Gender, Perceived Infertility, and Risk of Dissolution among German Couples: A Panel Study

Researchers have long recognized that we can learn more about the experiences of couples by treating the dyad rather than the individual as the unit of analysis. Stressful situations or events that affect both partners of a couple -- either directly or indirectly through spillover from one partner to the other -- have been called "dyadic stressors". How couples cope with a dyadic stressor has important implications for relationship quality and relationship stability. Infertility, defined by most physicians as no conception after 12 months or more of recurrent, unprotected intercourse, is a prime example of a dyadic stressor. Regardless of who has the reproductive problem, both partners in the couple experience the lack of a live birth within the context of the dyad, and medical providers typically consider infertility a "couple" phenomenon. It is not clear, however, whether both partners necessarily perceive themselves as being infertile. This study explores the following questions: Is perceiving infertility related to partnership stability? Is whether or not partners share a perception related to partnership stability? If partners do not share perceptions, does it matter which partner in a heterosexual relationship perceives infertility?

To investigate these questions, we analyzed 11 waves (2008-2020) of the German pairfam survey, a panel study that includes data on both partners in a relationship. We started with 3,299 couples in Wave 1 and classified couples into four categories: (1) neither partner ever perceived infertility, (2) only the woman ever perceived infertility, (3) only the man ever perceived infertility, and (4) both partners ever perceived infertility. We used Cox Proportional Hazards models to compare the changes in risk of partnership dissolution over time. To assess whether sharing the experience was more important than whether or not one or more partners had ever perceived infertility, we also ran models comparing couples in which both partners shared perception (i.e., either both partners perceived infertility or neither did) to couples in which only one partner perceived infertility (i.e., only the man or only the woman perceived infertility).

Descriptive statistics are reported in Table 1. Neither partner perceived infertility in 80% of the cases. In 13% of the cases, only the woman perceived infertility, while only the man perceived infertility in 7% of the cases. In 3% of cases, both partners perceived infertility.

Results from the Proportional Hazards Model are shown in Table 2 and illustrated in Figures 1-4. In the unadjusted model, the risk of dissolution is lower for couples in which men only or both partners perceive infertility (see Model 1, illustrated in Figure 1). Adjusting for the control variables, the constant now represents those in the younger cohort (ages 25-27), those from West Germany, those missing on the education variable and the child variable, those who are migrants, those who never married, and those with very low traditional values. The association of perceived infertility and risk of dissolution changed when controls were added (see Model 2, illustrated in Figure 2). The risk of dissolution is now higher for couples in which only the woman perceives an inability to procreate compared to couples in which neither partner perceives infertility. Model 3 (illustrated in Figure 3) shows that that couples in which spouses have different perceived infertility have lower risk in the unadjusted model and higher risk of dissolution in the adjusted model compared to couples in which partners have the same perception. Several control variables are associated with lower risk of dissolution, including

being in the older cohort, having a common child, and ever marrying. Couples who are migrants have higher risk of dissolution, and women's higher traditional attitudes are associated with higher risk of dissolution.

To summarize, once control variables are added, couples where both partners or only the man perceives infertility are not at greater risk of dissolution than couples where neither partner perceives infertility. However, couples in which only the woman perceives infertility are at greater risk of dissolution. In addition, couples in which partners share perception of infertility are at less risk of dissolution than couples in which partners do not share perceptions. These findings lend some support to the hypothesis that infertility does not necessarily weaken relationships and that perceiving infertility as a shared problem may actually strengthen relationships. Qualitative research on couples seeking treatment for infertility suggests that the underlying mechanism of this phenomenon could be increased communication and a sense of "us" dealing with a common problem. Our finding that gender matters for the association of infertility and partnership stability shows the importance of including men in research on reproduction.

Table 1: (Unweighted) Descriptive Statistics for the Pairfam Sample of Couples (N = 3,299)		
	N	Percent
Couple perceived inability to procreate (PIP) 4 categories		
Neither partner reported PIP	2,538	76.90%
Woman only reported PIP	423	12.80%
Man only reported PIP	241	7.30%
Both partners reported PIP	97	2.90%
Couple perceived inability to procreate (PIP) 2 categories		
Same: Partners have the same PIP status (neither or both)	2,635	79.90%
Different: Only the man or only the woman reports PIP	664	20.10%
Study Cohort		
Cohort 2: Ages 25-27 in wave 1	1,545	46.80%
Cohort 3: Ages 35-37 in wave 1	1,754	53.20%
Couple East (GDR) or West (FRG)		
Neither partner is from East Germany	2,459	74.50%
Woman partner only is from East Germany	157	4.80%
Man only is from East Germany	139	4.20%
Both partners are from East Germany	544	16.50%
Couple relative education		
Partners have the same educaiton	1,946	59.00%
The woman has more education	444	13.50%
The man has more education	699	21.20%
Missing information about education	210	6.40%
Couple child status		
Partners do not share a common child	1,119	33.90%
Partners share a common child	2,167	65.70%
Missing information about children	13	0.40%
Immigration Status		
Neither partner immigrated	2,677	81.10%
At least one partner immigrated	622	18.90%
Couple marital status		
The couple never married	1,002	30.40%
The couple married	2,297	69.60%
	Mean	S.D.
Traditional attitudes (Women) (1= low to 5 = high)	2.27	.74
Traditional attitudes (Men) (1=low to 5 = high)	2.38	.76

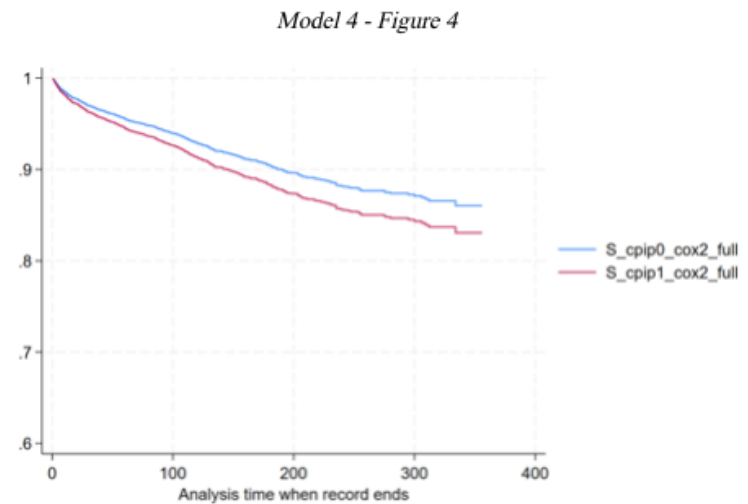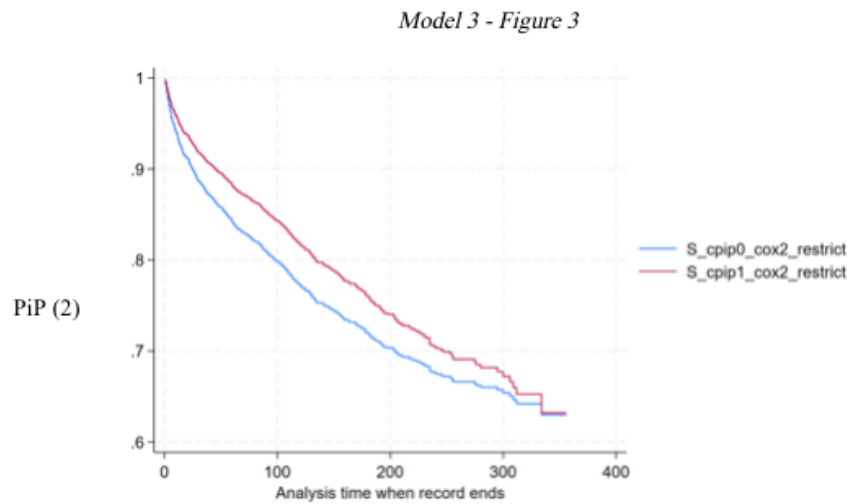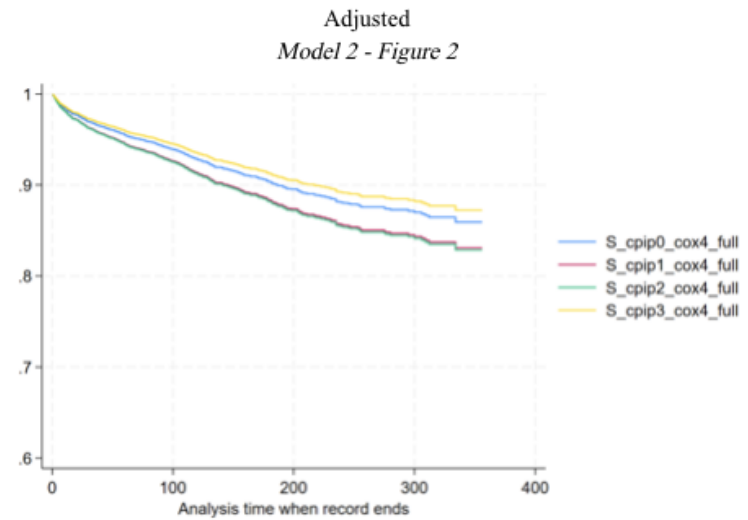Table 2: Cox Proportional Hazards Model of Risk of Couple Dissolution over 11 years of the German pairfam Study.
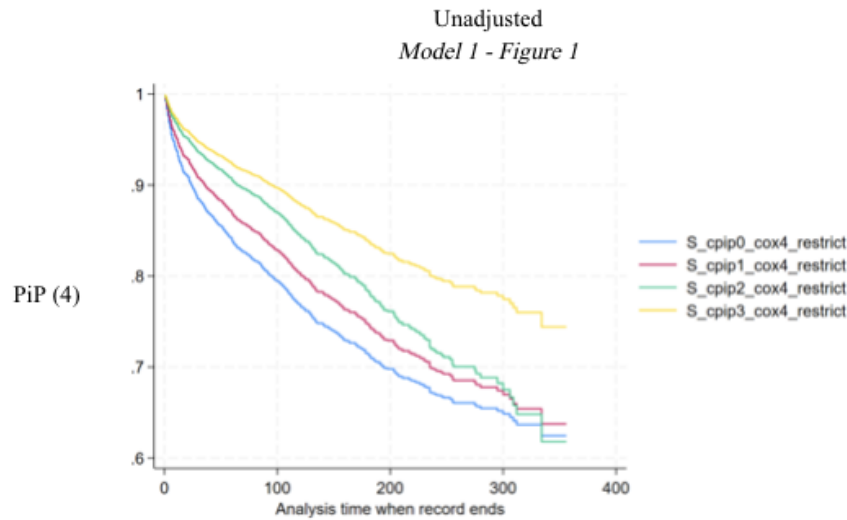
	Model 1			Model 2			Model 3			Model 4		
	Unadjusted			Full Model			Unadjusted			Full Model		
	Coeff.		SE	Coeff.		SE	Coeff.		SE	Coeff.		SE
Couple perceived inability to procreate (PIP) 4 categories												
Women only report PIP	-.26		.16	.20	*	.12						
Men only report PIP	-.68	***	.24	.22		.15						
Both report PIP	-.85	**	.40	-.10		.26						
Couple perceived inability to procreate (PIP) 2 categories												
Partners have different PIP							-.38	***	.14	.21	**	.10
Study Cohort												
Cohort 3: 35-37 years old wave 1				-.68	***	.09				-.68	***	.09
Couple East (GDR) or West (FRG)												
Women only GDR (East)				.15		.16				.15		.16
Men only GDR (East)				-.02		.17				-.02		.17
Both GDR (East)				-.11		.10				-.12		.10
Couple relative education												
Both Partners Same education				.02		.18				.02		.18
Women more education				.10		.22				.10		.22
Men more education				-.14		.21				-.14		.21
Couple child status												
No common child				-.40		.45				-.40		.45
Common child				-.98	**	.45				-.98	**	.45
Migrant				.23	*	.14				.23	*	.14
Ever married (was the couple every married)				-1.43	***	.14				-1.43	***	.14
Traditional attitudes (women)				.09	*	.05				.09	*	.05
Traditional attitudes (men)				.04		.05				.04		.05
Model Fit Statistics												
ll	-5751.42			-5447.41			-5756.54			-5447.50		
AIC	11514.84			10936.82			11517.08			10932.99		
BIC	11579.60			11163.48			11538.67			11138.07		

Note: Coeff. = Coefficient; SE = Standard Error   * p < 0.10, ** p < 0.05, *** p < 0.01

Note: The Proportional Hazards test indicated the need to include interactions with "time" (century months) for the following variables: Model 1 & 3: PIP category; Model 2 & 4: Relative education, Migrant status, and Marital status (results not shown in the table)

Reference categories:Neither partner PIP (Models 1 and 2), Same PIP status (Models 3 and 4), cohort #2 (25-27 years old); neither from East Germany; Missing education; missing about children; never married.

Note: "Cpip" Incidcates couple perceived inability to procreate (i.e. perceived infertility)

"cpip4" indicates the 4 category version with 0 = neither, 1 = woman only, 2 = man only, and 3 = both partners perceive an inability to procreate.

"cpip2" indicates the 2 category version with 0 = both partners have the same perception and 1 = only one spouse perceives an inability to procreate

"restrict" indicates a model without the control variables (i.e. unadjusted) and "full" indicates a model with control variables (i.e. adjusted)

"cox" indicates Cox Proportional Hazards Model

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