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Longitudinal relationships between insecure attachment and romantic relationship quality and stability in emerging adults: the mediating role of perceived conflict in daily life

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Abstract

Initiating a romantic relationship is an important developmental task in emerging adulthood. Previous research has shown a negative association between insecure attachment (such as anxious and avoidant attachment) and relationship quality/stability. However, few studies have examined the mechanism involved between them. The current study investigated the relationship between anxious/avoidant attachment and daily romantic relationship quality using an ambulatory assessment, the relationship between anxious and avoidant attachment and overall romantic relationship quality/stability using a longitudinal survey, and the mediating effect of perceived conflict between the above relationship. A total of 164 emerging adults were recruited to complete the study. Anxious/avoidant attachment were measured at baseline. Daily perceived conflict and daily relationship quality were measured by ambulatory assessment. Overall relationship quality and stability were measured at the longitudinal survey. For the ambulatory assessment, avoidant attachment could predict romantic quality in daily life whereas anxious attachment did not predict daily relationship quality, and perceived conflict mediated above relationship. For the longitudinal survey, anxious/avoidant attachment can predict overall relationship quality. However, the mediating role of overall perceived conflict was not significant. Anxious/avoidant attachment could predict lower relationship stability, and overall perceived conflict mediated above relationship. The findings indicated that insecure attachment had direct negative associations with romantic relationship quality/stability during emerging adulthood. Perceived conflict as a mechanism is more likely to work dynamically.

Keywords Insecure attachment · Perceived conflict · Relationship quality · Relationship stability · Ambulatory assessment · Longitudinal design

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Introduction

Romantic relationships form a vital part of people's lives, especially in emerging adulthood (Furman & Collibee, 2014). In this period, the sense of perceived intimacy shifts from parents to romantic partners (Laursen & Williams, 1997). How to initiate and maintain a romantic relationship then becomes a critical developmental task for emerging adults (Arnett, 2000; Collins, 2003; Roisman et al., 2004). Numerous studies have found that romantic relationships are demonstrably associated with mental health (Braithwaite et al., 2010; Braithwaite & Holt-Lunstad, 2017; Still, 2020). In particular, romantic relationships can be an important source of well-being for emerging adults (Gómez-López et al., 2019). Additionally, poor romantic relationship quality and breakup can increase an individual's psychological distress (Connolly & McIsaac, 2009; Roberson et al., 2018;

Shulman et al., 2017) and even generate suicidal ideations (Still, 2020). However, during emerging adulthood, romantic relationships are not stable (Barr et al., 2013; Blekesaune, 2008). Therefore, it is necessary to investigate what could impact romantic relationship quality/stability among emerging adults, which helps improve couples' intimate relationships.

Attachment theory is an important framework for explaining how adults form romantic relationships (Candel & Turliuc, 2019). Brennan et al. (1998) reviewed previous adult attachment theories. They concluded that anxious and avoidant attachment were the two key dimensions underlying most attachment theories that belong to insecure attachment styles. Those with high insecurity are an emotionally lower level of closeness and intimacy with their partner and fewer reciprocal interactions (Shaver & Mikulincer, 2005). Anxious attachment is characterized by the perception of being betrayed and abandoned, whereas avoidant attachment is characterized by the preference for emotional distance and fear of closeness (Hazan & Shaver, 1987; Shaver & Mikulincer, 2005). As people with anxious attachment have both a strong desire for closeness and an insufficient sense of security, they typically use hyperactivation strategies to maintain their romantic relationship. They tend to intensify the magnitude of their cognitions, emotions, and behaviors, both positive and negative ones, toward their partner. On the contrary, people with avoidant attachment are afraid of connections with other people and typically apply deactivation strategies. They have the tendency to decrease any kind of interactions or feelings, both positive and negative ones, in the romantic relationship (Shaver & Mikulincer, 2002). Specifically, compared with anxious attachment, avoidant attachment was more negatively associated with general satisfaction, connectedness, and general support in relationships. In contrast, anxious attachment was more positively associated with general conflict in relationships (Li & Chan, 2012).

According to the temporal adult romantic attachment model (Hadden et al., 2013), the relationships between insecure attachment and romantic relationship satisfaction are negative and become more negative for romantic relationships of longer durations. Previous meta-analyses and empirical studies have also shown that insecure attachment is a strong predictor of poor romantic relationship quality and instability for couples (Candel & Turliuc, 2019; Fitzpatrick & Lafontaine, 2017; Hadden et al., 2013; Li & Chan, 2012). However, few studies have investigated the mechanisms that may be involved in the relationship between insecure attachment and romantic relationship quality and stability (Lavy et al., 2013). Therefore, further exploring the mediating factor between the above relationships is necessary, as insights into this issue may have implications for adults with poor romantic relationships.

Perceived Conflict as a Mediator

Defined as the presence of disagreement, difference, or incompatibility between partners (Cahn, 1992), conflict is common and inevitable in couples' relationships (Feeney & Karantzas, 2017; Meyer & Sledge, 2021). According to attachment theory, different attachment styles influence perceptions of relationship interactions (Mikulincer & Shaver, 2007), such as perceived conflict. Some empirical studies have also found that higher insecure attachment levels were associated with more perceived couple conflict (Brassard et al., 2009; Campbell et al., 2005; Lafontaine et al., 2020). Furthermore, according to the model of attachment, conflict, and relationship quality (Feeney & Fitzgerald, 2019), insecure attachment shapes perceptual, physiological, and behavioral responses to conflict, which tend to erode relationship quality. For instance, Johnson et al. (2018) used a longitudinal design and found that more frequent conflict foretold reduced satisfaction and heightened perceived instability. Additionally, perceived conflict was found to be significantly associated with relationship satisfaction (Brassard et al., 2009). Usually, relationship satisfaction can reflect romantic relationship quality (Hadden et al., 2013; Woodhouse et al., 2009), and it is also a key correlate of relationship stability over time (Berscheid & Reis, 1998). Given that insecure attachment may be associated with high perceived conflict, which aggravates poor relationship quality/stability, in this study, it was speculated that perceived conflict plays a mediating role in the relationship between insecure attachment and romantic relationship quality/stability.

Notably, attachment styles are stable and resistant to change, whereas relationship outcomes (such as relationship quality and stability) are comparatively labile and may evolve over time (Hadden et al., 2013). Emerging adults' feelings of intimacy vary from day to day (Mehta et al., 2016). Additionally, conflicts are triggered by the situation at hand. However, previous studies of insecure attachment and romantic relationships have primarily used retrospective surveys (Brassard et al., 2009; Givertz et al., 2013), which do not capture dynamic variables accurately. Ambulatory assessment is mainly adopted to assess dynamic psychological processes and variables that change over time (Trull & Ebner-Priemer, 2014). Obtaining assessments of individuals' in real-world environments improves external validity (Trull, 2018). Moreover, ambulatory assessments can minimize the retrospective and heuristic biases of retrospective survey methods (Schaefer et al., 2020). Thus, ambulatory assessment is an important methodology for studying romantic relationships in daily life. Several ambulatory assessment studies have been conducted in the literature on perceived conflict (Rogers

et al., 2018; Testa et al., 2018) and relationship quality (Horn et al., 2018; Mehta et al., 2016). Therefore, in the current study, we explored the relationships between insecure attachment, daily perceived conflict, and relationship quality in daily life via ambulatory assessment. Moreover, many studies have used cross-sectional data (Brassard et al., 2009), which can only describe the concurrent relationships between variables. Longitudinal design can better understand the prospective associations between insecure attachment and romantic relationship quality/stability over time. Therefore, we applied a longitudinal survey to explore the impact of insecure attachment on overall romantic relationship quality and relation stability as well as the mechanism involved in this relationship.

The Current Study

In a sample of dating emerging adults, further understanding the dynamics and longitudinal potential relationships between insecure attachment and romantic relationship quality/stability is important. Thus, this study adopted a combination of ambulatory assessment and longitudinal survey designs to explore the impact of insecure attachment on relationship quality/stability and the mediating role of perceived conflict in these relationships. The ambulatory assessment focuses on individuals' current states and collects daily perceived conflict and daily romantic relationship satisfaction every three times per day for 14 consecutive days. The longitudinal survey designs include a baseline for assessment of anxious attachment and avoidant attachment and a follow-up test six months after baseline for assessing relationship quality/stability.

We hypothesized that at ambulatory assessment, (a) insecure attachment (i.e., anxious attachment and avoidant attachment) would predict lower romantic relationship quality in daily life and (b) insecure attachment (i.e., anxious attachment and avoidant attachment) would predict higher perceived conflict in daily life. Moreover, in the longitudinal design, we hypothesized that (c) insecure attachment (i.e., anxious attachment and avoidant attachment) would predict lower overall relationship quality/stability, and (d) higher insecure attachment (i.e., anxious attachment and avoidant attachment) would predict more overall perceived conflict. Finally, we hypothesized that (e) perceived conflict would mediate relationships (a) and (c) above.

Methods

Participants

Participant recruitment was done via social media, advertisements, and flyers at several universities in China. The advertisements and flyers were printed material that has distributed on the university premises. For social media, research assistants forwarded electronic recruitment posters through WeChat Friend Circle and WeChat Group. The enrollment criteria were as follows: (1) the participants should be aged 18 years or older; (2) they should be currently in the relationship stage, and the dating couples should have been in the romantic relationships for more than three months before the study; (3) the participants should be heterosexual (same-sex couples are at heightened risk for the breakup, same-sex relationships exist in a context of heterosexism, suppression, stigmatization, prejudice, discrimination, and violence which results in lower relationship quality [in China]; Khaddouma et al., 2015; Zhang et al., 2020); (4) the participants and their partner should report no history of mental disease (psychopathology is a risk factor for poor relationship outcomes among heterosexual couples, and we screened based on the DSM-5 to excluded participants with mental disease; Whisman, 2013); and (5) they should have stable access to mobile internet and WeChat (a Chinese messaging platform) during the study. A total of 164 dating participants who met the requirements took part in the study. At the baseline survey and ambulatory assessment, our sample consisted of 164 emerging adults with an average age of 20.95 years (SD = 2.284), of whom 83 (50.60%) were male. One hundred fifty participants took part in the follow-up study six months later. The participant attrition rate was 8.54%. Participants at follow-up measurement consisted of 77 females (51.30%) and 73 males (48.70%) with an average age of 21.57 years (SD = 2.40).

Procedures

This study was approved by the research ethics committee of the authors' university. Eight assistants were engaged in the collect data process, with each assistant responsible for about 21 participants. Each assistant obtained the participants' contact information (added WeChat friends). This study involved three procedures. In the first step, participants were asked to join in an explanatory meeting. Researchers introduced the procedure of the study to the participants, and all the participants signed an informed consent form. Then, the researchers distributed questionnaires about adult attachment (anxious attachment and avoidant attachment) to the 164 participants. In the second step, participants took part in the ambulatory assessment procedure. Over the following 14 consecutive days, participants were invited to complete a short questionnaire including measures of state perceived conflict, positive/negative affect, and romantic relationship quality in daily life three times a day (at 10:00 am, 4:00 pm, and 10:00 pm). The procedure was completed online, and the questionnaire was accessed via a web link that was sent to the participants' mobile phones via WeChat at scheduled

time-points each day. All participants were asked to permit new message notifications from WeChat. They were asked to fill out the questionnaires within 30 min each time the questionnaire was launched. Also, if the participants did not complete the questionnaire ten minutes after the web link was sent, we would send messages to remind the participants to complete the questionnaire. If a questionnaire was not completed within 30 min of receiving the link, then the data at that time-point was abandoned. In a total of 14 days, with three times weblink questionnaire completions per day, each participant would theoretically need to complete the questionnaire 42 times. If the number of questions completed was fewer than 30 times, this participant's data could not be included in the analyses, and this participant could not obtain compensation. In the third step, six months after first step, a follow-up survey focused on the quality and stability of romantic relationships using a questionnaire was administered to the same group of participants. After the ambulatory assessment, the compensation is ¥100 China Yuan (CNA) and 10 CNAs after the follow-up.

Time 0 (T0) is denoted as for the baseline, measuring anxious attachment and avoidant attachment. Time 1 (T1) is denoted as the ambulatory assessment, measuring daily perceived conflict and daily romantic relationship quality. Time 2 (T2) is denoted as the longitudinal survey, measuring overall relationship quality and relationship stability.

Measures

Anxious attachment and avoidant attachment Anxious attachment and avoidant attachment were measured using the Chinese Adaptation of the Experiences in Close Relationships Inventory Scale (ECR) (Brennan, Clark, & Shave, 1998; Li & Kato, 2006). The questionnaire consists of 36 items asking participants how they generally feel in romantic relationships and contains two subscales (anxious attachment and avoidant attachment). Eighteen items assessed anxious attachment, and 18 items assessed avoidant attachment. Respondents are asked to endorse items on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Subscale scores were obtained by reverse keying negatively worded items and calculating the mean of the 18 items. High scores on each of the dimensions represent a corresponding anxious attachment and avoidant attachment style. Both subscales showed acceptable Cronbach's α values (anxious attachment $\alpha = 0.811$, avoidant attachment $\alpha = 0.842$).

Daily Perceived Conflict One item was used to assess participants' perceived conflict (i.e., In the past two hours, to what extent do I have conflicts with him/her?) (Sladek et al., 2016). The item was rated on a 7-point scale from 1 (not at all) to 7 (very much). Higher scores represent a higher level of perceived conflict by the individual in the past two hours. The intra class coefficient (ICC) of the daily perceived conflict was 0.125. Cohen (1988) suggested that we could not ignore the similarity when the ICC was more than 0.059, and a hierarchical linear model should be used to process data.

Daily Affect Participants rated their current levels of several emotions on a 7-point scale from 1 (not serious at all) to 7 (extremely serious) using of the following item: "Right now, how ____ do you feel?". Five items ("anxious", "depressed", "angry", "nervous", "feeling out of control about important things") were combined into a measure of negative affect, and three items ("happy", "related", "energetic") were combined into a measure of positive affect. These items were largely drawn from the Positive and Negative Affect Scale (PANAS; Watson et al., 1988) and the past ambulatory assessment of daily emotions (Reichenberger et al., 2018; Spears et al., 2019). The ICCs of positive and negative emotion were 0.389 and 0.487, respectively.

Daily Romantic Relationship Quality One item was used to assess participants' daily romantic relationship quality at each time point (i.e., Now, I am satisfied with the romantic relationship between me and him/her at this moment; Campbell et al., 2005; Langer et al., 2020). The item was rated on a 7-point scale from 1 (not at all) to 7 (very much). A higher score means greater daily romantic relationship quality. The ICC of the daily romantic relationship quality was 0.528.

Overall Romantic Relationship Quality We measured the degree to which participants were satisfied with the quality of their relationship with partners using the revised Chinese version of the Intimate Relationship Quality Questionnaire (IRQQ; Shulman et al., 1997; Li, 2010). The Chinese version of the IRQQ has 23 items rated on a 5-point scale from 1 (not at all) to 5 (very much). The average scores of the entire questionnaire were calculated. Higher scores indicate higher levels of romantic relationship quality. The Cronbach's α value for this questionnaire was measured as 0.991, indicating that the items showed good internal consistency.

Stability of Romantic Relationship Three items were used to assess the stability of romantic relationships (i.e., "Since the last test, the status of your relationship is single or in love?" "Are you still in love with the same person you took the test with before?" and "During these six months, have you and your current lover experienced a breakup?"). Individuals who had broken up and those who had experienced a breakup within six months were considered to have an unstable romantic relationship, denoted by "0". If the participant's couple at the T2 survey is the same person as at the T0 survey and at the same time the participant and has

not experienced a breakup, the participant was considered to have a stable romantic relationship, denoted by "1".

Data Analysis

To examine our assumptions, Mplus 8.3 was used to analyze the ambulatory assessment and longitudinal survey data. Ambulatory assessment, if the antecedent is measured at Level 2 (between-person level), while the mediator and dependent variables are at Level 1(within-person level), it is labeled as 2-1-1 (Zhang et al., 2008). We used Bayesian estimation for multilevel mediational models. Bayesian multilevel mediation analysis is not only conceptually natural, but also has computational advantages (Yuan & MacKinnon, 2009). To ensure stable parameter estimates, all models used a minimum of 10,000 Bayesian iterations. See Fig. 1 for the multilevel mediational model.

Ambulatory assessment is an important tool that minimizes retrospective biases when gathering self-reports from daily life experiences (Trull, 2018). Therefore, we calculated the mean of daily perceived conflict for each individual as overall perceived conflict at T1. Mediation models with anxious/avoidant attachment at T0 as a predictor, overall perceived conflict at T1 as a mediator and overall romantic quality and stability at the T2 as a dependent variable were tested. Specifically, we used logistic regression to examine the mediating model and the odds ratio (OR) to express the effect size of a binary logistic regression because the relationship stability is a binary outcome. To test the longitudinal survey hypothesized mediating effect for statistical significance, bootstrapping was applied using 5000 bootstrapped replications. An indirect effect is considered statistically significant when the 95% bootstrap confidence interval does not include zero (Hayes & Scharkow, 2013).

In addition, a study employing ambulatory assessment shows a negative association between prior-day negative affect and present-day daily intimacy in couples (Mehta et al., 2016). Therefore, positive affect and negative affect as covariates were included in the multilevel model. A longitudinal survey found that relationship breakup and relationship satisfaction were unrelated to changes in negative or positive emotion expression during conflict discussion (Ha et al., 2013). Thus, we did not control for positive and negative affect in the longitudinal analysis.

Results

Dynamic Analysis Results

As each of the 164 participants received 42 message reminders, a maximum of 6888 reports were possible. Participants provided 6525 valid responses (94.73%), representing a good response rate for studies using an ambulatory assessment approach. Each participant completed 39.79 assessments on average.

We found that anxious attachment did not predict daily romantic relationship quality. Individuals with higher values for avoidant attachment had less daily romantic relationship quality (Estimate = −0.558, *SD* = 0.092, 95% CI = [−0.743, −0.377]). Anxious attachment and avoidant attachment significantly predicted daily perceived conflict (Estimate = 0.079, *SD* = 0.030, 95% CI = [0.021, 0.138]; Estimate = 0.117, *SD* = 0.039, 95% CI = [0.041, 0.195]). Daily perceived conflict played a role in mediating between anxious/avoidant attachment and daily romantic relationship quality (with the indirect effect = −0.029/−0.044, *SD* = 0.011/0.015, 95% CI = [−0.052, −0.008]/[−0.073, −0.015]). When participants had greater anxious/avoidant attachment, they exhibited higher daily perceived conflict and then experienced less daily romantic relationship quality. The results are shown in Table 1.

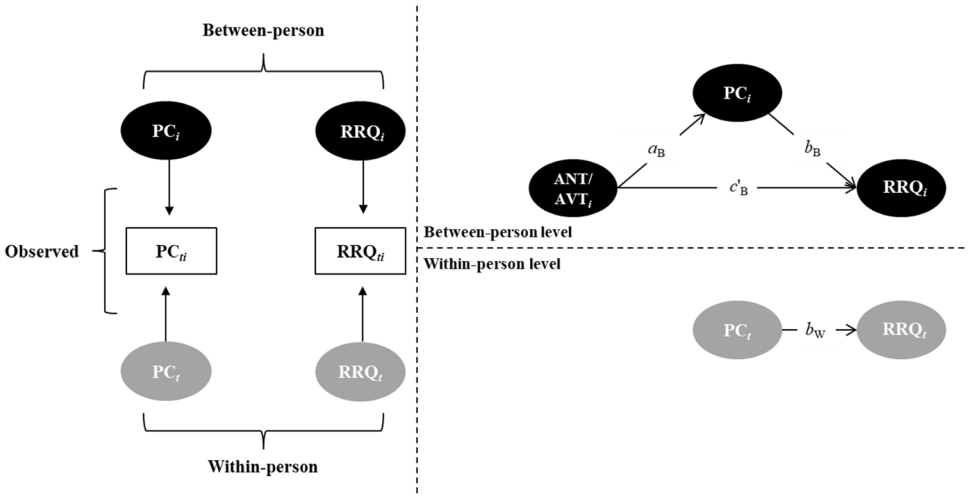

Fig. 1 Multilevel mediation model tested. ANT, anxious attachment; AVT, avoidant attachment; PC, daily perceived conflict; RRQ, daily romantic relationship quality; The left panel shows the decomposition of observed variables (rectangles) into their latent within-person (grey ellipses) and between-person (black ellipses) components. The right panels show the model estimated at the within- and between-person levels

Table 1 Results of multilevel mediation models testing effects of anxious/avoidant attachment on daily romantic relationship quality via daily perceived conflict

Predictor	Parameter	Estimate	*SD*	95% CI	
				LLCI	ULCI
Anxious attachment	Within-person level				
	b_{W}	−0.375	0.013	**−0.400**	**−0.349**
	PA_{W}	0.138	0.011	**0.117**	**0.159**
	NA_{W}	−0.124	0.013	**−0.148**	**−0.099**
	Between-person level				
	a_{B}	0.079	0.030	**0.021**	**0.138**
	b_{B}	−0.375	0.013	**−0.400**	**−0.349**
	c'_{B}	−0.116	0.075	−0.261	0.030
	PN_{B}	0.138	0.011	**0.117**	**0.159**
	NA_{B}	−0.124	0.013	**−0.148**	**−0.099**
	indirect $_{B}$	−0.029	0.011	**−0.052**	**−0.008**
	total $_{B}$	−0.146	0.076	−0.293	0.002
Avoidant attachment	Within-person level				
	b_{W}	−0.375	0.013	**−0.401**	**−0.350**
	PA_{W}	0.137	0.011	**0.116**	**0.158**
	NA_{W}	−0.122	0.013	**−0.146**	**−0.097**
	Between-person level				
	a_{B}	0.117	0.039	**0.041**	**0.195**
	b_{B}	−0.375	0.013	**−0.401**	**−0.350**
	c'_{B}	−0.515	0.091	**−0.693**	**−0.338**
	PA_{B}	0.137	0.011	**0.116**	**0.158**
	NA_{B}	−0.122	0.013	**−0.146**	**−0.097**
	indirect $_{B}$	−0.044	0.015	**−0.073**	**−0.015**
	total $_{B}$	−0.558	0.092	**−0.743**	**−0.377**

Note. PA, positive affect; NA, negative affect; Anxious attachment and avoidant attachment were assessed at baseline (T0); Daily perceived conflict, daily romantic relationship quality, PA, and NA were assessed during ambulatory assessment (T1); CI = Bayesian credibility interval; Parameters in bold have 95% CIs that do not cross zero

Follow-Up Analysis Results

Significant correlations between anxious attachment and avoidant attachment, overall perceived conflict, overall romantic relationship quality and stability are shown in Table 2.

The predictive effect of anxious attachment (Estimate = −0.461, *SE* = 0.062, 95% CI = [−0.571, −0.332]) and avoidant attachment (Estimate = −0.183, *SE* = 0.073, 95% CI = [−0.401, −0.060]) at T0 on relationship quality at T2 was shown to be significant. The predictive effects of anxious attachment (Estimate = 0.224, *SE* = 0.087, 95% CI = [0.038, 0.379]) and avoidant attachment

Table 2. Means, standard deviations (*SD*) and correlations of follow-up variables

	M	*SD*	1	2	3	4	5
1.Anxious attachment	3.845	0.818	1				
2.Avoidant attachment	2.814	0.644	0.151	1			
3.Perceived conflict	1.253	0.316	0.235**	0.224**	1		
4.Relationship quality	4.129	0.643	−0.183*	−0.461***	−0.193*	1	
5.Relationship stability	–	–	−0.175*	−0.211*	−0.342***	0.242**	1

Note: $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Note. Anxious attachment and avoidant attachment were assessed at baseline (T0); Perceived conflict, the mean of daily perceived conflict for each individual during ambulatory assessment (T1); Relationship quality and relationship stability were assessed at the longitudinal survey (T2)

(Estimate = 0.235, *SE* = 0.079, 95% CI = [0.080, 0.391]) at T0 on perceived conflict at T1 were shown to be significant. However, when we entered the mediating variable in the model, the results showed that the relationship between anxious/avoidant attachment and relationship quality was not mediated by perceived conflict. We also found that the predictive effect of anxious attachment (OR = 0.454, *SE* = 0.174, 95% CI = [0.218, 0.902]) and avoidant attachment (OR = 0.608, *SE* = 0.180, 95% CI = [0.321, 1.009]) at T0 on relationship stability at T2 were significant. When we entered the mediating variable in the model, the results showed that the relationship between anxious/avoidant attachment and relationship stability was mediated by overall perceived conflict (with the total natural indirect effect = 0.797/0.829, *SE* = 0.092/0.068, 95% CI = [0.603, 0.959]/[0.685, 0.953]). The mediating analysis results are shown in Tables 3 and 4.

Table 4 Bootstrap confidence intervals for indirect, direct, and total effects of insecure attachment on relationship stability (relationship stability is a binary outcome)

Paths	Odds Ratios Estimate	*SE*	Bootstrap 95% LLCI	Bootstrap 95% ULCI
Anxious attachment → perceived conflict → relationship stability				
Tot natural IE	0.797	0.092	**0.603**	**0.959**
Pure natural DE	0.570	0.213	**0.285**	**1.118**
Total effect	0.454	0.174	**0.218**	**0.902**
Avoidant attachment → perceived conflict → relationship stability				
Tot natural IE	0.829	0.068	**0.685**	**0.953**
Pure natural DE	0.733	0.210	**0.398**	**1.216**
Total effect	0.608	0.180	**0.321**	**1.009**

Note. Anxious attachment and avoidant attachment were assessed at baseline (T0); Perceived conflict, the mean of daily perceived conflict for each individual during ambulatory assessment (T1); Relationship stability was assessed at the longitudinal survey (T2); Tot natural IE = Total natural indirect effect; Pure natural DE = Pure natural direct effect; Parameters in bold have 95% CIs that do not cross zero

Discussion

The current study presents empirical evidence of the relationships between insecure attachment, perceived conflict and romantic relationship quality/stability via ambulatory assessment and longitudinal surveys. Our study illustrates the utility of investigating associations between insecure attachment and romantic relationship quality/stability in emerging adult couples as well as the potential mechanism. By investigating relational processes in emerging adult romantic relationships, we may understand the predictors that ensure either the quality or stability of these romantic relationships.

Our results were in line with predictions for the most part. Specifically, both dynamically and longitudinally, we found that higher levels of avoidant attachment predicted lower levels of romantic relationship quality. According to the temporal adult romantic attachment model (Hadden et al., 2013), the negative association between avoidant attachment and relationship satisfaction will be more negative as relationship durations increase. For the longitudinal study, higher insecure attachment levels predicted lower relationship stability in six months. This result is consistent with prior findings (Li & Chan, 2012; Mikulincer & Shaver, 2007), suggesting that insecure attachment styles

Table 3 Results of longitudinal mediating effects of insecure attachment on relationship quality via overall perceived conflict

Paths		Estimate	*SE*	Bootstrap 95% LLCI	Bootstrap 95% ULCI
Anxious attachment → perceived conflict → relationship quality					
Anxious attachment → relationship quality	total effect	−0.461	0.062	**−0.571**	**−0.332**
Anxious attachment → relationship quality	direct path	−0.440	0.064	**−0.559**	**−0.312**
Anxious attachment → perceived conflict	a-path	0.224	0.087	**0.038**	**0.379**
Perceived conflict → relationship quality	b-path	−0.094	0.069	−0.222	0.038
a-path * b-path	indirect path	−0.021	0.019	−0.067	0.009
Avoidant attachment → perceived conflict → relationship quality					
Avoidant attachment → relationship quality	total effect	−0.183	0.073	**−0.401**	**−0.060**
Avoidant attachment → relationship quality	direct path	−0.146	0.073	**−0.370**	**−0.018**
Avoidant attachment → perceived conflict	a-path	0.235	0.079	**0.080**	**0.391**
Perceived conflict → relationship quality	b-path	−0.159	0.083	−0.312	0.009
a-path * b-path	indirect path	−0.037	0.023	−0.112	0.004

Note. Anxious attachment and avoidant attachment were assessed at baseline (T0); Perceived conflict, the mean of daily perceived conflict for each individual during ambulatory assessment (T1); Relationship quality was assessed at the longitudinal survey (T2); Parameters in bold have 95% CIs that do not cross zero

predict worsening relationship quality in emerging adults. Individuals with insecure attachment show higher levels of anxious attachment and/or avoidant attachment based on a negative representation of themselves and/or others (Bartholomew & Horowitz, 1991). They perceive themselves as not worthy of love and feel uncomfortable with depending on others. Specifically, anxious attachment can be attributed to the tendency of anxiously attached individuals to be highly vigilant toward signals of rejection or potential abandonment, be emotionally dependent and display intense distress when the partner is perceived as unavailable (Li & Chan, 2012). However, for ambulatory assessment, we found that anxious attachment did not predict daily romantic relationship quality. For the longitudinal survey, we found that higher levels of anxious attachment predicted lower levels of overall romantic relationship quality. These findings may indicate that the detrimental anxious attachment impact on romantic relationship quality mainly occurs for a long time rather than the short term.

Consistent with our expectations, we found that insecure attachment predicts higher daily perceived conflict dynamically, and insecure attachment predicts higher overall perceived conflict (average of daily perceived conflict for each person) longitudinally. The effects of attachment in conflict situations are pervasive (Feeney & Fitzgerald, 2019). Additionally, insecure attachment shapes perceptions of conflict. Campbell et al. (2005) found that more anxiously attached individuals perceived greater conflict in their romantic relationship daily and reported feeling more hurt by perceived conflict in their relationships than less anxiously attached individuals. For individuals with avoidant attachment, conflict is often perceived as a threat to independence (Brassard et al., 2009), and avoidant spouses have difficulty asking for support constructively (Feeney & Fitzgerald, 2019). Our study suggests that insecure attachment styles may result in more perceived conflict in daily life when interacting with partners. From a longitudinal perspective, these associations may induce an overall high-level of conflict over time.

As predicted, the relationship between insecure attachment and daily romantic relationship quality was mediated by daily perceived conflict. This finding may imply that anxious attachment and avoidant attachment increase perceived conflict in daily life and then decrease daily romantic relationship quality. However, inconsistent with our expectations, the relationship between insecure attachment and overall relationship quality was not mediated by overall perceived conflict from a longitudinal perspective. These results are inconsistent with the prior model (Feeney & Fitzgerald, 2019), suggesting that insecure attachment predicts more conflict in couples and that perceived conflict erodes relationship quality. The current study only adopted Chinese participants, and the inconsistent results between the previous and the current study may be because of cultural differences.

As predicted, the relationship between insecure attachment and relationship stability was mediated by overall perceived conflict. Specifically, compared with less anxious individuals, individuals high in anxious attachment would perceive greater conflict and more conflict escalation in their romantic relationships (Campbell et al., 2005). And perceived more conflict portend the higher possibility of breakup for their relationships in the future. Furthermore, avoidant attachment is characterized by distrust in the partner (Shaver & Mikulincer, 2005). When at least one relationship partner was low in trust, both partners felt less close following the conflict. It then affects the stability of the romantic relationship.

Limitations

This study presents some limitations. First, all of the participants were healthy unmarried emerging adults with relatively high levels of education. It is unknown whether the results can be generalized to other samples, such as married couples. Second, the current study only adopted Chinese participants how the findings generalize to other cultural contexts warrants future research. Third, all of the participants were heterosexual couples. It is unknown whether the results can be generalized to homosexual couples. Fourth, individuals' feelings and thoughts in romantic relationships can affect their partners. Future studies may adopt the actor-partner interdependence model to examine the relationships between attachment styles, perceived conflict and relationship quality/stability. Fifth, for the follow-up design, the measurement interval was too short, and longer intervals should be used in future studies.

Implications

Findings from this study show that insecure attachment predicts romantic relationship quality/stability during emerging adulthood. Poor relationship quality and breakup can have negative emotional, physical and/or behavioral effects for romantic partners. Understanding how and why insecure attachment affects relationship quality/stability in both dynamic and longitudinal aspects is crucial to facilitating a richer understanding of romantic relationships. Additionally, emerging adults' early experiences will mark the course of their romantic relationships. Specifically, individuals with higher insecure attachments and perceived higher levels of conflict in their interactions with their spouse are at risk for decreased quality of romantic relationships and breakups. Attachment-related interventions effectively reduce the maladaptive responses that lead to conflict escalation and promote security and emotional connection within the

couple bond (Feeney & Fitzgerald, 2019), which will help the individual to build a firm and long-term romantic relationship with their partner. Furthermore, it is vital to help researchers and therapists find more ways to prevent and reduce poor relationship quality or instability.

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Availability of Data and Material The manuscript does not contain clinical studies or patient data. The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request, Wei Xu. The data are not publicly available due to restrictions.

Declarations

Conflict of Interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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