervention effectiveness and moderating effects of demographic variables. Additional studies using this data have included intervention effectiveness depending on intervention delivery setting (DOI: [doi.org/10.1037/fam000622](https://doi.org/10.1037/fam000622)) and couple cohesion (DOI: [doi.org/10.1037/fam000577](https://doi.org/10.1037/fam000577)).

Correspondence concerning this article should be addressed to Patricia N. E. Roberson, 1200 Volunteer Boulevard, Knoxville, TN 37916. E-mail: [probers3@utk.edu](mailto:probers3@utk.edu)

had a substantially higher rate of separation over a 3-year period. While the associations between RHTs and relationship outcomes have implications for identifying and targeting “at-risk” populations, it is unclear if different RHTs present and respond to brief interventions similarly.

While this method of analysis can predict couple differences and outcomes (e.g., Fowers et al., 1996; Roberson et al., 2015), most of these cluster analyses examine the overall couple score rather than taking into account nuanced differences within the dyad (e.g., the partner perspective; Fowers et al., 1996). While using couple level data has yielded valuable information, the present study seeks to employ an analysis incorporating within dyad differences by using Dyadic Latent Profile Analyses in order to understand differences across and within couples who present to a brief relationship intervention:

*RQ 1: What are the presenting Relationship Health Types (RHTs) of couples who attend a brief relationship prior to treatment?*

Demographic differences may also be present within these RHTs. Although past research examining the effectiveness of relationship intervention did not detect differences in intervention effectiveness as a function of marital, or poverty status (Hawkins, Blanchard, Baldwin, & Fawcett, 2008), the authors caution that such couples, particularly economic minorities (i.e., couples living below the poverty line) are underrepresented in relationship health intervention programs. A more recent study found that economic majority couples participating in relationship education programs evidence more robust change than economic minority couples (Hawkins & Erickson, 2015). To improve the utility of couple interventions for the populations who may be more susceptible to barriers of accessing such interventions (income, childcare, relationship status), we need a better understanding of *who* presents for relationship interventions and how these differential presentations respond to the intervention. The greater representation of cohabiting as well as economic minorities in such brief interventions allows us to consider how RHTs differ by demographic variables linked to intervention access and in terms of responsiveness to the intervention:

*RQ 2: How the presenting RHTs differed by the demographic variables of interest (marital status, parenting status, poverty status)*

*RQ 3: How do RHTs respond to a brief intervention by examining differential rates of change on key outcome variables (i.e., relationship communication, satisfaction, intimacy).*

## Method

### Procedure

Couples in this study participated in a brief couple intervention, the Relationship Checkup (RC), an adaptation of the Marriage Checkup (Cordova et al., 2014). This study took place in the Southeastern United States, either in participants' homes or a place of their choosing (e.g., Community health center, University campus office). The intervention included two face-to-face meetings

(assessment and feedback) approximately 2 weeks apart with a trained facilitator with each lasting approximately 1.5 to 2 hr targeting the couples' self-identified concerns about their relationships.

Couples from the community were recruited primarily through advertising in local integrative health care facilities and at community events. Once the study began, a portion of recruitment also occurred by word of mouth, which helped us to reach more diverse couples who may not normally respond to fliers. If they were interested in participating in the program, couples called the office to enroll in the intervention. To participate, members of the dyad had to be 18 years or older, cohabiting or married, and report feeling physically and emotionally safe in their relationship. Once enrolled, couples were mailed the baseline survey (T1) to complete separately before the first meeting. After completing the intervention, couples were mailed a follow-up assessment 1-month postintervention to complete independently and return (T2). Each couple was compensated with one \$50 gift card for the completion of the T1 and T2 surveys. All procedures were approved by the appropriate Institutional Review Boards.

### Participants

All participant data are part of a larger study (Gordon et al., 2019). Four hundred seventy-one couples of the original 656 couples had both partners complete and return each assessment for the present study. Additionally, to perform the dyadic latent profile analyses differentiating patterns based on gender, 16 same-sex couples were removed from the sample. Thus, 455 couples were used for the present study.

At T1, the majority of couples were legally married (62.3%). Also, at T1 the majority of couples were parents (60.0%). In terms of age, participants selected the most appropriate predetermined age bracket; most participants reported being in the 25–34 years old age bracket (34.5%), followed by 35–44 (27.3%), 45–54 (16.5%), 18–24 (12.5%), 55 and older (9%). 79.5% of participants identified as White, 14.8% identified as Black and the rest identified as ‘other’. Finally, 8.9% of participants identified as Hispanic/Latino. Taking into consideration the number of children living in the home, 27.5% of couples lived at or under the poverty line.

### Measures

Means, standard deviations, and Cronbach's Alpha for men and women for the predictor and outcome variables are provided in Table 1.

**Demographics.** We used three variables that could differentiate couple types based on previous typology research (Fowers et al., 1996): marital status (0 = *cohabiting*; 1 = *married*), parental status (0 = *no children living in the home*; 1 = *one or more children living in the home*) and poverty (0 = *under the poverty line*; 1 = *above the poverty line*). Poverty status was calculated by considering the combined couples' household income and the number of people supported by that income in comparison to the federal poverty level.

**Couple type predictor and outcome variables.** Descriptive statistics are presented in Table 1. Relationship satisfaction was measured using the Couple Satisfaction Index–16 items (CSI-16;

Table 1  
 Descriptive Statistics for All Scales and Indexes Used in the Study at T1 (Baseline) and T2  
 (1-Month Follow-Up)

Variables	Men		Women	
	<i>M</i> ( <i>SD</i> )	Cronbach's $\alpha$	<i>M</i> ( <i>SD</i> )	Cronbach's $\alpha$
Relationship satisfaction T1	3.75 (1.04)	0.95	3.54 (1.22)	0.96
Relationship satisfaction T2	4.04 (0.93)	0.97	3.98 (1.06)	0.98
Communication T1	5.38 (1.55)	0.85	5.12 (1.59)	0.83
Communication T2	5.94 (1.46)	0.85	5.79 (1.54)	0.84
Intimacy T1	2.86 (0.74)	0.81	2.83 (0.97)	0.83
Intimacy T2	3.04 (0.76)	0.74	3.08 (0.76)	0.86

Note. Cronbach's  $\alpha$  measures the internal consistency for items measuring the same underlying construct.

Funk & Rogge, 2007). The self-report scale uses Likert-type response options ranging from 0 to 5 (15 items) or 0 to 6 (1 item). All items were averaged together to produce a single score (also ranging from 0 to 6), where higher scores indicated greater relationship satisfaction.

Communication was measured by the Communication Patterns Questionnaire (CPQ; Heavey, Larson, Zumtobel, & Christensen, 1996), which is an 11-item self-report scale with Likert-type response options ranging from 0 (*very unlikely*) to 9 (*very likely*). Items were averaged to produce a single score and higher scores indicate healthier couple communication.

Couple intimacy was assessed using the Intimacy Safety Questionnaire—Short Form (Cordova et al., 2014), which is a 9-item self-report scale with Likert-type response options ranging from 0 (*never*) to 4 (*always*). Items were averaged to produce a single score where higher scores indicate more feelings of couple intimacy.

### Analytic Strategy

For RQ1, to determine the number of Relationship Health Types (RHT) we used Latent Profile Analysis (LPA; Lazarsfeld & Henry, 1968) using men's and women's reports of relationship satisfaction, couple communication, and couple intimacy. To account for the interdependence of the men and women scores, we correlated the error terms in the "overall" statement within Mplus. We determined the appropriate number of RHTs through goodness-of-fit measures such as Akaike Information Criteria (AIC) and Bayesian Information Criteria (BIC) and functionality of the types (e.g., how useful or interpretable types were; Muthen & Muthen, 1998). We also used statistical methods to determine the appropriate number of types: the Vuong-Lo-Mendell-Rubin Likelihood Ratio Test (VLMR-LRT) and Lo-Mendell-Rubin Adjusted Likelihood Ratio Test (LMR-ALRT). For these tests, a nonsignificant *p* value indicates that the model with one fewer type is the optimal model (Nylund, Asparouhov, & Muthen, 2007). When there was not a clear number of types, we selected the number that made the most theoretical sense and the highest entropy score was selected. Couples were assigned to the RHT they are predicted to have the highest probability; probability scores are assigned by Mplus. The accuracy of this prediction is measured by entropy, a poor assignment occurs when entropy is  $<.80$ .

For RQ2, we used couple-level variables for assigned type and demographic variables (i.e., poverty, parenting status, and marital

status). Using chi-square tests (cross-tabulations) we examined if the demographic variables were different across the types of presenting couples.

For RQ3, we examined how RHTs change from T1 to T2 on each of the relationship health measures: Constructive Communications, Couple Satisfaction, and Couple Intimacy. We used a series of 3-level multilevel models to test the couple level effects of differential change depending on RHT where time points were nested in individuals and individuals were nested in couples. All models were tested in Mplus using full information maximum likelihood estimation to account for missing data due to attrition (NOTE: A full description of identifying missingness pattern is discussed in Gordon et al., 2019). We included gender and 3 couple level control variables that were linked to the missingness pattern in this sample (Gordon et al., 2019). RHTs were dummy coded so that *Above Average* RHT was the reference group. Along with time, two interaction terms (time\**Poor Women RHT\_Dummy* coded and time\**Below Average RHT\_Dummy* coded) were included on level one of the model, the time-varying level. All other variables were included on level 3, the couple level. Statistically significant interactions were probed with simple slopes analyses within Mplus to determine how the tested RHT differentially changed compared to the reference group, *Above Average* RHT.

## Results

### Research Question 1: Presenting Relationship Health Typologies

We used the aforementioned strategy to determine the appropriate number of Relationship Health Typologies (RHTs; Table 2). Correlation among the three predictor variables at T1 were moderate to strong ranging from  $r = .56$  to  $r = .69$ ; there were no concerns with multicollinearity ( $r > .80$ ). The statistical methods indicated that a 3 or 4 class solution fit the data best. Therefore, we examined entropy and the theoretical class structures to select the appropriate number of classes. Because of the entropy score was high and there were no clear theoretical differences, we chose the more parsimonious, three-RHT solution. RHT 1, Partners Below Average with Wife Much Lower RHT (*Wife Lower RHT*), representing 18% of couples ( $n = 86$ ), was labeled because of the within couple difference as the female partners reported a lower average compared to their male partners but both partners scored

Table 2  
Fit Indices for Determining the Number of Presenting Couple Types

Number of types	AIC	BIC	entropy	VLMR-LRT	LMR-ALRT
1	7689.693	7751.92	—	—	—
2	7147.363	7238.629	.843	.00	.00
<b>3</b>	<b>6946.307</b>	<b>7066.613</b>	<b>.840</b>	<b>.03</b>	<b>.03</b>
<b>4</b>	<b>6848.015</b>	<b>6997.360</b>	<b>.785</b>	<b>.04</b>	<b>.04</b>
5	6770.997	6949.381	.798	.18	.19
6	6721.772	6929.506	.821	.77	.77

Note. The bolded row is the selected number of presenting couple types.

below average; RHT 2, Partners Below Average with Husband Slightly Lower RHT (*Below Average RHT*), representing 26% of couples ( $n = 122$ ), was labeled in reference to the other RHTs as the male and female partners reported scores below average with male partners being slightly lower than females; and for RHT 3, Partners are Both Above Average RHT (*Above Average RHT*), representing 56% of the couples ( $n = 260$ ), was labeled in reference to the other RHTs as the male and female partners' both reported above average and there was little within couple differences. Figure 1 depicts the RHTs' standardized means.

**Research Question 2: Demographic Differences**

To examine if demographic differences existed between the RHTs, we used a series of chi-square tests. Neither marital status ( $\chi^2(2) = 3.31, p = .15$ ), parenting status ( $\chi^2(2) = 4.51, p = .03$ ), or poverty status ( $\chi^2(2) = .50, p = .78$ ) differed by RHT. Indicating that the proportion of each RHTs was similarly stratified across demographics.

**Research Question 3: Differential Change Depending on Relationship Health Typology**

Parameter results of all three models for each of the outcome variables (constructive communication, relationship satisfaction, and emotional intimacy) were reported in Table 3 and visually depicted in Figure 2. For couples in the *Wife Lower RHT*, they start with the lowest levels across all of the outcome variables. Couples in this RHT significantly changed across the intervention for each of the variables of interest. The change from before to after the intervention for this group was significantly more rapid compared to couples in the *Above Average RHT* across all outcome variables. However, the change from before to after the intervention for this RHT was at a similar rate of change compared to the *Below Average RHT* for couple communication and couple satisfaction. For couple intimacy, couples in the *Wife Lower RHT* experienced a more rapid change compared to couples in the other two RHTs.

For couples in the *Below Average RHT*, before the intervention, they scored the second to lowest across each of the variables of interest. Couples in this RHT significantly changed across the

**Standardized Means for Relationship Health Typologies**

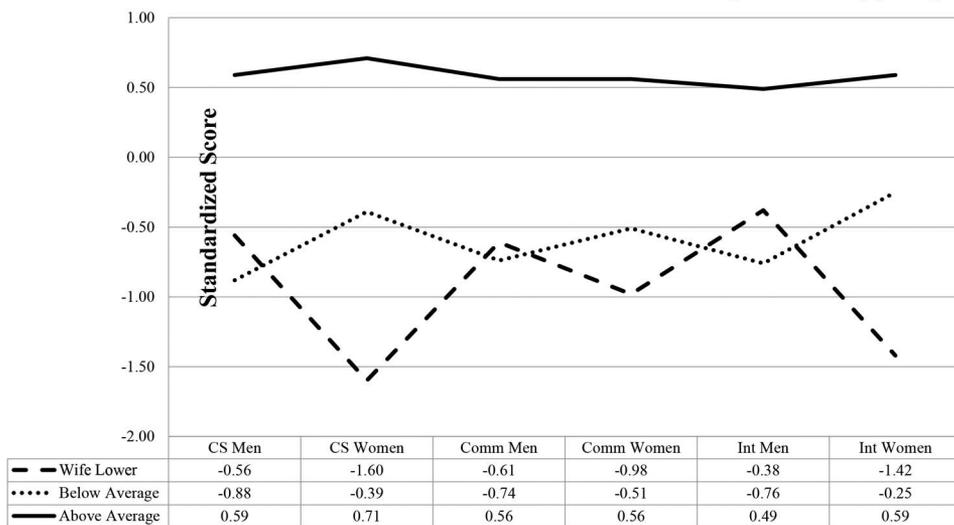


Figure 1. The visual depiction of standardized means for the three couple typologies. Conditional stimulus (CS) = Couple Satisfaction, Comm = Couple Communication, and int = Intimacy. To interpret Relationship Satisfaction for the level of distress (<51.5) multiple unstandardized means by 16.

This document is copyrighted by the American Psychological Association or one of its allied publishers. This article is intended solely for the personal use of the individual user and is not to be disseminated broadly.

Table 3  
Parameter Results of the 3 Multi-Level Models Examining Research Questions 3

Variable	Model 1: Couple communication			Model 2: Couple satisfaction			Model 3: Couple intimacy		
	B (SE)	95% CI	β	B (SE)	95% CI	β	B (SE)	95% CI	β
Poverty	.10 (.11)	-.11, .30	.03	-.12 (.07)	-.26, .01	-.04	-.01 (.03)	-.12, .08	-.02
Marital status	.05 (.10)	-.14, .24	.02	.03 (.06)	-.10, .15	.01	.02 (.03)	-.06, .13	.05
Parenting status	-.04 (.09)	-.22, .14	-.02	.01 (.06)	-.11, .12	.003	.02 (.03)	-.06, .11	.03
Gender	-.22 (.06)**	-.34, -.11	-.11	-.16 (.04)**	-.24, -.09	-.12	-.02 (.04)	-.09, .05	-.04
Time (Change for Above Average RHT)	.31 (.07)**	.17, .44	.15	.06 (.04)	-.02, .14	.04	-.002 (.03)	-.06, .06	-.003
RH Typology									
Wife Lower RHT	-2.64 (.23)**	-3.09, -2.18	-.74	-2.54 (.13)**	-2.80, -2.27	-.81	-.88 (.04)**	-1.92, -1.51	-2.29
Below Average RHT	-2.24 (.21)**	-2.64, -1.83	-.72	-1.98 (.12)**	-2.21, -1.74	-.72	-.69 (.05)**	-1.36, -1.00	-1.58
Above Average RHT									
Time* Wife Lower RHT	.51 (.15)**	.22, .80	.28	.56 (.08)**	.40, .73	.47	.51 (.06)**	.32, .57	.91
Simple Slope Analysis: Wife Lower Change	.82 (.13)**	.56, 1.08	—	.62 (.08)**	.47, .77	—	.44 (.06)**	.33, .57	—
Time* Below Average RHT	.39 (.14)**	.12, .66	.24	.50 (.08)**	.35, .65	.47	.36 (.04)**	.16, .40	.57
Simple Slope Analysis: Below Average Change	.70 (.12)**	.47, .93	—	.56 (.07)**	.43, .69	—	.28 (.05)**	.18, .38	—
Difference Test: Wife Lower Change = Below Average Change		Wald $\chi^2(1) = .47, p = .49$			Wald $\chi^2(1) = .35, p = .56$			Wald $\chi^2(1) = 4.36, p = .04**$	

Note. RHT = relationship health typology. A nonsignificant Wald  $\chi^2 (p > .05)$  fails to reject the null hypothesis that change in the outcome variable for those in the Wife Lower RHT is equal couples in the Below Average RHT, indicating that these two groups are not different from each other.

\*  $p < .05$ . \*\*  $p < .001$ . \*\*\* Reference group.

intervention for each of the variables of interest. Couples in this RHT changed more rapidly before to after the intervention compared to couples in the *Above Average RHT*. However, couples in the *Below Average RHT* only changed differently from *Wife Lower RHT* for emotional intimacy whereby couples in this *Below Average RHT* changed at a slower rate before to after the intervention.

Finally, couples in the *Above Average RHT* reported the *Above Average* on the variables of interest compared to the other two RHTs. However, couples in this RHT did not experience significant change across the intervention for couple satisfaction and intimacy. They did experience a significant increase in couple communication, though smaller compared to the other 2 RHTs.

### Discussion

The present study identified three couple Relationship Health Types (RHTs) that presented to a brief couple intervention, the Relationship Checkup (RC), that specifically targeted lower-income, underserved couples. The largest group was the *Above Average RHT*, suggesting that most of the couples who presented to the RC reported healthy relationship functioning which is consistent with this primarily being a preventative intervention. The other relationship health types, *Wife Lower RHT* and *Below Average RHT* represented a smaller proportion of the sample. Within the *Wife Lower RHT*, male partners reported higher levels on all relationship health indicators compared to their female partners. In fact, men's reported relationship functioning was similar to that of men and women's in the *Below Average RHT*. Thus, what is unique to this profile is women's consistent report of poorer relationship functioning relative to their male partners'. Though *Wife Lower RHT* was the smallest group, it identifies an RHT that may be in particular need of relationship intervention. Further, the identification of this type suggests that it is important to examine both within couple differences as well as between couple differences as observing only couple-level aggregate relationship health may have obscured the differences in how *Wife Lower* and *Below Average RHTs* may respond to therapy, as discussed below.

RHTs did not differ the barriers to access including poverty status, marital status, or parenting status indicating that these types may exist in similar proportions across couples in all levels of these demographics. This is particularly notable as relationship instability has been found to be higher among lower-income couples (Amato, Johnson, Booth, & Rogers, 2003), despite these couples valuing marriage similarly or more than high-income couples (Trail & Karney, 2012). The disproportionate instability among economic minority couples may be attributed to the impact of external stressors, from living under financial strain and other poverty-related stress, on the relationship (Neff & Karney, 2017) or lack of access to relationship health interventions, rather than lack of relationship quality or commitment (Trail & Karney, 2012). Our findings support the former and suggest that RHTs are similar for couples across multiple demographic factors indicating that a flexible intervention like the RC that increases access to relationship interventions may improve relationship stability in at-risk communities.

In addition to demographic differences between RHTs, the brief relationship intervention appears to have had a differential influence on relationship health outcomes: couple communication, couple satisfaction, and couple intimacy. Individuals within the *Wife*

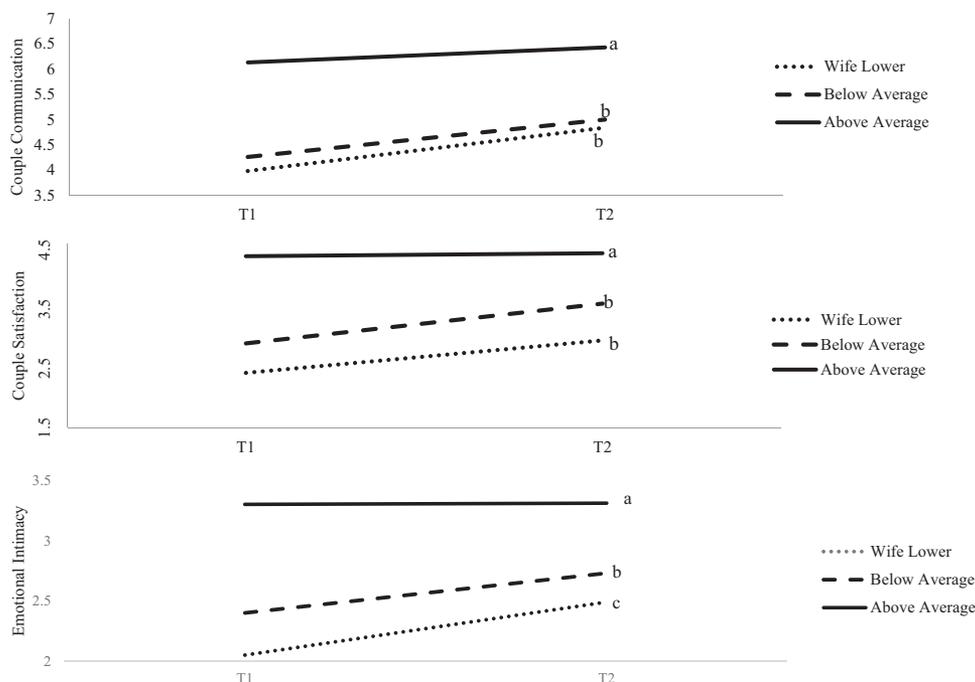


Figure 2. Means of the variables of interests for each relationship health group before the intervention (T1) and after the intervention (T2). Different letters indicate a significantly different ( $p < .05$ ) rate of change from before to after the intervention according to the parameter estimates from the multilevel regression models. To interpret Couple Satisfaction for the level of distress ( $<51.5$ ) multiple unstandardized means by 16.

*Lower RHT* evidenced the greatest improvements in couple satisfaction, communication, and intimacy, followed by *Below Average*, and then *Above Average RHTs*. Thus, the RC appears to be able to “meet the couple where they are” and promote positive change across RHTs. Although the *Wife Lower RHT* evidenced the greatest gains, this may be partially because individuals in this group presented with the poorest level of functioning and thus had the most room to improve. Even still, while couples in these groups gained the most, they still did not attain the level of relationship health of those in the *Above Average RHTs*. Therefore, while a brief intervention can to improve relationship functioning for couples who are below average, it might not be enough to bump them into a healthy range. Future research should continue to examine what dosage effect is necessary to transition a couple with lower relationship health into a range that would be considered, “healthy”.

### Limitations

This paper should be interpreted within the scope of its limitations. There was no control group for comparison of change observed in the RHTs. Therefore, the change observed could be due to naturally occurring events outside of the context of the intervention. These typologies may also change over the course of a relationship but we did not account for relationship length so we cannot determine if these typologies are a temporary state or a permanent trait of each relationship. Additionally, these couples all volunteered to participate. Thus, the differences and similarities observed within this sample may only be generalizable to couples

where both partners are interested in and willing to participate in a brief couple intervention and not the general public. Further, though most of the participants completed the intervention, 65% returned the 1-month feedback that is included in this study. While the study as a whole improved the return rate over time and we adequately handled missing data patterns, longitudinal findings may not be applicable to participants who did not complete the study. Finally, the measures included in the typology were broad assessments of relational satisfaction, communication, and intimacy and there might be additional couple typologies, but the present study could not determine them because we did not measure the variable that might distinguish them.

### Conclusion

Couples with poorer relationship health have a higher likelihood of experiencing family instability but couple interventions can help (Shadish & Baldwin, 2005). However, there are many barriers to accessing such interventions including childcare and financial ability. Brief couple interventions have been posited as one way to increase access to underserved couples because of the reduced time commitment and the accessibility to couples across a wide spectrum of relationship health. But, within this wider range of couple’s relationship health and in this unique populations, it was unclear (a) if different RHTs attended these brief interventions, (b) if RHTs differed by demographic factors linked to access, and (c) if a brief intervention could be similarly effective across the RHTs. We found that couples presenting for a brief relationship intervention evidence nuance in relationship functioning presentation with

the majority of couples reporting better functioning (*Above Average RHT*) but a minority reported being in more at-risk relationships - either a below-average functioning with the husband (*Below Average RHT*) or wife (*Wife Lower RHT*) scoring lower within the dyad. Notably, the RHTs did not differ by demographic indicating that this brief intervention with flexible meeting times and locations may be able to access at-risk couples across underserved demographics. Couples in the at-risk RHTs also reported greater gains in relationship health after the intervention. The RC appears to be a program that not only was accessible to a range of couples but also was able to address these couples' relationship functioning across a variety of relationship health presentations.

## References

- Amato, P. R., Johnson, D. R., Booth, A., & Rogers, S. (2003). Continuity and change in marital quality between 1980 and 2000. *Journal of Marriage and Family*, *65*, 1–22. <http://dx.doi.org/10.1111/j.1741-3737.2003.00001.x>
- Benson, L. A., McGinn, M. M., & Christensen, A. (2012). Common principles of couple therapy. *Behavior Therapy*, *43*, 25–35. <http://dx.doi.org/10.1016/j.beth.2010.12.009>
- Cordova, J. V., Fleming, C. E., Morrill, M. I., Hawrilenko, M., Sollenberger, J. W., Harp, A. G., . . . Wachs, K. (2014). The marriage checkup: A randomized controlled trial of annual health checkups. *Journal of Consulting and Clinical Psychology*, *82*, 592–604. <http://dx.doi.org/10.1037/a0037097>
- Doss, B. D., Atkins, D. C., & Christensen, A. (2003). Who's dragging their feet? Mans and wives seeking marital therapy. *Journal of Marital and Family Therapy*, *29*, 165–177. <http://dx.doi.org/10.1111/j.1752-0606.2003.tb01198.x>
- Doss, B. D., Cicila, L. N., Georgia, E. J., Roddy, M. K., Nowlan, K. M., Benson, L. A., & Christensen, A. (2016). A randomized controlled trial of the web-based OurRelationship program: Effects on relationship and individual functioning. *Journal of Consulting and Clinical Psychology*, *84*, 285–296.
- Fowers, B. J., Montel, K. H., & Olson, D. H. (1996). Predicting marital success for premarital couple types based on PREPARE. *Journal of Marital and Family Therapy*, *22*, 103–119. <http://dx.doi.org/10.1111/j.1752-0606.1996.tb00190.x>
- Funk, J. L., & Rogge, R. D. (2007). Testing the ruler with item response theory: Increasing precision of measurement for relationship satisfaction with the Couples Satisfaction Index. *Journal of Family Psychology*, *21*, 572. <http://dx.doi.org/10.1037/0893-3200.21.4.572>
- Gordon, K. C., Cordova, J. V., Roberson, P. N. E., Miller, M., Lenger, K., Martin, K., . . . Hawrilenko, M. (2019). An implementation study of relationship checkups as home visitations for low-income at-risk couples. *Family Process*, *58*, 247–265. <http://dx.doi.org/10.1111/famp.12396>
- Hawkins, A. J., Blanchard, V. L., Baldwin, S. A., & Fawcett, E. B. (2008). Does marriage and relationship education work? A meta-analytic study. *Journal of Consulting and Clinical Psychology*, *76*, 723. <http://dx.doi.org/10.1037/a0012584>
- Hawkins, A. J., & Erickson, S. E. (2015). Is couple and relationship education effective for lower income participants? A meta-analytic study. *Journal of family psychology*, *29*, 59–68.
- Heavey, C. L., Larson, B. M., Zumtobel, D. C., & Christensen, A. (1996). The Communication Patterns Questionnaire: The reliability and validity of a constructive communication subscale. *Journal of Marriage and Family*, *58*, 796–800. <http://dx.doi.org/10.2307/353737>
- Lazarsfeld, P. F., & Henry, N. W. (1968). *Latent Structure Analysis*. Boston, MA: Houghton Mifflin.
- Muthen, L. K., & Muthen, B. O. (1998). *Mplus* [Computer software]. Los Angeles, CA: Author.
- Neff, L. A., & Karney, B. R. (2017). Acknowledging the elephant in the room: How stressful environmental contexts shape relationship dynamics. *Current Opinion in Psychology*, *13*, 107–110.
- Nylund, K., Asparouhov, T., & Muthen, B. O. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Structural Equation Modeling*, *14*, 535–569. <http://dx.doi.org/10.1080/10705510701575396>
- Roberson, P. N. E., Fish, J. N., Olmstead, S. B., & Fincham, F. D. (2015). College adjustment, relationship satisfaction, and conflict management: A cross-lag assessment of developmental spillover. *Emerging Adulthood*, *3*, 244–254. <http://dx.doi.org/10.1177/2167696815570710>
- Shadish, W. R., & Baldwin, S. A. (2005). Effects of behavioral marital therapy: a meta-analysis of randomized controlled trials. *Journal of Consulting and Clinical Psychology*, *73*, 6–14. <http://dx.doi.org/10.1037/0022-006X.73.1.6>
- Snyder, D. K., & Smith, G. T. (1986). Classification of marital relationships: An empirical approach. *Journal of Marriage and Family*, *48*, 137–146. <http://dx.doi.org/10.2307/352237>
- Trail, T. E., & Karney, B. R. (2012). What's (not) wrong with low-income marriages. *Journal of Marriage and Family*, *74*, 413–427.

Received August 8, 2019

Revision received March 10, 2020

Accepted March 16, 2020 ■