TOUCHING THE GRIEF: DOES AFFECTIONATE TOUCH PROTECT INTIMACY IN COUPLES WHO LOST THEIR CHILD?

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ABSTRACT

TOUCHING THE GRIEF: DOES AFFECTIONATE TOUCH PROTECT INTIMACY IN COUPLES WHO LOST THEIR CHILD?

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Keywords: affectionate touch, intimacy, child loss, diary, dyadic design

Although child loss has detrimental consequences for individual well-being, its impact on bereaved parents' romantic relationships is still understudied. This research focused on one of the most frequent relationship behaviors, namely affectionate touch, in relationships. Accordingly, the difference in affectionate touch in bereaved couples who experienced child loss during pregnancy, labor, or afterward vs. non-bereaved couples and the roles of affectionate touch and its similarity across partners in the couples' intimacy was examined. In total, 483 bereaved parents (228 couples, 27 individuals) and 523 non-bereaved participants (258 couples, 7 individuals) from Turkey participated in a seven-day diary study. Although bereaved and non-bereaved men reported equal affectionate touch, bereaved women's affectionate touch was lower than non-bereaved women's. Despite this discrepancy, multilevel analysis results revealed that affectionate touch mostly benefited both genders' intimacy in bereaved and non-bereaved couples. The Dyadic Response Surface Analyses results showed that rather than the similarity of affectionate touch across partners at any level, mutually high affectionate touch was positively related to intimacy. These findings highlight that bereaved and non-bereaved couples are more similar than different regarding affectionate touch's relational gains, and affectionate touch could be a promising target in intervention programs aiming to buffer the negative consequences of child loss for bereaved parents.

ÖZET

YASA DOKUNMAK: ŞEFKATLI DOKUNMA ÇOCUK KAYBI YAŞAMIŞ ÇIFTLERDE YAKINLIK HISSINI KORUR MU?

TURAN DENİZ ERGUN

PSİKOLOJİ YÜKSEK LİSANS TEZİ, TEMMUZ 2023

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Her ne kadar çocuk kaybının bireysel esenlik üzerinde olumsuz etkisi olsa da, çocuk kaybının ebeveynlerin romantik ilişkilerine olan etkileri üzerine yapılan çalışmalar kısıtlıdır. Bu çalışma romantik ilişkilerdeki en sık davranışlarından biri olan şefkatli dokunmaya odaklanmıştır. Bu amaca bağlı olarak doğum öncesi, sırası, ve sonrasında çocuk kaybı yaşamış ve çocuk kaybı yaşamamış çiftlerin şefkatli dokunmalarındaki farklılıkların yanı sıra, şefkatli dokunmanın ve eşler arasında benzerliğinin yakınlık hissine olan etkisi incelenmiştir. Türkiye'den toplam 483 çocuk kaybı yaşamış (228 çift, 27 bireysel) ve 523 çocuk kaybı yaşamamış (258 çift, 7 bireysel) katılımcı 7 gün boyunca günlük çalışmasına katılım göstermişlerdir. Her ne kadar çocuk kaybı yaşamış ve kayıp yaşamamış erkekler aynı seviyede şefkatli dokunma raporlasalar da, çocuk kaybı yaşamış kadınlar kayıp yaşamamış kadınlara kıyasla daha düşük şefkatli dokunma seviyesi belirtmişlerdir. Bu farklılığa rağmen, yapılan Çok Düzeyli Model analizi sonucunda şefkatli dokunmanın çocuk kaybı yaşamış ve yaşamamış çiftlerde hem kadın, hem de erkeklerin yakınlık hissini çoğunlukla olumlu etkilediği gözlemlenmiştir. Eşli Yüzey Yanıt Analizleri sonuçları ise eşlerin şefkatli dokunmalarının her seviyedeki benzerliğine kıyasla her iki eşin yüksek seviyede şefkatli dokunmalarının yakınlık hissiyle ilişkili olduğunu göstermiştir. Bu araştırmanın sonuçları şefkatli dokunmanın romantik ilişkisel kazanımlarının çocuk kaybı yaşamış ve kayıp yaşamamış çiftler arasında farklılıktan çok benzerlik gösterdiği, ve aynı zamanda şefkatli dokunmanın çocuk kaybının çiftler üzerindeki olumsuz etkilerini azaltmaya yönelik müdahale programları için umut verici bir hedef olabileceğini göstermiştir.

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dedicated to the loved ones...

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1. INTRODUCTION

Child loss is one of the most painful and traumatic events an individual can experience throughout life and is associated with long-term adverse consequences (Rogers et al. 2008). Bereaved parents have a higher risk for psychiatric hospitalization (Li et al. 2005), report lower levels of well-being (Rogers et al. 2008), and poorer health-related quality of life than their non-bereaved counterparts (Song et al. 2010). What is more, they have a higher mortality rate than non-bereaved couples (Chen et al. 2022; Li et al. 2003).

The loss of a child also threatens the relationships of couples. For example, previous studies have highlighted the association of child loss with higher marital distress (see Albuquerque et al. 2016; for a review) and frequent problems in sexual activity (Dyregrov and Gjestad 2011). Furthermore, a slightly higher divorce rate has been reported in couples following child loss than in the overall population (Finnäs et al. 2018). Yet, some protective factors may buffer the detrimental effects of losing a child on bereaved parents' individual and relationship well-being. For example, marital closeness before parents' loss is positively associated with health-related quality of life after loss (Song et al. 2010). Parents' involvement in dyadic coping strategies, such as supportive stress communication, in response to child loss positively relates to bereavement adjustment (Bergstraesser et al. 2015). Furthermore, feeling understood by the partner may buffer the negative effect of child loss on the relationship quality of bereaved parents (Dyregrov and Dyregrov 2017; Essakow and Miller 2013).

In this research, affectionate touch is addressed as another factor that may promote bereaved parents' relationship quality. Affectionate touch is defined as touching behaviors aiming to provide love and affection to the receiver, such as hugging and kissing (Jakubiak and Feeney 2017), which may have sexual and/or non-sexual intentions. Previous research has shown that frequent affectionate touch positively influences many relationship outcomes, including but not limited to enhanced feelings of intimacy (Durbin et al. 2021; for a review, see Jakubiak and Feeney 2017).

For example, in an experimental study, people who held hands and hugged their romantic partner before a public speech had lower systolic and diastolic blood pressure as well as less heart rate reactivity compared to participants who did not engage in any affectionate touch behaviors (Grewen et al. 2003). Relatedly, Jakubiak and Feeney (2019) showed that couples holding hands were more likely to engage in constructive behaviors during a conflict than couples who were not having any physical contact. All in all, these studies suggest a crucial role of affectionate touch in romantic relationships. Nevertheless, past studies have not considered the real-life stressful circumstances (e.g., major life events) that may impact affectionate touch behaviors, as they do the enactment and evaluation of other types of behavioral exchanges between partners (e.g., Neff et al. 2022).

The current study aimed to extend this line of research on affectionate touch to couples who experienced child loss. Losing a child, which reflects the permanent separation of parents from their child, threatens the bereaved parents' felt safety and thoughts of predictability (Rubin and Malkinson 2001). Support-seeking and -provision behaviors could be vital in such a context to reconstruct feelings of security and comfort damaged due to being detached from such a strong bond (Mikulincer and Shaver 2009). Indeed, affectionate touch was shown to serve as a non-verbal behavior promoting security in partners (Jakubiak and Feeney 2016, 2017; Murray 2023), a behavior that is preferred even more than verbal behaviors by support providers (Jakubiak 2021). Considering these pieces of evidence, affectionate touch is a behavior that deserves close attention in the context of child loss.

As elaborated below, this research first investigated whether touch behaviors in bereaved parents are as affectionate as touch behaviors in non-bereaved couples. Second, the impact of affectionate touch on intimacy was compared between bereaved and non-bereaved couples. Lastly, using a couple-level approach, whether affectionate touch's benefit for intimacy depends on the existence of affectionate touch similarity between partners (i.e., both partners engaging in highly affectionate touch) was examined in both bereaved and non-bereaved couples.

1.1 Affectionate Touch in Bereaved vs. Non-bereaved Couples

As the first aim of this research, bereaved and non-bereaved couples were compared regarding their affectionate touch levels. Although indirectly, previous research has provided some evidence about the negative association between trauma and physical and emotional intimacy (Mills and Turnbull 2004; Riggs 2014; Whisman 2006). In

several groups of people with varying traumatic experiences (e.g., veterans, refugees, ex-prisoners), high levels of post-traumatic stress symptoms were associated with intimacy problems between partners (Riggs 1998; Rizkalla and Segal, 2019; Zerach et al. 2010).

Another indirect source of evidence comes from research on sexual life after bereavement. Sexual activity, due to its association with reproductivity, may remind bereaved partners of their child, which could negatively influence their willingness to engage in sexual intercourse (Dyregrov 1990). For instance, Gottlieb and colleagues (1996) showed that the sexual intimacy of bereaved parents decreased over time compared to their pre-loss levels. Similarly, in a qualitative study with twenty-four bereaved parents, the majority reported that the frequency of sexual intercourse declined after their child loss (Hagemeister and Rosenblatt 1997). Considering these suggestions, lower levels of affectionate touch behaviors were expected in the bereaved couples than in the non-bereaved couples.

1.2 Association between Affectionate Touch and Intimacy in Bereaved vs. Non-bereaved Couples

As the second aim of this research, the similarity of the affectionate touch's association with psychological intimacy across bereaved and non-bereaved heterosexual couples was examined. Although the link between affectionate touch and intimacy is presumably bidirectional, Jakubiak and Feeney (2017) proposed that receiving affectionate touch specifically contributes to each relational, psychological, and physical well-being and buffers stress reactivity through several pathways. As a neurobiological pathway, receiving affectionate touch boosts oxytocin release and increases endogenous opioids. As a relational-cognitive pathway, affectionate touch reinforces the receiver's intention to feel close to and trust the partner. Indeed, affectionate touch behaviors positively influenced partners' perceived responsiveness (Jolink et al. 2021) and both the touch provider's and receiver's intimacy in correlational and experimental studies with non-bereaved couples (Debrot et al. 2013; Durbin et al. 2021).

Could affectionate touch similarly enhance intimacy in bereaved parents? In this study, it is proposed that affectionate touch would matter for bereaved parents who are likely to struggle with anxiety, uncertainty, insecurity, and loneliness (Essakow and Miller 2013; Hebert et al 2009; Murphy et al. 2014; Rosenberg et al. 2012; Wang and Hu 2020) and serve as a nonverbal support behavior. Bereaved parents

may benefit from reduced stress reactivity, felt security, and heightened intimacy as a result of receiving touch from their partner (Debrot et al. 2013; Durbin et al. 2021; Grewen et al. 2003).

A number of experimental studies have shown the soothing role of touch. For example, handholding between partners was associated with comfort during an emotionally painful memory recall task (Sahi et al. 2021). Similarly, women stimulated with pain reported lower pain ratings when they held hands with their partner than when they were alone or had no physical contact (Goldstein et al. 2017). In another study, Robinson and colleagues (2015) showed that touch is a nonverbal instrument of communication used to solicit and provide a feeling of support between partners. These studies indicate that affectionate touch would have a comforting role in distressed couples' daily life. Thus, affectionate touch was hypothesized to positively relate to intimacy in bereaved parents, similar to how it does in non-bereaved couples, while any significant difference between the bereaved and non-bereaved couples was not hypothesized regarding the strength of this impact due to a lack of prior evidence.

1.3 Similarity of Affectionate Touch Between Partners

As the third aim of this research, whether the association between affectionate touch and intimacy depends on both partners engaging in similar levels of affectionate touch was investigated. What happens to the intimacy level when couples' touch behaviors are not equally affectionate? On the one hand, a slightly affectionate touch from the receiver in response to a highly affectionate touch from the provider would lead to disappointments and harm intimacy on the provider's side (cf. Gleason et al. 2003; Sprecher et al. 1986). On the other hand, research has shown that the positive impact of touch occurred even when people were not aware that they were touched (Fisher et al. 1976; Robinson et al. 2015). Therefore, the inequality in the level of affectionate touch between partners may have a negative impact on the providers' intimacy, while the receiver may still benefit from receiving high levels of affectionate touch. Perhaps touch positively impacts intimacy (at least for the receiver) in both similar and non-similar cases. Thus, whether the effect of touch on intimacy depends on the presence of highly affectionate touch in both partners in bereaved and non-bereaved couples was explored.

1.4 Gender and Culture

Although both bereaved parents go through a traumatic experience, interestingly, research mostly focused on women and has not paid enough attention to men (Lamon et al. 2022; Mcneil et al. 2021). Bereaved women are perceived as requiring more support due to sociocultural norms (Dyregrov 1990; Tanacıoğlu-Aydın and Erdur-Baker 2022; Thomas and Striegel 1995). Bereaved men, however, are generally expected to stay strong, which may lead them to suppress their emotions and avoid grief-related discussions with their partner (Cook, 1988; Dyregrov et al. 2020; Dyregrov and Matthiesen 1991; Mandell et al. 1980). In such a context of men's suppression of emotions, women may engage in affectionate touch behaviors to provide nonverbal support to or get support from their partners. Because of its reciprocal nature in romantic relationships, frequent affectionate touch can serve as one of the tools to compensate for the disrupted communication between bereaved parents (Albuquerque et al., 2018). Thus, a dyadic approach was considered in this study and the association between affectionate touch and intimacy was investigated for both women and men in the same analysis.

Another limitation of bereavement literature is that most studies have been conducted in Western countries, although bereaved parents' grief responses may vary across cultures (Mcneil et al. 2020; Stroebe and Schut 1998). Filling that gap, this study was conducted in a non-Western and predominantly Islamic context: Turkey (Nişancı et al. 2023). Because a child is a source of social status in Turkey, bereaved parents may experience intense reactions in response to child bereavement (Cimete and Kuguoglu 2006). Nevertheless, some parents are likely to avoid explicitly showing their grief because public grief expressions are perceived as an act of disobedience against God's will in conservative groups (Rubin and Yasien-Ismael 2004; Tanacıoğlu-Aydın and Erdur-Baker 2022). As a result, affectionate touch may play a non-verbal supportive role, especially in such a relatively conservative context.

1.5 The Present Study

In this research, three research questions were investigated: a) Do bereaved couples have lower average affectionate touch levels than non-bereaved couples? b) Is affectionate touch positively associated with intimacy in both bereaved and non-bereaved couples? c) Is the similarity of average affectionate touch across partners associated

with intimacy? These research questions were examined through a seven-day dyadic diary conducted in Turkey. The hypotheses and data analytic strategy for this study were preregistered (https://osf.io/ga4vy).

2. METHOD

2.1 Procedure and Participants

The data were collected from married heterosexual couples who experienced child loss during pregnancy, labor, or afterward (i.e., Loss Group) and those who did not experience child loss (i.e., Comparison Group) between August 2020 and December 2021 as part of a larger project funded by the Scientific and Technological Research Council of Turkey (grant number: 119K404). The Research Ethics Council of Sabancı University approved the research. The participants were recruited primarily by contacting the social networks of the research assistants and posting social media announcements and advertisements. Participants were asked to think of their most recent loss in case of multiple losses.

Initially, 248 couples and 21 individuals in the Loss Group and 265 couples and ten individuals in the Comparison Group participated. After the data cleaning (e.g., gave wrong responses to attention-check questions; see Appendix A), the Loss and Comparison Groups consisted of 228 couples and 27 individuals (N=483) and 258 couples and seven individuals (N=523), respectively. Most of the families experienced pregnancy loss (70%), whereas the remaining families experienced child loss during, or days, months, or years after the labor. Detailed sample characteristics are presented in Table 2.1. From now on throughout the text, bereaved mothers and fathers will be considered as bereaved women and men, respectively, to ensure consistent use of participants' gender across Loss and Comparison Groups.

The data collection through Qualtrics had two stages: a cross-sectional survey and a 7-day diary. Participants were asked to start the diary survey a week after they completed the cross-sectional survey. Due to some participants' unavailability, the average time between these two stages was 8.18 (SD=3.84) and 7.88 (SD=2.23) days for the Loss and Comparison Groups, respectively. Participants were sent the daily surveys' links through emails at 7:00 PM and asked to complete them by midnight.

Each participant was compensated with a shopping voucher for up to 100 Turkish Liras (USD 13.72 by August 2020), depending on their survey completion rates. The average number of completed surveys was 5.80 for the Loss Group and 5.97 for the Comparison Group.

Table 2.1 Sample characteristics

	Loss Group			Comparison Group		
	M	*SD*	Range	*M*	*SD*	Range
Age (W)	40.43	10.48	20-74	33.83	8.27	22-59
Age (M)	44.48	11.05	25-57	36.08	8.56	23-65
Marriage length (years)	16.63	11.36	0.67-56	8.14	8.73	0.08-40.58
Number of living children (W)	1.48	1.20	0-10	0.93	0.96	0-4
Number of living children (M)	1.45	1.24	0-10	0.95	0.97	0-4
Number of lost children (W)	1.49	0.97	1-8	-	-	-
Number of lost children (M)	1.45	0.91	1-6	-	-	-
Time passed since the loss (years)	10.77	10.01	0.08-50	-	-	-
Deceased child's age (years)	3.29	6.58	0-25	-	-	-
Pregnancy month	3.28	1.69	.75-9	-	-	-
Education (W)	4.58	1.60	1-7	5.87	1.22	2-7
Education (M)	4.73	1.51	2-7	5.71	1.20	2-7
Socioeconomic status (W)	5.45	1.87	1-10	5.83	1.49	1-9
Socioeconomic status (M)	5.43	1.74	1-9	5.65	1.64	1-10

Note. W=Women, M=Men. The number of living children slightly differed across women and men, possibly because some of the participants had children from their previous marriages. The deceased child's age indicates the age of the child who died during labor or afterward. The pregnancy month variable represents the gestational period for the pregnancy losses. Socioeconomic status was measured by asking participants to rate their socioeconomic status on a 10-step ladder (Adler and Stewart, 2007). Education was assessed using a 7-point question (1=Literate but no formal education, 7=Master's or Ph.D. degree).

2.2 Measures

Daily affectionate touch and intimacy were measured by using single items. The item "Today, I touched my partner in an affectionate and caressing manner (e.g., hugged)" assessed affectionate touch, and the item "Today, I felt close to my partner" measured intimacy. Participants answered both questions on a 5-point Likert scale (1=*Strongly disagree*, 5=*Strongly agree*).

2.3 Strategy of Analysis

Analyses were conducted using Mplus 8.4 (Muthén and Muthén 1998-2019) and the full information maximum likelihood estimation with robust standard errors (i.e., MLR) to handle missing data (Enders and Bandalos, 2001).

2.3.0.1 Research question 1

For the first research question (RQ1), Wald tests were conducted to compare affectionate touch levels between the Loss and Comparison Groups. Thus, the within-gender differences between the groups (i.e., affectionate touch in the Loss Group vs. in the Comparison Group) were examined.

2.3.0.2 Research question 2

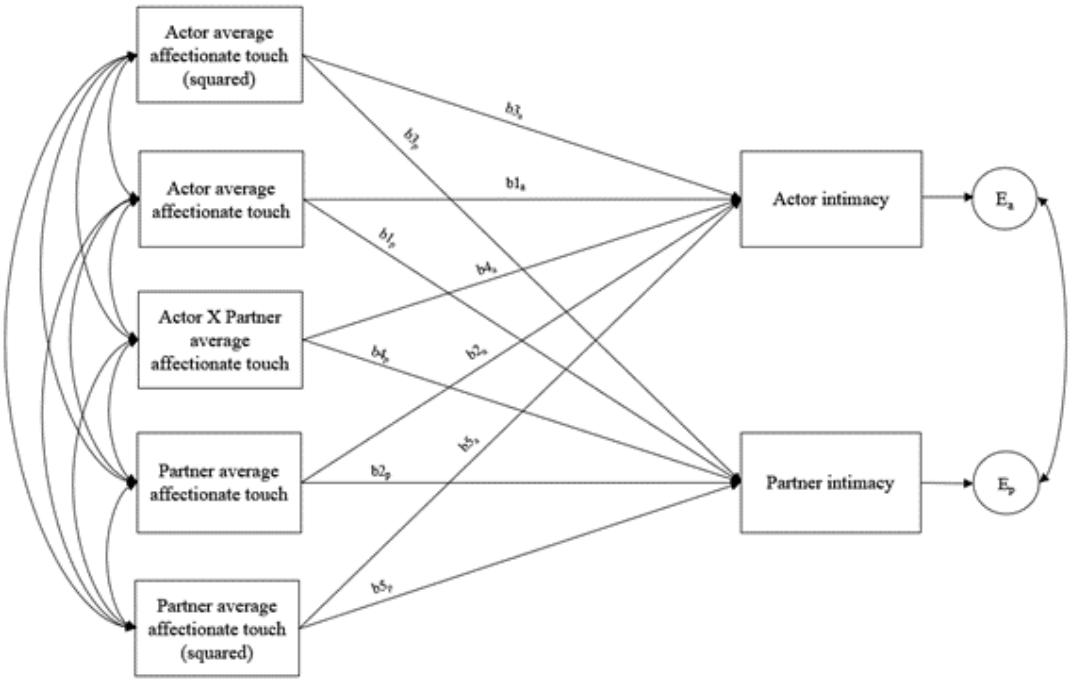
For the second research question (RQ2), multilevel analyses were conducted to test the association between daily affectionate touch and intimacy. The person-mean centered levels at each day as the Level 1 within-person variables and grand-mean centered averages across the diary as the Level 2 between-person variables in multilevel models were included (Bolger and Laurenceau 2013; Nezlek 2007). These within- and between-person variables reflected the state and trait-like levels, respectively. The variance of each variable explained at the within- and between-level was also investigated. In the Loss Group, most of the variance for affectionate touch (55% for women, 51% for men) and intimacy (52% for women, and 56% for men) depended on within-person variations. Similarly, in the Comparison Group, the variance of affectionate touch (58% for women, 62% for men) and intimacy (60% for women, 59% for men) was mostly due to the changes at the within-person level. The interdependence between women's and men's within- and between-person variables was considered and investigated the relation of one's affectionate touch with their (i.e., actor effect) and their partner's (i.e., partner effect) intimacy.

2.3.0.3 Research question 3

To test whether the effect of affectionate touch on intimacy depended on both partners' engagement in similar affectionate touch for the third research question (RQ3),

Dyadic Response Surface Analysis was conducted (DRSA; Schönbrödt et al. 2018). In the DRSA women's and men's intimacy were regressed on women's and men's average affectionate touch across the diary (i.e., linear effects), their squared terms, and the interaction between linear effects (Figure 2.l). Before running the DRSA, it was confirmed that there was a variance in the data regarding the difference between partners' affectionate touch levels (Shanock et al. 2010; see Appendix B). The affectionate touch variable was grand-mean centered (Schönbrödt et al. 2018).

Figure 2.1 The dyadic response surface analysis conceptual model



Note. a=Actor, p=Partner. All affectionate touch variables are grand mean centered. As elaborated below, there was no significant difference in b1-b5 coefficients across women and men, and hence, the variables were presented as actor and partner variables in this figure.

Regression coefficients (b1-b5; Figure 2.1) in the DRSA are used to compute five parameters (a1-a5). The parameters a1 and a2 represented the linear and non-linear effects for the *line of congruence* (i.e., the line where partners' affectionate touch levels are equal, e.g., both partners' affectionate touch scores were 1 unit higher than the grand-mean), respectively. The parameters a3 and a4 reflected the same effects for the *line of incongruence* (i.e., the line where the partners equally deviate from the grand-mean but in opposite directions, e.g., one partner's affectionate touch score was 1 unit lower than the grand-mean vs. the other partner's affectionate touch score was 1 unit higher than the grand-mean).

To test whether the similarity of affectionate touch between partners is associated

with higher levels of intimacy, the following criteria are detected: *a1>0, a2=ns, a3=ns, a4<0, a5=ns* (Humberg et al. 2019; Schönbrödt et al. 2018). A positive a1 would suggest that higher intimacy was reported when both partners of a couple report higher levels of affectionate touch, compared to couples who have lower affectionate touch levels. A non-significant a2 would indicate that partners' similar levels of affectionate touch at extremes compared to the grand-mean (e.g., affectionate touch score of 1) do not have a different effect on their intimacy than similar affectionate touch at the grand-mean. A non-significant a3 would suggest that participants' intimacy is not affected by whether they have higher levels of affectionate touch than their partner, or their partner has higher affectionate touch levels than themselves. A negative a4 would indicate that compared to the grand-mean, dissimilarities at the extremes (e.g., one partner's affectionate touch score of 5 vs. the other partner's affectionate touch score of 1) are related to lower levels of intimacy. In addition, an additional parameter a5 would be required to be nonsignificant if the similarity criteria of a1-a4 are met.

2.3.1 Power

There is no well-established method to estimate power for a multilevel analysis using a dyadic diary study. Therefore, a power analysis for Actor-Partner Interdependence Model was conducted using APIMPowerR (Ackerman et al. 2016) using the effect sizes found in non-bereaved couples (Debrot et al. 2013). The sample size of this study was found to provide a power higher than .80 for both Loss and Comparison Groups. In addition, the multilevel power curves suggested by Bolger and colleagues (2012) were checked and it was found that the current study's sample size was sufficient to detect medium effect sizes with a power higher than .80 (see Appendix C). Similarly, previous studies did not report the minimum number of participants required to run DRSA. However, it is suggested to collect data from at least 200 participants for non-dyadic Response Surface Analysis (Schönbrödt et al. 2018). The sample sizes in both the Loss and Comparison Groups exceeded double that number.

3. RESULTS

3.1 Descriptive Statistics and Correlations

Descriptive statistics of and correlations between study variables are presented in Table 3.1. The correlations between the study variables were positive and significant for both the Loss and Comparison Groups. Men reported significantly higher levels of affectionate touch than women on average (Loss Group: Wald=27.17, df=1, p=<.001; Comparison Group: Wald=6.08, df=1, p=.014). Similarly, men had higher levels of average intimacy compared to women in both the Loss (Wald=37.33, df=1, p=<.001) and Comparison Groups (Wald=17.23, df=1, p=<.001). For the Loss Group, affectionate touch was negatively correlated with time passed since the loss (r=-.10 for women, r=-.12 for men).

Table 3.1 Descriptive statistics of and correlations between study variables

	Loss Group					Comparison Group
Variable	*M* (*SD*)	1	2	3	4	*M* (*SD*)
1. Affectionate touch (W)	3.68 (1.06)	-	0.60	0.71	0.51	3.92 (1.02)
2. Affectionate touch (M)	4.01 (0.95)	0.60	-	0.46	0.75	4.05 (0.89)
3. Intimacy (W)	3.98 (0.90)	0.80	0.47	-	0.55	4.12 (0.82)
4. Intimacy (M)	4.31 (0.73)	0.53	0.77	0.53	-	4.31 (0.71)

Note. W=Women, M=Men. The number of living children slightly differed across women and men, possibly because some of the participants had children from their previous marriages. The deceased child's age indicates the age of the child who died during labor or afterward. The pregnancy month variable represents the gestational period for the pregnancy losses. Socioeconomic status was measured by asking participants to rate their socioeconomic status on a 10-step ladder (Adler and Stewart, 2007). Education was assessed using a 7-point question (1=Literate but no formal education, 7=Master's or Ph.D. degree).

3.2 RQ1: Comparison of Affectionate Touch Across the Groups

As hypothesized, Wald tests revealed that women in the Loss Group reported significantly lower average affectionate touch than women in the Comparison Group (Wald=6.34, df=1, p=.012; see Table 3.1 for the averages). However, men's average affectionate touch levels were not significantly different between the groups (Wald=0.46, df =1, p=.497; Table 3.1).

3.3 RQ2: The Association between Affectionate Touch and Intimacy

The results of the multilevel models are presented in Table 3.2. Before conducting the analysis for each group, whether the between- and within-person effects can be constrained to be equal across the Loss and Comparison Groups was tested by using the loglikelihood test. Because unconstrained and constrained models were significantly different from each other (χ^2(25, N=1006)=118.04, p<.001), the results were presented for the Loss and Comparison Groups separately.

Table 3.2 Multilevel model results for affectionate touch's effect on intimacy in loss and comparison groups

	Loss Group			Comparison Group		
	b	*p*	95% CI	*b*	*p*	95% CI
Within-person level						
Actor effect (W)	**.41**	**<.001**	**[.35 - .47]**	**.43**	**<.001**	**[.36 - .49]**
Actor effect (M)	**.40**	**<.001**	**[.33 - .46]**	**.37**	**<.001**	**[.31 - .43]**
Partner effect (W)	**.06**	**.004**	**[.02 - .10]**	**.09**	**<.001**	**[.05 - .14]**
Partner effect (M)	.05	.091	[-.01 - .12]	**.09**	**.002**	**[.03 - .14]**
Between-person level						
Actor effect (W)	**.70**	**<.001**	**[.60 - .81]**	**.58**	**<.001**	**[.47 - .69]**
Actor effect (M)	**.51**	**<.001**	**[.38 - .63]**	**.56**	**<.001**	**[.44 - .69]**
Partner effect (W)	**.09**	**.014**	**[.02 - .17]**	.04	.343	[-.05 - .13]
Partner effect (M)	-.02	.706	[-.13 - .09]	.02	.809	[-.11 - .14]

Note. W=Women, M=Men. The bold results are significant.

For the Loss Group, women's within-person level actor and partner effects showed that both women and their partner had a higher level of intimacy on days when women's affectionate touch level was higher than their average across days, compared to the days when women's affectionate touch was lower than their average. The result at the between-person level indicated that women's higher (vs. lower) average affectionate touch was positively associated with their and their partner's

intimacy. Only the actor effects of men were significant at the within-person level, revealing that men had higher intimacy when their affectionate touch was higher (vs. lower) than their average. Similarly, at the between-person level, compared to men with lower average affectionate touch, men with higher average affectionate touch reported higher intimacy.

For the Comparison Group, the actor and partner effects of women were again significant at the within-person level, suggesting that when women reported higher (vs. lower) affectionate touch than their average, they and their partner reported higher levels of intimacy. A significant actor effect (but not a partner effect) was found at the between-person level: women with higher average affectionate touch reported higher intimacy than women with lower average affectionate touch. In addition, a significant actor and partner effects of men's affectionate touch was found at the within-person level: On the days men engaged in higher-than-average affectionate touch than on the days with lower-than-average affectionate touch, they and their partner reported higher levels of intimacy. At the between-person level, however, only the actor effect was significant, representing that men with higher average affectionate touch reported higher intimacy than men with lower average affectionate touch.

In addition, whether the within-person level actor and partner effects are significantly different across women and men in the Loss and Comparison Group (e.g., comparison of women's actor effect to men's actor effect) was tested. The results did not reveal any gender differences in terms of the strength of these effects (Wald test *p*s=.199-.998). Moreover, Wald tests were conducted for significant actor and partner effects in Table 3.2 to understand whether the effects significantly differ across Loss and Comparison Groups. For instance, women's within-person actor effects were compared in the Loss vs. Comparison Groups. The results did not reveal any significant differences regarding the strengths of the effects across the groups (Wald test *p*s=.105-.249).

Overall, at the within-person level, women's and men's actor and partner effects were similarly positive for both the Loss and Comparison Groups, except for the non-significant partner effect of men in the Loss Group. At the between-person level, however, while women's and men's actor effects were positive for both groups, only women's partner effect was significant in the Loss Group. The RQ2's results were summarized in Table 3.3.

Table 3.3 Summary of the results of the impact of affectionate touch on intimacy (RQ2)

	Loss Group	Comparison Group	PregnancyLoss Group	During/After Labor Loss Group
Within-Person Level				
Actor Effect	Positive for both genders	Positive for both genders	Positive for both genders	Positive for both genders
Partner Effect	Positive for women	Positive for both genders	Positive for men	Positive for women
Between-Person Level				
Actor Effect	Positive for both genders	Positive for both genders	Positive for both genders	Positive for both genders
Partner Effect	Positive for women	Non-significant	Non-significant	Positive for women

3.4 RQ3: The Role of Affectionate Touch Similarity in Intimacy

First, the equality of DRSA regression coefficients across Loss and Comparison Groups was tested (Figure 2.1). The chi-square difference test revealed that the Loss and Comparison Groups' models were significantly different from each other ($\chi^2(22,\ N{=}1006){=}514.76,\ p{<}.001$). Thus, the results for each group was reported separately. It was also checked whether the within-group actor and partner effects differed across gender. Because Wald tests did not reveal a significant gender difference in either group (see Appendix D), the actor and partner effects were constrained to be equal across women and men. Table 3.4 presents the DRSA results.

Table 3.4 Dyadic response surface analysis results

	Loss Group			Comparison Group		
	b	*p*	95% CI	*b*	*p*	95% CI
Regression coefficients						
b1 actor	**.62**	**<.001**	**[.55 - .68]**	**.56**	**<.001**	**[.49 - .63]**
b2 partner	.00	.910	[-.06 - .06]	.06	.123	[-.02 - .13]
b3 actor2	.02	.627	[-.05 - .08]	-.02	.673	[-.09 - .06]
b4 actor*partner	.00	.932	[-.07 - .07]	.06	.324	[-.06 - .17]
b5 partner2	-.04	.057	[-.09 - .00]	-.01	.819	[-.07 - .06]
DRSA parameters						
a1 (LOC, linear)	**.62**	**<.001**	**[.55 - .69]**	**.62**	**<.001**	**[.55 - .69]**
a2 (LOC, quadratic)	-.02	.593	[-.11 - .06]	.03	.537	[-.07 - .14]
a3 (LOIC, linear)	**.61**	**<.001**	**[.51 - .72]**	**.51**	**<.001**	**[.38 - .63]**
a4 (LOIC, quadratic)	-.03	.645	[-.16 - .10]	-.08	.458	[-.29 - .13]
a5	.06	.085	[-.01 - .13]	-.01	.770	[-.07 - .05]
Evidence for the similarity? (a1>0, a2=ns, a3=ns, a4<0, a5=ns)						
	No, a3=not ns, a4=ns			No, a3=not ns, a4=ns		

Note. LOC = Line of congruence, LOIC= Line of incongruence, CI = Confidence interval, ns= non-significant. The bold results are significant. RSA parameters are calculated by the following formulas: a1=b1+b2; a2=b3+b4+b5; a3=b1-b2; a4=b3-b4+b5; a5=b3-b5. Because the similarity results were non-significant, the graphs of the DRSA results was presented in Appendix E to prevent any misunderstanding.

For both Loss and Comparison Groups, no evidence was found indicating that the similarity of affectionate touch levels be- tween partners was associated with higher levels of intimacy. However, a positive a1 parameters was found for Loss and Comparison Groups, which suggests that the existence of both partners' high levels of affectionate touch was associated with higher levels of intimacy. The results also revealed positive a3 parameters for both groups, which indicates that participants reported higher levels of intimacy when they had higher affectionate touch levels than their partner, compared to vice versa. Considering the non-significant result for the similarity, the graph of the DRSA was presented in Appendix E.

3.5 Subsequent Analyses

For subsequent analyses, whether the relevant control variables depending on the group (participants' age, socioeconomic status, education level, number of living children, pregnancy month, time since the loss, experience of one vs. more child losses) impacted the association between affectionate touch and intimacy (RQ2) was tested. Because participants' age and time since loss were strongly correlated (r=.809 for women, r=.795 for men), the effect of these variables was controlled for in separate models. The results in the models with control variables did not prominently change in either the Loss Group or Comparison Group compared to the results in the original models.

The models where intimacy was a predictor of affectionate touch for both the Loss and Comparison Groups were also tested (see Table 3.5). For the Loss Group, all actor and partner effects were significant at the within-level, suggesting that on days bereaved women and men had higher levels of intimacy than their own average, both themselves and their partners reported higher affectionate touch levels. At the between-level, all actor and partner effects were significant except for the women's partner effect, indicating that men and women with higher levels of intimacy on average reported higher levels of affectionate touch compared to participants who had lower intimacy levels. For the Comparison Group, similar to the Loss Group, all actor and partner effects were significant at the within-level. At the between-level, however, only actor effects were significant, suggesting that higher levels of average intimacy were associated with participants' own, but not with their partners', affectionate touch levels.

In further examination, the lagged associations (e.g., the effect of affectionate touch on a day on intimacy the next day) were tested between affectionate touch and

Table 3.5 Multilevel model results for intimacy's effect on affectionate touch in loss and comparison groups

	Loss Group			Comparison Group		
	b	*p*	95% CI	*b*	*p*	95% CI
Within-person level						
Actor effect (W)	**.63**	**<.001**	**[.55 - .72]**	**.60**	**<.001**	**[.52 - .69]**
Actor effect (M)	**.59**	**<.001**	**[.51 - .67]**	**.65**	**<.001**	**[.55 - .74]**
Partner effect (W)	**.07**	**.029**	**[.01 - .14]**	**.13**	**<.001**	**[.06 - .19]**
Partner effect (M)	**.15**	**.001**	**[.06 - .24]**	**.20**	**<.001**	**[.11 - .28]**
Between-person level						
Actor effect (W)	**.84**	**<.001**	**[.73 - .94]**	**.89**	**<.001**	**[.75 - 1.03]**
Actor effect (M)	**.93**	**<.001**	**[.81 - 1.04]**	**.93**	**<.001**	**[.79 - 1.07]**
Partner effect (W)	.09	.135	[-.03 - .22]	.06	.387	[-.07 - .18]
Partner effect (M)	**.21**	**.004**	**[.07 - .34]**	.16	.067	[-.01 - .34]

Note. W=Women, M=Men. The bold results are significant.

intimacy to understand the direction of the association (see Appendix F). Because the effect of the outcome (e.g., intimacy) on the preceding day was controlled for, the results showed whether the predictor (e.g., affectionate touch) was associated with a change in the outcome between two days. In the models in which lagged intimacy was regressed on affectionate touch, the results mostly revealed non-significant actor and partner effects at the within-person level for both men and women across Loss and Comparison Groups, except a positive actor effect of women's affectionate touch in the Loss Group. These findings suggest that the participants' higher engagement in affectionate touch than their usual did not influence either their or their partner's intimacy levels on the next day in most cases, but bereaved women's higher-than-usual affectionate touch predicted their intimacy on the next day. Similarly, the results did not reveal any significant lagged actor and partner effects of intimacy on affectionate touch for either Loss or Comparison Groups at the within-person level,indicating that participants did not report higher levels of affectionate touch the next day after they or their partners reported higher intimacy levels than usual.

Given that the majority of the sample experienced pregnancy loss (70%), and the desire to have another child may motivate those couples to engage in affectionate touch more often than the couples who experienced child loss during/after labor, multigroup analyses were conducted. Actor and partner effects were constrained to be equal at between- and within-level across these two loss types. The constrained and unconstrained models were significantly different from each other ($2(25, N=483)=79.64$, $p<.001$). While the women's partner effects at the between- and within-person levels were non-significant for pregnancy loss, these effects were positive and significant for couples who experienced child loss during/after labor

(see Appendix G). In addition, there was a significant partner effect of men at the within-level for the pregnancy loss group, whereas this effect was non-significant for the during/after labor group. Other results were consistent across the pregnancy loss and during/after labor loss groups. The summary of these results took place in Table 3.3.

4. DISCUSSION

In this study, the association between affectionate touch and intimacy in bereaved (i.e., Loss Group) and non-bereaved couples (i.e., Comparison Group) was investigated using a 7-day dyadic diary study. Three research questions were posed. First, whether average affectionate touch levels differed across bereaved and non-bereaved couples was examined, with hypothesizing that bereaved parents would have lower affectionate touch levels than non-bereaved couples. The results revealed that bereaved women, but not bereaved men, had lower levels of affectionate touch than their non-bereaved counterparts. Second, whether daily affectionate touch was positively associated with intimacy in both Loss and Comparison Groups was investigated. In line with the expectations, positive associations between affectionate touch and both the provider's (i.e., actor effect) and receiver's (i.e., partner effect) daily intimacy were found, except for the non-significant partner effect of men in the Loss Group. Lastly, whether partners' similarity in affectionate touch was associated with their intimacy levels was explored, and it was found that affectionate touch similarity across partners did not contribute to couples' intimacy levels at all touch levels, neither in Loss nor Comparison Groups.

One of the important findings of this research is the gender differences in affectionate touch across Loss and Comparison Groups. While there was a significant difference between bereaved and non-bereaved women's average affectionate touch levels, such difference did not exist for men. Although there are mixed findings regarding the grief reactions of men and women, some studies have highlighted that women may be more vulnerable to experiencing depression and post-traumatic symptoms than men (Pohlkamp et al. 2019), which are shown to be negatively associated with parents' romantic relationship functioning (Lambert et al. 2012) and feelings of intimacy (Riggs 2014). It is also possible that bereaved women experience their grief in a way that interferes with their willingness to provide affectionate touch towards their partner. For instance, bereaved women report more reluctance to have sex with their partners and find it more distressing compared to bereaved men (Dyregrov

and Gjestad 2011). Because they do not feel comfortable in such physical acts, bereaved women may refrain from engaging in affectionate touch and have lower levels of affectionate touch compared to the non-bereaved women.

The lack of difference in men's affectionate touch across bereaved and non-bereaved couples may also be related to gender roles. In Turkish culture, men are attributed to be the main support provider to their partners, while women are mostly perceived as the support receivers. For instance, in a qualitative study conducted in Turkish parents who experienced pregnancy loss, some bereaved men stated that they should not express their grief to fulfill the social expectations that fathers should be the ones to stay strong and support their partners (Tanacıoğlu-Aydın and Erdur-Baker 2022). Thus, bereaved men, although they also experience grief after losing their child, may hide their emotions for the sake of their partner and still continue to engage in affectionate touch at a similar level to their non-bereaved counterparts to fulfill their societal roles. These traditional gender roles may also explain why men reported higher levels of average affectionate touch compared to women in both bereaved and non-bereaved couples, different from the results found in Western cultures (e.g., Debrot et al. 2013).

In line with the second hypothesis, it was found that affectionate touch is equally beneficial for bereaved and non-bereaved couples' intimacy. Previous studies conducted with non-distressed couples have highlighted the role of affectionate touch in enhancing feelings of support (Robinson et al. 2015) and security (Jakubiak and Feeney 2016). In response to child loss, where the attachment behavioral system (see Bowlby 1982/1969; Mikulincer and Shaver 2009) of the bereaved parents can become activated due to the complete separation from their child, bereaved parents may engage in affectionate touch and benefit from its securing role to soothe the elevated stress. For instance, a recent study found that individuals who experienced different types of bereavement are likely to perceive a gentle touch and stroking of arms as consoling behavior (Enmalm et al. 2023). Furthermore, Jakubiak and Feeney (2017) proposed that affectionate touch can enhance the receivers' feelings of security, which is one of the mechanisms related to promoting closeness in romantic relationships. Thus, by engaging in affectionate touch to enhance feelings of security, bereaved parents may also feel more intimate towards their partner.

Surprisingly, a non-significant partner effect of men's affectionate touch on their partner's intimacy was found in the Loss Group. In response to child loss, bereaved women may feel guilt more often than bereaved men do (perhaps especially in the case of pregnancy loss), which may also influence their willingness to become physically and psychologically intimate with their partner. For example, Dyregrov and

Gjestad (2011) found that bereaved women are less ready to continue to engage in sex after losing a child compared to bereaved men. Although indirectly, studies conducted on trauma may also partially explain the lack of partner effect. For instance, traumatic experiences can change how one perceives their body boundaries (Talmon and Ginzburg 2017) and may cause the victims to perceive affectionate touch in a threatening manner (Lukacena and Mark 2021). Perhaps, while women are not positively influenced by receiving affectionate touch and, as a result, do not feel intimate, they may still benefit from providing affectionate touch to their partner. However, this gender difference should be interpreted cautiously, considering that the lower bound of the confidence interval is nearly zero, and Wald tests did not reveal a significant difference between women's and men's partner effects at the within-person level.

Another important finding of this study was that rather than the similarity of affectionate touch across partners at any level, both partners' high levels of affectionate touch contributed to their intimacy for both the Loss and Comparison Groups. Frequent affectionate touch is positively associated with intimacy (Debrot et al. 2013) and relationship satisfaction (Floyd et al. 2009), and the benefits of affectionate touch on well-being are stronger among people who have highly satisfying relationships (Jakubiak 2022). Therefore, both partners' high engagement of affectionate touch may be an indicator of a satisfactory romantic relationship where the partners are capable of buffering the stress of each other.

It was also found that the actor effects, rather than the partner effects of affectionate touch, which were inconsistent and less-strong, are crucial to bereaved and non-bereaved couples' intimacy. Although previous studies mostly focused on the impact of affectionate touch on the receiver, affectionate touch is also suggested to have similarly positive effects on the provider (Generous and Floyd 2014). For example, Durbin and colleagues (2021) have found that providing affectionate touch to a romantic partner is associated with the provider's feelings of intimacy. Bereaved parents may also engage in affectionate touch behaviors to elicit support from their partner (Forest et al. 2021).

Although lagged associations between affectionate touch and intimacy were mostly non-significant, the influence of bereaved women's daily affectionate touch was found not to be limited to concurrent intimacy, but extended to their intimacy on the next day, signaling a "causal" role of affectionate touch in intimacy rather than vice versa. This finding, combined with the result that affectionate touch behaviors occurred less often in bereaved women, suggests that bereaved women are more selective about when they touch, but those selected physically-close moments provide them

a prolonged emotional intimacy benefit.

4.1 Clinical Implications

The findings of this study revealed that frequent affectionate touch could play a significant role in contributing to bereaved couples' intimacy, similar to it does in non-bereaved couples, hence may be a promising target for future interventions. For instance, in a study conducted with non-bereaved couples, Durbin and colleagues (2021) found that affectionate touch provision, which was prompted externally by a smartphone app, improved the provider's feelings of intimacy. What is more, affectionate touch, considering its' nurturing and caring nature, may enhance the grief adjustment of bereaved parents. For example, Kempson (2021) found that bereaved mothers who received touch-based therapy by a clinical professional reported lower levels of grief symptoms compared to mothers who did not receive such intervention. Thus, clinical practice and interventions could aim to enhance affectionate touch, one of the most common romantic relationship behaviors, to partly buffer the negative impact of child loss and promote intimacy in bereaved couples.

4.2 Strengths & Limitations and Future Directions

This study has several strengths. First, the current research adds to the literature by investigating the daily lives and romantic relationships of bereaved parents using a dyadic diary for the first time. Second, the data for this study was collected from Turkish couples, an underrepresented context, and hence contributed to the cultural diversity of bereavement research. Lastly, because the data were collected from both bereaved and non-bereaved couples, the similarities and differences across groups were tested, and it was found that bereaved couples were more similar than different to non-bereaved couples.

Yet, there are some limitations of this study. First, because of some of the sample characteristics, such as the predominance of labor loss and a considerably long time after the loss, the results may not fully represent the daily experiences of recently bereaved parents after child loss but still suggest that short-duration/longitudinal follow-ups would be merited. Second, previous studies have shown that relationship satisfaction may moderate the association between affectionate touch and well-being

(Jakubiak et al. 2022). Thus, it is also possible that because the time passed after loss is relatively long in the sample, only the parents who were able to maintain a satisfying relationship after losing their child participated in this study. Third, this study was correlational. Subsequent analyses revealed that affectionate touch and intimacy have a mutual influence only within the same day for bereaved men, but the effect of affectionate touch on intimacy does extend to the next day for bereaved women. This finding, indicating that clinical practice or intervention programs should target either affectionate touch or intimacy for men but especially affectionate touch for women, awaits to be tested with future experimental designs.

There were also some differences between the Loss and the Comparison Groups (e.g., age, marriage duration), but controlling for these differential characteristics' effects in the analyses did not change the findings. Still, future studies should replicate these findings by collecting data from couples with similar sample characteristics. In addition, single-item measures were used to assess affectionate touch and intimacy, though single-item measures of romantic relationship quality are shown to have good psychometric qualities (Niehuis et al. 2022) and were assumed to cause less daily burden, especially for bereaved participants. Further investigation with more items is recommended.

To conclude, frequent affectionate touch was found to be positively associated with intimacy for both bereaved and non-bereaved couples. In addition, it is demonstrated that both partners' high levels of affectionate touch contributed more to their intimacy rather than any similarity of affectionate touch across partners. The findings of this study highlighted the potential role of affectionate touch for future interventions in protecting bereaved parents' romantic relationships after the loss of their child.

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APPENDIX A

Table A.1 Summary table for the data cleaning procedure

	Loss Group	Comparison Group
1) Number of rows in the original data	3485	3423
2) Preview responses	3	0
3) Did not enter the participant code, meaning that they did not see the rest of the survey	115	49
4) Unrelated participant codes	11	11
5) Deleted couples (e.g., participants who discussed their answers with their partners)	68	49
6) Code-gender mismatch (Women participants' codes should end with letter F and men participants' codes should end with the letter M)	24	34
7) Deleted rows based on the notes taken during the data collection (e.g a third person read the questions to the participant)	71	117
8) Entries at unrelated times (i.e., before 7 pm or after midnight)	86	0
9) Repeated entries on the same days (first entries were kept)	135	25
10) Other issues (e.g., couples who gave unreliable responses in cross-sectional survey was deleted in diary data)	143	10
11) Filled in the survey for more than 7 days	26	8
Final number of rows in the data	2803	3120

APPENDIX B

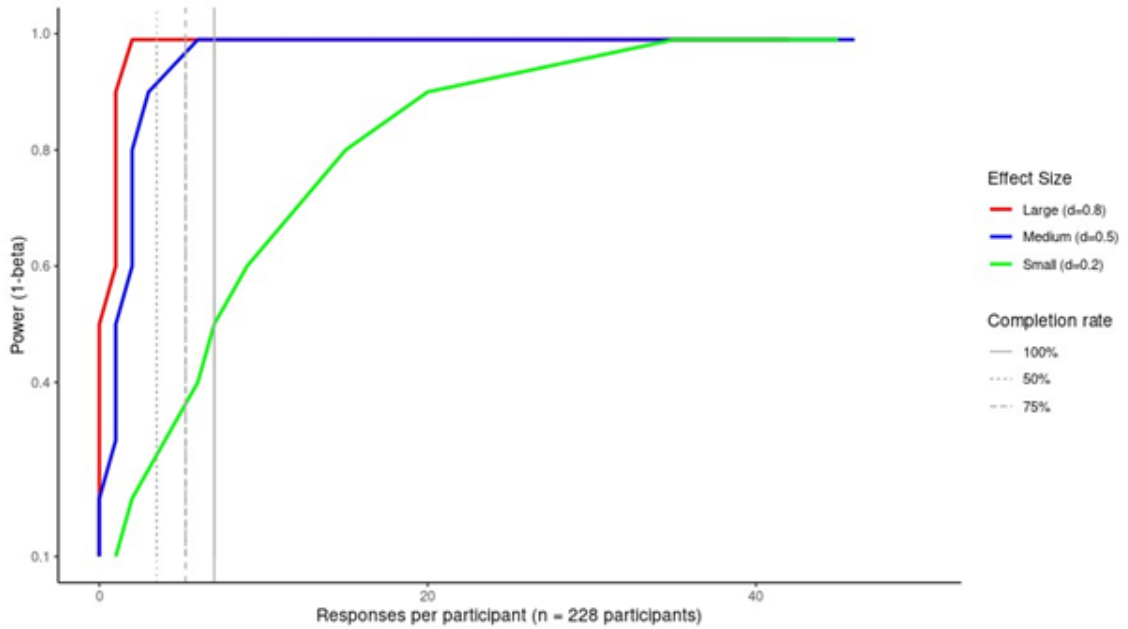
Table B.1 Affectionate touch distribution (%)

	$< -0.5z$	$-0.5z - 0.5z$	$> 0.5z$
Loss Group	31.7	55.1	13.2
Comparison Group	29.6	54.4	16.0

*Note.*The percentages indicate the distribution of differences between men's and women's standardized affectionate touch scores across seven days. The first column represents the percentage of couples where men had at least 0.5 z-score higher mean affectionate touch levels than women. The percentage in the second column suggests the z-score difference between partners varies between -.05 to .05. Third column shows the percentage of couples in which women have at least 0.5 z-score higher levels of mean affectionate touch than men. This distribution suggests that partners have varying affectionate touch levels, which is a precondition for the Response Surface Analysis (Shanock et al. 2010).

APPENDIX C

Figure C.1 Multilevel power curve



Note. This power curve for the multilevel model represents the sample's power to detect small, medium, and large effect sizes. The figure was produced based on the sample characteristics of the men in the Loss Group to be conservative in terms of sample size (N=228, number of days=7, number of responses per day=1, $\text{ICC}_{intimacy} = .56$).

APPENDIX D

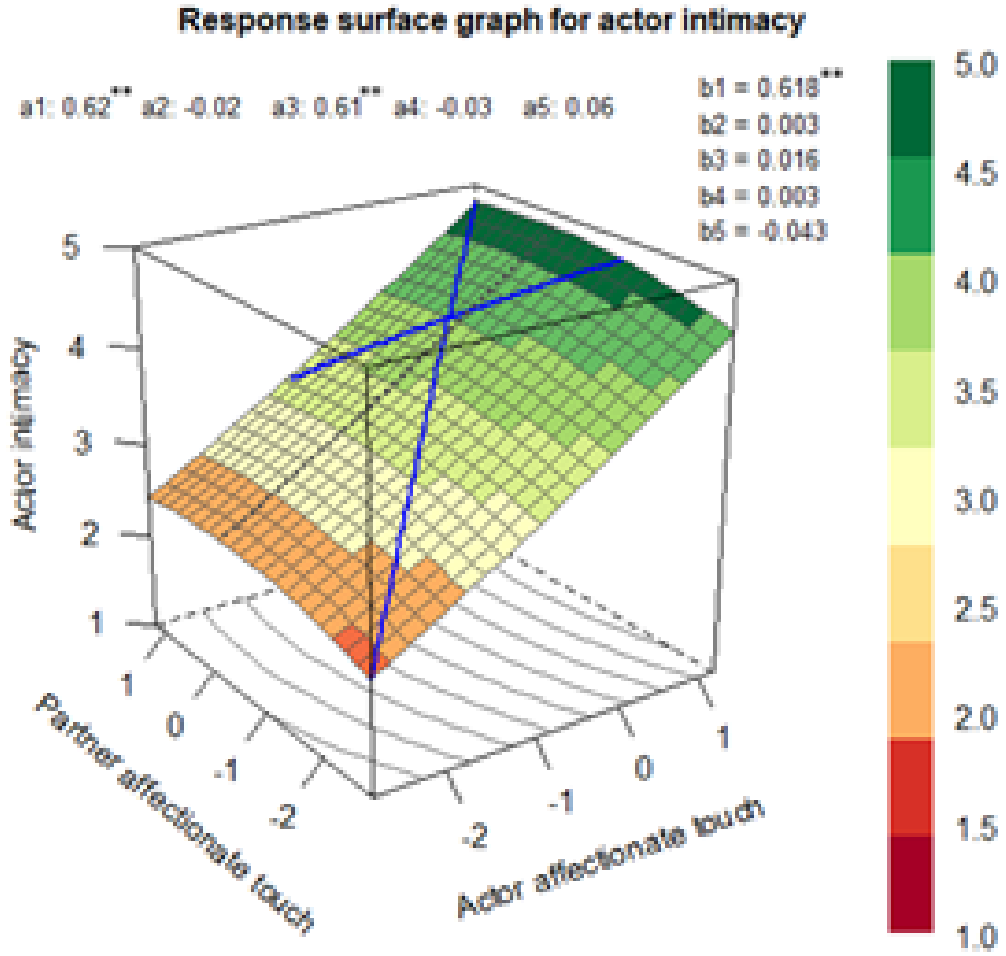
Table D.1 Wald test results for dyadic response surface analysis constraints

	Loss Group		Comparison Group	
	Wald	p	Wald	p
Actor effects ($b1_w = b2_m, b3_w = b5_m$)	2.884	.237	0.669	.716
Partner effects ($b2_w = b1_m, b5_w = b3_m$)	1.624	.444	0.500	.779
Interaction term ($b4_w = b4_m$)	0.000	.994	0.143	.705

Note.w = Women, m = Men. See Figure 2.1 in the main text for the regression coefficients b1-b5.

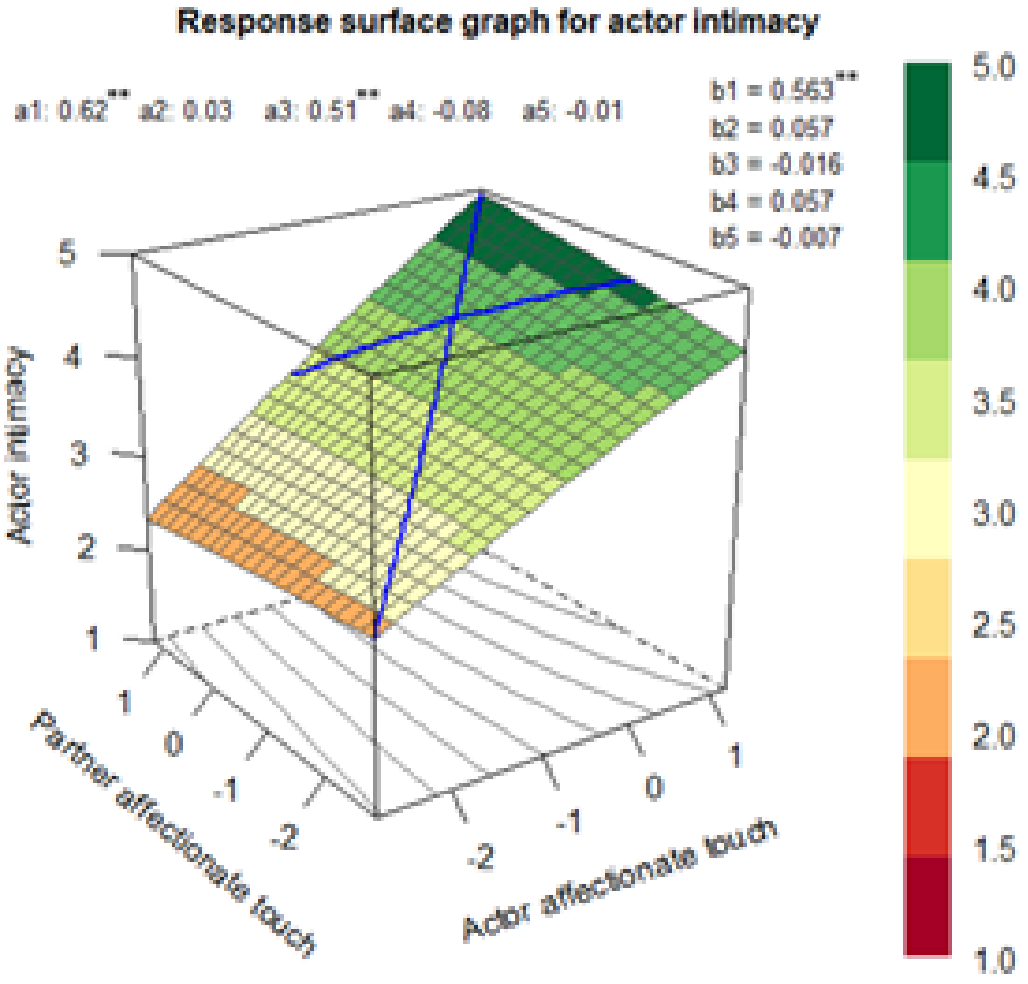
APPENDIX E

Figure E.1 Response surface graph for the loss group



Note. ** p<.001. This graph was produced using the RSA R package (Schönbrödt and Humberg, 2020).

Figure E.2 Response surface graph for the comparison group



Note. ** p<.001. This graph was produced using the RSA R package (Schönbrödt and Humberg, 2020).

APPENDIX F

Table F.1 Multilevel model results for lagged effects between affectionate touch and intimacy

	Loss Group			Comparison Group		
	b	*p*	95% CI	*b*	*p*	95% CI
Intimacy$_t$ ⇒ Affectionate Touch$_{t+1}$						
Actor effect (W)	-.05	.514	[-.18 - .09]	-.04	.472	[-.15 - .07]
Actor effect (M)	.09	.104	[-.02 - .20]	.12	.069	[-.01 - .24]
Partner effect (W)	-.08	.166	[-.18 - .03]	.04	.387	[-.06 - .14]
Partner effect (M)	-.02	.769	[-.17 - .13]	.09	.195	[-.05 - .24]
Intimacy$_t$ ⇒ Affectionate Touch$_{t+1}$						
Actor effect (W)	**.10**	**.005**	**[.03 - .17]**	.04	.301	[-.04 - .13]
Actor effect (M)	-.02	.646	[-.09 - .06]	.01	.811	[-.07 – .09]
Partner effect (W)	.04	.216	[-.03 - .11]	-.02	.529	[-.08 - .04]
Partner effect (M)	-.04	.439	[-.13 - .06]	.02	.700	[-.06 - .09]

Note. W=Women, M=Men. The bold result is significant. All reported results represent the lagged associations between affectionate touch and intimacy at the within-person level. Day1-6 in the diary study are represented by "t" whereas the consecutive day (Day 2-7) is represented by t+1.

APPENDIX G

Table G.1 Multilevel model results for affectionate touch's effect on intimacy in pregnancy loss and during/after-labor loss groups

	Pregnancy Loss			Labor/After Birth Loss		
	b	*p*	95% CI	*b*	*p*	95% CI
Within-person level						
Actor effect (W)	**.41**	**<.001**	**[.33 - .49]**	**.37**	**<.001**	**[.25 - .48]**
Actor effect (M)	**.38**	**<.001**	**[.30 - .46]**	**.43**	**<.001**	**[.31 - .55]**
Partner effect (W)	.04	.104	[-.01 - .09]	**.07**	**.045**	**[.00 - .15]**
Partner effect (M)	**.09**	**.049**	**[.00 - .17]**	-.03	.529	[-.11 - .05]
Between-person level						
Actor effect (W)	**.62**	**<.001**	**[.47 - .76]**	**.86**	**<.001**	**[.70 - 1.03]**
Actor effect (M)	**.49**	**<.001**	**[.35 - .60]**	**.41**	**.014**	**[.08 - .74]**
Partner effect (W)	.06	.198	[-.03 - .16]	**.20**	**.025**	**[.02 - .37]**
Partner effect (M)	.02	.713	[-.10 - .15]	-.18	.115	[-.41 - .04]

Note. W=Women, M=Men. The bold results are significant.