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Changes in rejection sensitivity across adolescence and emerging adulthood: Associations with relationship involvement, quality, and coping

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ABSTRACT

Using a sample of 110 Israeli youth (72% female), the present study investigates associations between initial levels of rejection sensitivity as well as changes in rejection sensitivity from age 16 to age 23 and relationship involvement, quality, and (growth following) coping with relationship stress. Results showed that rejection sensitivity generally decreased over time into the transition to adulthood. Furthermore, levels of rejection sensitivity at age 16 predicted whether young people were romantically involved by age 23, as well as the quality of their relationships. Yet, the change in level of rejection sensitivity over time explained far more the quality of later romantic relationships and competence in coping with relationship stress than the initial level of rejection sensitivity. These findings have important implications for examining the role of changes in personality attributes such as rejection sensitivity in the transition from adolescence to adulthood.

1. Introduction

Forming and establishing meaningful, committed romantic relationships are important endeavors for adolescents and emerging adults (Arnett, 2015). Concerns about being rejected by a romantic partner can complicate this process. Rejection sensitivity refers to the tendency to anticipate rejection, interpret neutral situations as rejecting and hostile, and overreact to these interpretations (Downey & Feldman, 1996). Findings from cross-sectional empirical research have consistently supported the link between rejection sensitivity and outcomes in late adolescence and emerging adulthood, including relationship dissatisfaction (Downey & Feldman, 1996, 2004; Galliher & Bentley, 2010), depressive symptoms (Norona, Roberson, & Welsh, 2016), and aggressive behaviors (Galliher & Bentley, 2010; Romero-Canyas, Downey, Berenson, Ayduk, & Jan Kang, 2010). Importantly, relatively little research on the longitudinal associations between rejection sensitivity and individual and relational qualities later in life can be found. Using a sample of Israeli youth, the present study investigates associations between initial levels of rejection sensitivity as well as changes in rejection sensitivity from age 16 to age 23 and relationship involvement, quality, and growth following relationship stress.

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1.1. Rejection sensitivity and romantic experiences

Rejection sensitivity is a relational schema (Furman & Wehner, 1997) that affects the lenses through which individuals see their interactions with others (Downey & Feldman, 1996). Originating in childhood, individuals with parents who display rejecting behaviors tend to anticipate their parents' negativity in order to protect themselves against it (Bowlby, 1984; Downey & Feldman, 1996; Downey, Lebolt, Rincón, & Freitas, 1998). This sensitivity to rejection is often carried forward into adolescence and emerging adulthood, affecting young people's interactions with peers and romantic partners. For example, during romantic interactions in particular, individuals who are sensitive to rejection continue to expect that their romantic partners will behave with negative intentions, even though these behaviors might be generally positive or neutral (Norona, Salvatore, Welsh, & Darling, 2014). Indeed, observational studies have shown that during conversations with romantic partners, adolescents who are more sensitive to rejection perceive more conflict with their romantic partners compared to those who are less sensitive to rejection (Galliher & Bentley, 2010). Conflictual interactions are particularly difficult for those who are sensitive to rejection because of the potential threat of romantic dissolution (Downey, Bonica, & Rincón, 1999).

The discoloration of romantic interactions might explain the associations between rejection sensitivity and aggressive behaviors toward romantic partners (Downey, Irwin, Ramsay, & Ayduk, 2004; Galliher & Bentley, 2010; Romero-Canyas, Downey, Berenson, Ayduk, & Kang, 2010). Specifically, individuals who are sensitive to rejection perceive their partners as behaving in hostile and rejecting ways; as a result, they react aggressively in retaliation to protect themselves. Consequently, rejection-sensitive individuals' attempt to protect themselves results in a self-fulfilling prophecy, as romantic partners react negatively to aggressive behaviors (Romero-Canyas et al., 2010). Relatedly, rejection sensitivity is associated with withholding negative feelings about their relationships with their romantic partners because the expression of such opinions might lead to conflict (Harper, Dickson, & Welsh, 2006). This cyclical dance of perceived rejection, hostility, and withholding feelings might account for the relationship between rejection sensitivity and relationship dissatisfaction (Galliher & Bentley, 2010). Taken together, this diminished quality in romantic relationships is likely to affect the schema of those who are sensitive to rejection, which in turn can explain the difficulty to sustain long-term, committed romantic relationships in the future.

1.2. Rejection sensitivity and its longitudinal associations

Despite the abundance of research on the associations across rejection sensitivity and individual and relationship qualities, the majority of these studies are cross-sectional (e.g., Besicki, Agnew, & Yildirim, 2016; Galliher & Bentley, 2010; Göncü & Sümer, 2011; Romero-Canyas & Downey, 2013). Relatively little research on the longitudinal associations of rejection sensitivity exist. To our knowledge, only one study (Hafen, Spilker, Chango, Marston, & Allen, 2014) examined the effect of rejection sensitivity over time on romantic relationships assessing rejection sensitivity at age 16 and its association with relationship qualities at age 22. Using self-report measures and behavioral observations, Hafen et al. (2014) found that those who reported higher rejection sensitivity at age 16 tended to be single at age 22. Further, those who were high in rejection sensitivity at age 16 but were in a romantic relationship at age 22 reported more anxiety and avoidant behaviors with their romantic partners, behaved in ways that negatively impacted their romantic partners' independence and interdependence, and behaved submissively in their romantic relationships (Hafen et al., 2014).

This long-term effect of rejection sensitivity can be understood within the tenets of the attachment theory showing how relational schemas are re-enacted in future relationships (Sroufe & Fleeson, 1986). This pattern of coherence aligns with existing research on the continuity in relationship characteristics from adolescence to adulthood. For example, Seiffge-Krenke (2003) showed that the quality of a relationship with a partner at age 17 is associated with bonded love during emerging adulthood. Additionally, maladaptive relationship characteristics that contribute to low relationship quality seem to continue from adolescence to adulthood (Madsen & Collins, 2011; Smith, Welsh, & Fite, 2010). Thus, considering the self-perpetuating nature of the biased behaviors of rejection-sensitive individuals (Galliher & Bentley, 2010), these individuals are also more likely to experience difficulties in their future relationships.

1.3. Changes in rejection sensitivity over time

Early romantic experiences have been described as the “training ground” for romantic experiences later in life (Shulman & Connolly, 2013, p. 28). However, individual and relational qualities are not yet set in stone; rather, research suggests that relationship skills build upon one another. For example, at the couple level, Seiffge-Krenke (2003) showed that romantic relationship quality improves from adolescence to early adulthood. Furthermore, at the individual level, as they grow older, adolescents begin to use more productive strategies to solve problems with their romantic partners (Laursen, Finkelstein, & Townsend Betts, 2001; Shulman, Tuval-Mashiach, Levran, & Anbar, 2006).

Conceptually, it might be questioned whether relational schemas also change from adolescence to early adulthood and whether rejection sensitive individuals' views and interactions also improve with age. Indeed, Hafen et al. (2014) demonstrated that rejection sensitivity decreased from adolescence to early adulthood, suggesting that young people either learn to cope with rejection or develop alternate views that change the ways they perceive interactions. These changes are consistent with research on personality across the lifespan, which suggest that individual characteristics shift throughout adulthood (Donnellan, Hill, & Roberts, 2015; Specht et al., 2014). During the transition to adulthood, individuals become more socially dominant, conscientious, and emotionally stable; for example, they become more open to new experiences and are less defensive (Roberts, Walton, & Viechtbauer, 2006). According to Arnett (2015), as youth approach the transition to adulthood and consider their roles as romantic partners and join the workforce in

meaningful careers, their personalities and abilities to adapt expand to accommodate their new roles and responsibilities. Additionally, as young people gain more experience in romantic relationships, their abilities to regulate emotions and develop insight regarding their needs in desires might facilitate changes in relational schemas such as rejection sensitivity (Davila & Lashman, 2016). Taken together, these findings point to the dynamic nature of individual and relational qualities as they progress from adolescence to early adulthood.

Overall, whether individual and relational qualities are improving, staying the same, or declining over time, less is known about *changes* in rejection sensitivity in particular and how those changes are related to romantic experiences. The only existing findings by Hafen et al. (2014) found that increases in rejection sensitivity from ages 16 to 19 predicted greater avoidance and anxiety in their relationships as well as more difficulties in interacting competently with a partner. However, the nature of romantic relationships during emerging adulthood is more complex. An increasing number of emerging adults were observed to be involved in short relationships or casual sexual encounters (Claxton & van Dulmen, 2013; Shulman & Connolly, 2013) in which they might be pressured to become sexually involved (Vrangelova, 2015). In addition, due to the common changes in relationships, emerging adults need to cope quite often with breakups (Shulman, Seiffge-Krenke, Scharf, Lev-Ari, & Levy, 2017). While some emerging adults can also be found in lasting romantic relationships, not all of these relationships are necessarily adaptive and characterized by support and intimacy (Shulman, Seiffge-Krenke, Scharf, Bezalel Boiangui, and Tregubenko (2016)). Thus, considering the complexity of emerging adults' romantic relationships, it is important to assess relationships in a more comprehensive manner compared to the assessment reported by Hafen et al. (2014). It is important to consider their instabilities, sexual encounters, and capacity in coping with breakups (Claxton & van Dulmen, 2013). Furthermore, even when emerging adults report to be in a stable relationship, it is important to examine the extent to which their relationship is close and supportive or distant from each other (Shulman et al., 2016). Considering the difficulties that individuals high on rejection sensitivity have with initiating relationships and handling them (Hafen et al., 2014; Romero-Canyas & Downey, 2013), it is likely that rejection sensitivity might be associated with an increasing tendency to be involved in short romantic and sexual encounters. Thus, the current study examined the extent to which rejection sensitivity and its changes over time are associated with the way emerging adults handle the different aspects of their romantic and sexual encounters.

1.4. The present study

The present longitudinal study examines the roles of initial level of rejection sensitivity and changes in rejection sensitivity from ages 16 to 23 on the involvement and quality of romantic relationships at 23. Overall, we intend to deepen our knowledge of the ways rejection sensitivity affects young people as they continue to pursue romantic relationships and encounters.

1.4.1. Hypotheses

Considering both the consistency and the changeability of personality constructs across age (Roberts et al., 2006), we first examined whether rejection sensitivity at age 16 predicts the nature of romantic and sexual involvement, relationship quality with current or past romantic partners and coping with stressful events in their romantic relationships at age 23. We hypothesized that high rejection sensitivity at age 16 would predict a lower likelihood of romantic involvement, shorter relationship length, and more casual sexual encounters, as well as a higher tendency to become sexually involved to please a partner. We also hypothesized that high rejection sensitivity at age 16 would be longitudinally associated with lower relationship certainty, more concealment from one's romantic partner, lower romantic partner support, greater relationship tension, and the likelihood of reporting dating violence. Finally, rejection sensitivity at age 16 would predict higher breakup distress and lower growth (intrapersonal and interpersonal) following a breakup.

Second, we examined whether *changes* in rejection sensitivity were associated with various indices of relationship quality. We hypothesized that rejection sensitivity would decrease over time; additionally, however, increases in rejection sensitivity would predict a lower likelihood of romantic involvement, associate shorter durations of one's longest relationship, more casual sexual relationships and an increased tendency to submit sexually in casual encounters. We also hypothesized that increases in rejection sensitivity would predict lower relationship certainty, lower perceived romantic partner support, as well as greater concealment, greater tension, and greater dating violence. Finally, we hypothesized that increases in rejection sensitivity would predict lower intrapersonal and interpersonal growth following a breakup, as well as higher breakup distress.

2. Method

2.1. Participants and procedure

The sample consisted of 11th and 12th graders who were recruited from three schools in the center and the north of Israel. The three schools are representative of the majority of high schools in Israel. Individuals in this age range were selected to capture adolescents' management of their romantic relationships and to follow their romantic development through their transition to adulthood. The present longitudinal study included two time points. At Time 1, when participants were age 16, adolescents were approached and asked to participate in a study on romantic relationships. Flyers about a planned study on romantic relationships were distributed to all 11th and 12th graders in the three schools and adolescents were invited to join the study. Eighty eight percent of the adolescents were willing to participate in the study and they were informed that they will be included in the study after we obtained parental consent. Only 60% of parents gave their consent and only their adolescents were included in the study. In all, the

sample of the age 16 assessment consisted of 144 adolescents (86 females, 58 males; *Mean* age = 16.57 years, *SD* = .71, range = 16–18 years). All of the participants were Jewish from schools representing mainly middle class families. Mean years of schooling for fathers and mothers were 15.37 years (*SD* = 2.59) and 15.58 years (*SD* = 3.40), respectively. Twenty-one adolescents (14.58%) belonged to divorced families.

Six years later, at Time 2, participants were approached again. For the age 23 assessment, 110 participants were retained (76.38%; 79 females, 45 males; *Mean* age = 22.79 years, *SD* = .86, range = 21–25 years). It is important to note that the majority of participants ($n = 108$) were in different relationships at Time 2; these individuals reported on their *current* relationships in which they were involved at Time 2, rather than about the relationship in which they were involved during the Time 1 assessment. There were no differences between those who participated in the first assessment and those who dropped out on any of the demographic variables or on rejection sensitivity. For example initial mean levels on rejection sensitivity for those who participated at T2 and those who participated only at T1 were almost similar, $M = .74$ ($SD = .22$) and $M = .76$ ($SD = .20$), respectively. Participants were compensated at each assessment with a sum of 100 NIS (about \$25.00). All procedures were approved by the university's Institutional Review Board.

2.2. Measures

2.2.1. Age 16 assessment (Time 1)

2.2.1.1. Rejection sensitivity. The Rejection Sensitivity Questionnaire (RSQ; Downey & Feldman, 1996) was used to assess rejection sensitivity. This questionnaire presents 18 hypothetical situations in which an individual is susceptible to rejection by an important other (e.g., asking someone out on a date). For each scenario, respondents indicate their level of concern regarding the potential for rejection on a six-point Likert scale (1 = *very unconcerned*; 6 = *very concerned*). Participants then estimate the likelihood, using a six-point Likert scale (1 = *very unlikely*; 6 = *very likely*), that they will receive a favorable response. These acceptance expectation ratings were reverse-scored to obtain measures of rejection expectation. Total rejection sensitivity scores were computed by multiplying rejection expectations and rejection concern ratings, and then averaging the resultant values across the situations. Higher scores on the RSQ reflect greater sensitivity to rejection. In the current study, Cronbach's alpha at the age 16 assessment was .83.

2.2.2. Age 23 assessment (Time 2)

2.2.2.1. Rejection sensitivity. The Rejection Sensitivity Questionnaire (i.e., RSQ; Downey & Feldman, 1996) was used again to assess rejection sensitivity at the second assessment. In the current study, Cronbach's alpha at the age 23 assessment was .85.

2.2.3. Relationship involvement

2.2.3.1. Romantic involvement. Participants were asked to indicate whether they were currently involved in a romantic relationship, the length (in months) of the longest relationship in which they have been involved, and the number of relationships that lasted for less than two months. Finally, they were asked to rate the frequency of their involvements in casual sexual encounters in the recent three years (0 = *none*; 1 = *1 to 5 times*; 2 = *6 to 10 times*; 3 = *more than 10 times*).

2.2.3.2. Sexual submissiveness/hook-up motivation (Vrangałova, 2015). Three items (on a scale from 1 – not correct to 7 – very correct) assessed the extent to which one's motivation to become involved in casual sex was autonomous and was intended either to please a partner (e.g. "I wanted to please someone else, such as my partner or my friends, or because the situation seemed to compel it"). Cronbach's alpha for the scale was .86.

2.2.4. Relationship quality

2.2.4.1. Relationship certainty. Relationship certainty was adapted from Kellermann and Reynolds (1990). This scale consisted of nine items that measured a couple member's general confidence in predicting his or her partner's current interest of, and future visions for, the relationship (e.g., "How confident are you of your partner's interest in this relationship?"; "How confident are you in the future progress of this relationship?"). Items were rated on a scale from 1 (*not confident*) to 5 (*highly confident*). Cronbach's alpha for the scale was .91.

2.2.4.2. Concealment. This scale consisted of five items assessing self-concealment from one's partner (Larson & Chastain, 1990). Participants rated items, such as "There are lots of things about me that I keep from my romantic partner" and "I'm often afraid I'll reveal something to my romantic partner that I don't want to," on a 1 (*strongly disagree*) to 5 (*strongly agree*) scale. Cronbach's alpha was .91.

2.2.4.3. Perceived romantic partner support. The Network of Relationship Inventory (NRI; Furman & Buhrmester, 1985), assessed perceived romantic partner support. Participants rated (from 1 = *low* to 5 = *high*) the quality of support across eight items (i.e., "I can rely on ..."). Cronbach's alpha for the current sample was .87.

2.2.4.4. Tension and dating violence. Three items (on a scale from 1 – *not at all* to 10 – *very correct*) assessed levels of tension one experienced within the last week in the current relationship or the most recent relationship (e.g. "We had many disagreements"). An additional three items assessed dating violence (on a scale from 1 – *never* to 10 – *quite often*) regarding the frequency of violent behaviors experienced within the last week in the current relationship or the most recent relationship (e.g., "My partner hit me"). Cronbach's alpha for the two scales were .91 and .78, respectively.

2.2.5. Coping

2.2.5.1. Growth following relational stress. The growth experience scale was patterned according to [Tedeschi and Calhoun's \(1996\) Posttraumatic Growth Inventory](#). Participants were asked to assess the extent of change they had made following events in their romantic relationships. It consisted of two subscales: *changes concerning oneself* (i.e., intrapersonal growth; e.g., “I have learned that I have the capabilities to cope with difficulties”), and *changes with regard to relationships* (i.e., interpersonal growth; e.g., “I feel greater closeness with others”). The first subscale consisted of seven items and its internal consistency was .83. The second subscale consisted of three items and its internal consistency was .79.

2.2.5.2. Breakup distress. The Breakup Distress Scale (BDS; [Field, Diego, Pelaez, Deeds, & Delgado, 2010](#)) is a 16-item inventory that assessed the intensity of distress and preoccupation with an ex-partner following a romantic break-up (i.e., “I feel I cannot accept the breakup I've experienced”; “I feel drawn to places and things associated with the person”). Responses ranged from 1 (*not at all*) to 4 (*very much so*) and Cronbach's alpha in the current study was .94.

2.3. Analytic plan

A series of regression analyses with bootstrapping based on 5000 bootstraps were conducted to assess predictors of relationship involvement, quality, and coping at the age of 23. Gender was entered at the first step to control possible effect of gender. Level of rejection sensitivity at age 16 was entered at the second step and the change in rejection sensitivity between the first assessment at age 16 and the second assessment at age 23 was entered in the third step. In order to control multicollinearity the residual of the change (computed by the curve estimation procedure in SPSS) in the level of rejection sensitivity between the two assessments was computed. The correlation between level of rejection sensitivity and the residual is $r = .00$. A higher residual indicates increases in rejection sensitivity.

3. Results

Correlations among variables are presented in [Table 1](#). Prior to the analysis of the study questions, we compared levels of rejection sensitivity at age 16 and at age 23. Comparison of level of rejection sensitivity at adolescence and at emerging adulthood showed a significant decrease in level of rejection sensitivity over time; $M = .74$ ($SD = .22$) versus $M = .35$ ($SD = .14$), $t = 25.89$, $p < .00$.

3.1. Relationship involvement

Regression bootstrapping analyses were conducted separately with rejection sensitivity at age 16 (Time 1) and changes in rejection sensitivity from the age 16 assessment (Time 1) and the age 23 assessment (Time 2) as the predicting variables. The predicted variables were (a) current romantic status (b) the length of participants' longest relationship each as the outcome variables, and (c) the frequency of their involvements in casual sexual encounters, and (d) level of non-autonomous hook-up motivation. A loglinear regression performed to predict current romantic status did not yield any significant result. The remaining results (the regression bootstrapping analyses) are presented in [Table 2](#).

Results showed that rejection sensitivity predicted a lower likelihood of involvement in longer relationships while increases in rejection sensitivity predicted a shorter duration of one's longest relationship. Rejection sensitivity did not predict a higher likelihood of involvement in casual romantic encounters. Yet, rejection sensitivity at age 16 predicted a greater likelihood to please a partner while becoming involved in casual sex. Finally, gender, entered as a control variable, was found to predict lower likelihood of involvement in casual sexual encounters among women. No other significant relationships were found.

3.2. Relationship quality

Additional regression bootstrapping analyses were conducted separately with initial level of rejection sensitivity at age 16 and changes in rejection sensitivity from Time 1 and Time 2 as the predictors of relationship quality: (a) relationship certainty, (b) concealment, (c) perceived romantic partner support, (d) tension in a relationship, and (e) dating violence as the outcome variables. These results are presented in [Table 2](#). Results showed that initial level of rejection sensitivity measured at age 16 predicted lower levels of romantic certainty and perceived romantic partner support, but higher levels of likelihood to conceal in a romantic relationship at the age of 23. As can also be seen in [Table 2](#), increases in rejection sensitivity significantly and positively predicted concealment while decreases in rejection sensitivity predicted greater romantic certainty, and greater perceived romantic partner support. Finally, effects of changes in rejection sensitivity from age 16 to age 23 were also consistently found to predict greater tension and greater likelihood of dating violence in one's romantic relationships at age 23.

3.3. Coping

Regression bootstrapping analyses were conducted separately with initial level of rejection sensitivity at age 16 and changes in rejection sensitivity from Time 1 and Time 2 as the predictor variables and (a) intrapersonal growth, (b) interpersonal growth, and (c) breakup distress each as the outcome variables. These results are presented in [Table 2](#). Results showed that changes in rejection sensitivity significantly and negatively predicted intrapersonal and interpersonal growth, such that decreases in rejection sensitivity

Table 1
Correlations among all variables.

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
|--|-----------|---------------|-------------|------------|------------|-------------|------------|-------------|-------------|------------|-------------|------------|-----------|------------|
| (1) Romantic involvement | - | .21* | -.13 | -.26** | .00 | -.31** | .41** | -.13 | .02 | -.04 | .12 | .00 | -.03 | -.07 |
| (2) Length of longest relationship | | - | -.16 | -.12 | -.05 | -.25* | .23* | -.06 | -.04 | -.03 | -.09 | .13 | .14 | -.31** |
| (3) Number of casual sexual relationships | | | - | .26** | -.12 | .13 | -.08 | -.05 | -.03 | .14 | .08 | -.05 | -.15 | -.02 |
| (4) Hook-up motivation/sexual submissiveness | | | | - | -.24 | .53** | -.45** | .07 | .05 | -.02 | -.10 | .13 | .19 | .18 |
| (5) Relationship certainty | | | | | - | -.54** | .73** | -.50** | -.51** | .36** | .43** | -.08 | -.21 | -.39** |
| (6) Concealment | | | | | | - | -.59** | .37** | .32** | -.04 | -.22* | .10 | .23* | .34** |
| (7) Romantic partner support | | | | | | | - | -.31** | -.25* | .20* | .35** | -.09 | -.13 | -.37** |
| (8) Tension | | | | | | | | - | .90** | -.29* | .14 | .14 | .12 | .28* |
| (9) Dating violence | | | | | | | | | - | -.36** | -.22 | .10 | .13 | .25* |
| (10) Intrapersonal growth | | | | | | | | | | - | .51** | .11 | -.08 | -.29** |
| (11) Interpersonal growth | | | | | | | | | | | - | -.04 | -.02 | -.29** |
| (12) Breakup distress | | | | | | | | | | | | - | .08 | .09 |
| (13)TI Rejection sensitivity | | | | | | | | | | | | | - | -.00 |
| (14) Change in rejection sensitivity | | | | | | | | | | | | | | - |
| M(SD) | .58 (.50) | 27.52 (21.61) | 1.66 (1.15) | 1.51 (.93) | 5.58 (.90) | 1.67 (1.04) | 4.58 (.63) | 3.48 (2.69) | 2.90 (2.22) | 4.46 (.93) | 4.41 (1.11) | 2.02 (.76) | .74 (.22) | .01 (1.00) |
| Range | 0-1 | 1-84 | 1-6 | 1-5 | 3-7 | 1-6 | 1-5 | 1-10 | 1-10 | 1.43-6 | 1.67-6 | 1-4 | .07-1.32 | -2.10-2.91 |

Note. * $p \leq .05$, ** $p \leq .01$.

Table 2
Results of regression bootstrapping analyses.

| Variable | Gender | | | | | | Change in rejection sensitivity from Time 1 to Time 2 | | | | | | | | |
|--|-----------------------|------|---------------|-----------------------|-----------------------|-------|---|----------------|----------------|-----------------------|---------|------|-----------------|----------------|-----------------------|
| | Rejection sensitivity | | | Rejection sensitivity | | | Rejection sensitivity | | | Rejection sensitivity | | | | | |
| | B | SE | BCa 95% CI | R ² | R ² change | B | SE | BCa 95% CI | R ² | R ² change | B | SE | BCa 95% CI | R ² | R ² change |
| Relationship involvement | | | | | | | | | | | | | | | |
| Number of relationships lasting more than 6 months | .11 | .18 | [−.25, .47] | .01 | .01 | −.60* | .28 | [−1.17, −.03] | .05 | .04 | −.05 | .07 | [−.19, .09] | .05 | .01 |
| Length of longest relationship | 1.14 | 4.60 | [−7.76, 9.95] | .00 | .00 | 14.14 | 9.34 | [−4.67, 32.09] | .02 | .02 | −6.53** | 2.10 | [−10.75, −2.39] | .11 | .09* |
| Number of casual sexual relationships | −.64* | .26 | [−1.18, −.11] | .07 | .07* | −.88 | .53 | [−2.04, .20] | .09 | .03 | −.04 | .11 | [−.24, .19] | .09 | .00 |
| Sexual submissiveness/hook-up motivation | −.35 | .20 | [−.80, .12] | .04 | .04 | .78* | .35 | [.06, 1.45] | .07 | .03+ | .16 | .11 | [0.05, .36] | .10 | .03 |
| Relationship quality | | | | | | | | | | | | | | | |
| Relationship certainty | .14 | .22 | [−.28, .55] | .02 | .02 | −.83* | .42 | [−1.74, −.06] | .06 | .04 | −.36* | .12 | [−.60, −.11] | .20 | .15* |
| Concealment | −.32 | .21 | [−.75, .10] | .05 | .05* | 1.09* | .40 | [.42, 1.92] | .11 | .05* | .35* | .10 | [.17, .55] | .23 | .13* |
| Romantic partner support | −.09 | .10 | [−.30, .10] | .00 | .00 | −.53* | .23 | [−1.03, −.11] | .05 | .05* | −.20* | .05 | [−.30, −.10] | .20 | .15* |
| Tension | −.56 | .63 | [−2.02, .67] | .02 | .02 | 1.08 | 1.16 | [−1.70, 3.38] | .03 | .01 | .72* | .27 | [.23, 1.31] | .10 | .07* |
| Dating violence | −.45 | .51 | [−1.58, .59] | .02 | .02 | 1.01 | .96 | [−1.10, 2.86] | .03 | .01 | .54* | .24 | [.09, .99] | .09 | .06* |
| Post-breakup coping | | | | | | | | | | | | | | | |
| Intrapersonal growth | .40 | .19 | [−.03, .75] | .05 | .05 | −.09 | .46 | [−.95, .80] | .05 | .00 | −.22* | .09 | [−.39, −.04] | .11 | .05* |
| Interpersonal growth | .16 | .24 | [−.32, .63] | .01 | .01 | −.18 | .55 | [−1.21, .90] | .01 | .00 | −.25* | .11 | [−.46, −.05] | .06 | .05* |
| Breakup distress | .22 | .17 | [−.12, .53] | .02 | .02 | .29 | .33 | [−.37, .97] | .02 | .01 | .08 | .10 | [−.11, .30] | .03 | .01 |

Note. **p* ≤ .05, ***p* ≤ .001.

were associated with increased intrapersonal growth and interpersonal growth following conditions of romantic stress. Finally, changes in rejection sensitivity did not explain intensity of break-up distress.

Comparing the contribution of the two indices of rejection sensitivity on romantic relationship indices showed two interesting distinctions (see Table 2). The long-term impact of the initial level of rejection sensitivity was found on a limited number of indices. In contrast, the influence of change in the level of rejection sensitivity was found across all measured aspects of romantic quality, post breakup growth and the length of young adults' relationships. Second, where the initial level of rejection sensitivity explained about five percent of the variance, the change in level of rejection sensitivity explained between 10 and 20 percent of the variance across the different features of romantic involvement.

4. Discussion

Findings from the present study demonstrate the impact of relational schemas over a period of seven years from adolescence to emerging adulthood. Levels of rejection sensitivity at age 16 predicted whether young people were romantically involved by age 23, as well as the quality of their relationships. Importantly, this study to our knowledge is among the few studies showing the long-term effects of rejection sensitivity. Zimmer-Gembeck and colleagues (Zimmer-Gembeck, Nesdale, Webb, Khatibi, & Downey, 2016) found that young adolescents higher in rejection sensitivity were more likely to withdraw in response to rejection threat and to report increased levels of depressive symptoms 14 months later. As we have reported above, Hafen et al. (2014) demonstrated that adolescents high in rejection sensitivity at age 16 were less likely to be romantically involved at age 23. When they did have relationships, they reported more anxiety and avoidance and were observed to be more negative when interacting with their romantic partners. Consistent with these studies, our findings demonstrate the ways increased rejection sensitivity from adolescence to adulthood can negatively affect relationship quality. Further, our findings also indicate that increased rejection sensitivity over time can lead to individual-level after romantic relationships end, including less interpersonal and intrapersonal growth.

Together with our findings, we may thus suggest that difficult relationship schemas are forwarded, experienced, and enacted in future relationships, including friendships or in romantic relationships. Conceptually, our findings and those of Hafen et al. (2014) and Zimmer-Gembeck et al. (2016) can be embedded within the larger framework of attachment and the coherence of relational patterns through the lifespan. This is also in line with findings showing that the nature and quality of interactions within the families of origin and with romantic partners during adolescence contribute to the ability to have successful romantic relationships in the future (Donnellan, Larsen-Rife, & Conger, 2005). Conceptually, embedded within the attachment theory we may suggest that relationship schemas like rejection sensitivity as well as relationship experiences that develop into schemas (Sroufe & Fleeson, 1986) are carried forward and enacted in future relationships. In sum, our findings further highlight the importance of rejection sensitivity as a vulnerability that can affect relationship qualities in the long term.

Despite its long-term impacts, our findings also show that rejection sensitivity tends to decrease overall into the transition to adulthood. In understanding reasons for this decrease, it might be helpful to turn to a developmental perspective to understand the potential decrease in less adaptive behaviors as young people approach adulthood. The decrease in level of rejection sensitivity can be understood through examining the unique period of change experienced by young people. During emerging adulthood, young people are theorized to explore, expand their identities, and experiment with a variety of different behaviors (Arnett, 2015). The world of attending high school and living with one's parents, for example, is quite different from attending college or joining the workforce where individuals are interacting with people from a diversity of backgrounds and young people are exposed to new experiences (Bryant, 2003). Indeed, emerging adulthood is the time during which personality characteristics change significantly (Roberts & Davis, 2016). Specifically, young people tend to become more emotionally stable, conscientious, and agreeable (Roberts & Davis, 2016). Roberts and Davis (2016) speculate that these changes can be attributed to the expectations that come along with emerging adulthood, including increased responsibility and commitment to new roles formed (Lodi-Smith & Roberts, 2007; Roberts, Wood, & Smith, 2005). Conceptually, personality development during this stage of life can be characterized by a pattern of maturation (Roberts et al., 2006) and changes are typically in the direction of increased functional maturity (Donnellan, Conger, & Burzette, 2007). As such, personality maturation facilitates interaction with others and with the environment (van Aken, Denissen, Branje, Dubas, & Goossens, 2006). Relatedly, the changes found in rejection sensitivity between ages 16 and 23 in the current study can thus be understood to represent the maturational processes during emerging adulthood (Roberts & Davis, 2016).

It can then be understood that the adverse long-term effects of rejection sensitivity persisted mostly when rejection sensitivity increased over the years. In contrast, when rejection sensitivity decreased over the years, it significantly affected the nature of romantic relationships and their quality in a positive manner. At age 23, those whose rejection sensitivity had decreased were more likely to be involved in relationships of longer duration. Their relationships were more supportive and conveyed more confidence, were less tense and less likely to demonstrate dating violence. Most importantly, they revealed greater competence in coping with stressors that can emerge in a relationship from time to time. We speculate that the decrease in rejection sensitivity enabled adolescents and emerging adults to stay open and to learn a variety of lessons from their romantic experiences that were reflected in increased romantic competence (Norona, Roberson, & Welsh, 2015; Shulman, Davila, & Shachar-Shapira, 2011). As young people are working to solidify their romantic journeys and identities (Arnett, 2015), they meet romantic partners and interact with them. It is possible that support and acceptance of romantic partners can be helpful in learning to balance one's own needs with others, cope with and adaptively act on emotional experiences, and develop a more coherent view of one's romantic experiences that can be helpful for future relationships. Positive experiences and a partner's constructive attitude may thus be helpful in "taming" maladaptive qualities, such as rejection sensitivity, which will then subside with time. Indeed, Webb and Zimmer-Gembeck (2015) showed that being involved in satisfying experiences with peers can be helpful in decreasing rejection sensitivities. It will be important for

future research to examine the exact mechanisms through which these characteristics decline among romantic partners.

Our findings showed that both initial level of rejection sensitivity at age 16 and the level of change in rejection sensitivity from age 16 to age 23 explained the quality of romantic relationships at age 23. Yet, the change in level of rejection sensitivity over time explained far more the quality of later romantic relationships than the initial level of rejection sensitivity. This distinction calls for further understanding of how previous experiences or schemas affect future outcomes. A vast majority of studies have shown, for example, that previous experiences during adolescence affect relationship outcomes in young adulthood (Madsen & Collins, 2011; Seiffge-Krenke, 2003; Smith et al., 2010). However, findings of the current study as well as a growing body of research in personality development (Roberts & Davis, 2016) suggest that personality attributes and schemas are likely to change during the transition to adulthood. Sroufe, Egeland, Carlson, and Collins (2005) argued that development needs to take into account the dialectic of continuity and change. Our findings add that it is important to understand also changes in predictors and hence better understand patterns and directions of development over time.

4.1. Limitations and future directions

This study is not without its limitations. First, despite the longitudinal strength of the study, we included only one partner's perspective. Observational research as well as dyadic data will help paint a more complete picture of the ways rejection sensitivity impacts relationship qualities in particular. This is especially important given the biasing effect that rejection sensitivity can have on individuals' perceptions.

Second, we do not have information on why and how rejection sensitivity changed over time. Although the work of Roberts and Davis (2016) sheds light on the general improvement of positive personality traits over time, empirical research will need to address the theoretical assertion that heightened expectations during emerging adulthood motivate adaptive personality characteristics and behaviors.

Finally, this sample included Israeli youth. Israel is a Western culture and when making the transition to adulthood, young Israelis face dilemmas and uncertainties similar to those of their counterparts in other Western countries (Mayseless & Scharf, 2003). However, young Israelis are subjected to a military service of two or three years between the ages of 18–20 or 21, which might lead to the postponement of romantic commitment and associate with distinctive patterns of romantic involvements. In addition, there are also findings suggesting different romantic and sexual behavior timetables found in various cultures, including Israel (Shtarkshall, Carmel, Jaffe-Hirschfeld, & Woloski-Wruble, 2009). Future studies could indicate whether the pattern of our findings would be replicated in a different culture.

4.2. Implications

Our findings have several implications when considering the romantic lives of young people. It is important to consider the vulnerabilities of shy and withdrawn young people for whom approaching romantic tasks might be difficult. These qualities in combination with rejection sensitivity might lead to fewer opportunities to build new relational schemas about romantic interactions. Thus, researchers, educators, and clinicians who work with adolescents and emerging adults might benefit from assessing and challenging this schema, helping young people build and foster alternative romantic frameworks.

Second, given the general malleability of rejection sensitivity, relationship and therapeutic interventions can serve to bolster adaptive qualities in romantic relationships. For example, Project RELATE (Fincham, Stanley, & Rhoades, 2010) dedicates sessions to discussing young people's personality characteristics and the ways such characteristics can affect their choices in romantic partners. It would be beneficial to include discussions about how characteristics like rejection sensitivity can affect romantic interactions following mate selection.

In sum, the present study demonstrated the longitudinal effects of rejection sensitivity and changes in rejection sensitivity over a seven-year period on relationship involvement, quality, and coping in a sample of Israeli youth. Importantly, changes in rejection sensitivity predicted more of the variance in these relationship outcomes. Our findings point to the importance of examining personality changes over time as young people transition into adulthood.

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