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EMPIRICAL ARTICLE

Change in relationship status and internalizing symptoms among adolescents: Testing bidirectionality and moderation by sexual orientation, gender, and age

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Abstract

Adolescent romantic experiences are socially normative and serve important social and developmental functions. Despite the well-established concurrent link between romantic involvement and internalizing symptoms in heterosexual adolescents, limited and mixed evidence exists on the directionality of this association. Research on this topic in sexually diverse adolescents is scarce. We sought to clarify how changes in relationship status and internalizing symptoms predict each other over time, and how these associations vary by sexual orientation, gender, and age. We provided a novel examination of these associations separately for initially single and romantically involved adolescents. In this longitudinal study, 1136 demographically diverse adolescents (M_{age} = 15.3 years, $range_{age}$ = 13–19 years; 55.3% Hispanic/Latine) from local public high schools reported their relationship status and internalizing symptoms in four waves of surveys (August 2017–June 2019). We found that entering into a romantic relationship predicted lower internalizing symptoms for adolescents who were gay, lesbian, or not sure about their sexual orientation (but not for heterosexual or bisexual adolescents), highlighting the protective functions of romantic relationships for certain sexually diverse youth. We also found that higher internalizing symptoms predicted a greater likelihood of entering into a romantic relationship among initially single adolescents. Breakups and internalizing symptoms did not predict each other over time. Gender and age did not moderate any associations. These findings contribute to our understanding of the longitudinal associations between changes in relationship status and mental health and inform how adults should counsel youth on romantic relationships. Researchers should further elucidate the complex interplay between adolescent romantic relationships and mental health, especially for sexually and gender diverse youth.

KEYWORDS
adolescent dating, breakup, Hispanic/Latine youth, internalizing symptoms, longitudinal, relationship status, sexually diverse youth

INTRODUCTION

Engaging in romantic relationship experiences is a normative aspect of adolescence and serves important functions, including identity exploration, development of social competency, and social support (Carver et al., 2003; Connolly et al., 2023; Furman & Buhrmester, 1992). Early adolescence (ages 10–14) is often characterized by developing excitement towards potential romantic partners (e.g., crushes) and sexual fantasies, whereas mid to late adolescence (ages 15–19) is often when romantic exploration occurs (mostly in peer groups) and can evolve into stable and durable romantic bonds that exist outside of peer or friend groups (Connolly et al., 2023). Estimates suggest that between 66% and 95% of teens will experience romantic involvement at some point during adolescence (Manning et al., 2014; Wildsmith et al., 2013). Although adolescent dating is normative, romantic relationships can present many challenges and are often complex and difficult for adolescents to navigate. As such, dating may increase the risk for psychopathology for

certain adolescents, including internalizing psychopathology such as symptoms of depression and anxiety (Davila et al., 2016; Welsh et al., 2003).

Existing evidence based primarily on heterosexual relationships

Existing research examining the link between adolescent romantic involvement and mental health has predominantly focused on heterosexual relationships. For heterosexual adolescents, romantic involvement (i.e., being in a romantic relationship) is often associated with poorer mental health (Davila et al., 2016, 2019; Luginbuehl et al., 2025). The concurrent link between adolescent romantic involvement and psychological distress among heterosexual adolescents is well documented in the literature, with most work focused on depressive symptoms (Davila et al., 2016, 2019; Gómez-López et al., 2019; Mirsu-Paun & Oliver, 2017). Studies have found that, at a given time point, romantically involved adolescents reported more symptoms of depression and anxiety compared to their single counterparts (Davila et al., 2004; Hou et al., 2013; Mendle et al., 2013; Olson & Crosnoe, 2017; Starr et al., 2012; Starr & Hammen, 2016; but see La Greca & Harrison, 2005 and Whitton et al., 2018 for null and reverse findings). Additionally, longitudinal research that followed adolescents over time for repeated assessments has also found this association at the within-person level, such that adolescents report higher internalizing symptoms when they are romantically involved than when they are single (e.g., Furman & Collibee, 2014).

Various theories have been proposed to elucidate the directionality of positive associations between adolescent romantic involvement and internalizing symptoms (i.e., whether romantic involvement leads to internalizing symptoms or vice versa; see Davila, 2008 for a comprehensive discussion). According to the stress and coping model (Davila, 2008), romantic involvement may increase the risk of internalizing symptoms among adolescents as they are still developing coping and emotion regulation skills and are thus often not equipped to navigate the challenges associated with romantic relationships (e.g., conflict, breakup). Supporting this theory, it has been found that being in a romantic relationship or having recently engaged in romantic activities (e.g., held hands with someone, kissed someone) predicted higher levels of symptoms of depression and anxiety at a subsequent time among adolescents (Davila et al., 2004; Joyner & Udry, 2000; Starr et al., 2012; Szwedo et al., 2015). However, others did not find this association (Starr & Hammen, 2016), and Davila et al. (2009) observed mixed findings within the same study. Specifically, they found that recent romantic activities, but not relationship status, predicted higher depressive symptoms 1 year later among early adolescent girls (Davila et al., 2009). The authors suggested that this was likely due to younger adolescents having trouble differentiating romantic versus platonic relationships (Davila et al., 2009).

Another way in which romantic relationships pose risk for adolescents is through the psychological impact of relationships ending. Relationships in adolescence tend to be short-lived, and breakups are normative and frequent challenges adolescents face when navigating romantic relationships (Carver et al., 2003; Connolly et al., 2023; Morris & Reiber, 2011). Relative to research investigating the potential psychological risks associated with adolescent romantic involvement, much less work has focused on the psychological consequences associated with breakups among adolescents (for reviews, see Luginbuehl et al., 2025; Mirsu-Paun & Oliver, 2017). Research shows that having recently experienced a breakup (vs. no recent breakup) is associated with higher depressive symptoms among adolescents (Chen et al., 2009; Hou et al., 2013; Mirsu-Paun & Oliver, 2017). Longitudinal evidence also shows that experiencing a recent breakup predicts a greater likelihood of the first onset of major depressive disorder among adolescents (Monroe et al., 1999).

Conversely, researchers have theorized that internalizing symptoms may lead to romantic involvement among some adolescents. Specifically, adolescents who experience symptoms of depression and anxiety may be seeking romantic relationships to regulate their low mood and boost self-confidence (Davila, 2008; Davila et al., 2019). Only a few longitudinal studies have tested the association between internalizing symptoms and later romantic involvement among adolescents (Davila et al., 2004, 2009; van Zantvliet et al., 2020). Findings from these studies were inconsistent. For example, Davila et al. (2009) found that higher internalizing symptoms predicted a greater likelihood of being in a romantic relationship at a later point among a group of single and romantically involved adolescents, supporting the mood regulation theory. Similarly, van Zantvliet et al. (2020) found that higher internalizing symptoms predicted a greater likelihood of entering into a relationship among a group of initially single adolescents. However, other studies did not find that internalizing symptoms were associated with subsequent romantic involvement (Davila et al., 2004) or romantic activities (Starr et al., 2012).

Internalizing symptoms may also predict later relationship status among adolescents who are already in a relationship (Davila et al., 2016). For example, higher depressive symptoms have been found to be associated with shorter relationships among adolescent girls (Ha et al., 2012). This may be due to the fact that interpersonal styles and behaviors associated with depression and anxiety can be perceived as burdensome by romantic partners and cause relationship distress and breakup (Coyne, 1976a; Davila et al., 2019; de Lijster et al., 2018; Hames et al., 2013).

One source of mixed findings in the literature may be the presence of moderators. Moderators that have received the most research attention include participant gender and age. Some researchers found that the positive association between romantic involvement or breakup and depressive symptoms is stronger for girls than boys (Joyner & Udry, 2000; Natsuaki et al., 2009; but see also Furman & Collibee, 2014;

Monroe et al., 1999; Starr & Hammen, 2016). Regarding age, some evidence has shown that romantic involvement is more strongly associated with negative psychological outcomes for younger (vs. older) adolescents and this association attenuates for those who enter into late adolescence or young adulthood (Furman & Collibee, 2014; Joyner & Udry, 2000; Natsuaki et al., 2009; but see also Davila et al., 2004 and Szwedo et al., 2015 for exceptions). Besides adolescents' gender and age, sexual orientation is another important potential moderator to consider, which did not gain attention until recently.

Emerging evidence on sexually diverse adolescents

Although most studies examined adolescent romantic involvement and internalizing symptoms in heterosexual relationships, emerging research has begun to examine whether this association differs for sexually diverse adolescents (Baams et al., 2014; Bauermeister et al., 2010; Russell & Consolacion, 2003; Whitton et al., 2018). In contrast to findings based on heterosexual adolescents, research does not generally support a positive association between romantic involvement and internalizing symptoms among sexually diverse adolescents (Baams et al., 2014; Bauermeister et al., 2010). Moreover, some evidence shows a positive association between psychological well-being and romantic involvement among sexually diverse youth, as indicated by lower anxiety symptoms and psychological distress (Russell & Consolacion, 2003; Whitton et al., 2018). This likely reflects protective mechanisms that romantic relationships play for sexually diverse adolescents (e.g., identity affirmation, self-acceptance; Isay, 2009). Sexually diverse youth face unique challenges due to experiences with oppression, discrimination, and stigma, collectively known as minority stress (Meyer, 2003). Romantic relationships can represent a social context in which sexually diverse adolescents experience a sense of self-worth, acceptance, safety, and belongingness (Diamond & Alley, 2022; Snapp et al., 2025).

Further, the nature of this association may depend on one's specific sexual orientation (Whitton et al., 2018) or the gender of their dating partner (Russell & Consolacion, 2003). In a longitudinal study involving sexually diverse youth, Whitton et al. (2018) found that, on average, sexually diverse youth reported lower psychological distress when they were in a relationship, compared to when they were single. Whitton et al. (2018) further found that specific sexual orientation moderated this within-person association, such that romantic involvement was associated with lower psychological distress among gay or lesbian individuals but higher psychological distress among bisexual individuals. Because some of these studies were cross-sectional and included young adults in their sample, evidence on the longitudinal link between romantic involvement and psychological well-being among sexually diverse adolescents is almost nonexistent. Additionally, no studies have examined the directionality of this association (i.e., whether romantic involvement predicts internalizing symptoms, or vice versa) among this group. Considering the alarmingly high rates of internalizing psychopathology among sexually diverse youth (Lucassen et al., 2017; Marshal et al., 2011; Plöderl & Tremblay, 2015), it is critical to further elucidate the unique roles that romantic relationships play among this group.

Ambiguity in interpreting findings in prior literature

Another source of mixed findings may be related to how researchers have analyzed data to understand temporal associations between romantic involvement and internalizing symptoms. Most prior longitudinal research did not test these associations separately for those who were single and who were already romantically involved (e.g., Davila et al., 2004, 2009; Szwedo et al., 2015; but see van Zantvliet et al., 2020, for an exception, though they only included initially single adolescents). Combining these relationship status groups in analyses did not distinguish individuals who experienced a change in their relationship status over time from those who did not, and whether the change involved entering or leaving a relationship, which can lead to ambiguity in interpreting findings. For example, if a positive association between T1 romantic involvement and T2 internalizing symptoms is found after controlling for T1 internalizing symptoms, it is unclear whether it is driven by initially single adolescents entering into a relationship (vs. staying single), or by initially romantically involved adolescents staying in (vs. leaving) an existing relationship. This ambiguity also applies to the reverse direction of the association. Thus, separately examining the associations between romantic involvement and internalizing symptoms for adolescents with different initial relationship statuses would allow for a clearer understanding of how a *change* in relationship status in either direction is associated with internalizing symptoms and vice versa.

The current study

The current study aimed to investigate the bidirectional longitudinal associations between changes in relationship status and internalizing symptoms among adolescents. This study disentangled this bidirectionality by testing separate hypotheses for changes in relationship status predicting later internalizing symptoms and internalizing symptoms predicting subsequent changes in relationship status. For each test of direction, we formulated separate hypotheses for adolescents who were initially single and those who were initially romantically involved, which led to four hypotheses.

First, in line with the stress and coping model (Davila, 2008) and its supporting evidence (Davila et al., 2004; Joyner & Udry, 2000; Starr et al., 2012; Szwedo et al., 2015), we hypothesized that among initially single

adolescents, those who entered into a romantic relationship would report higher subsequent internalizing symptoms compared to those who stayed single (Hypothesis 1a). Additionally, based on prior theory and evidence on the psychological consequences of breakups (Davila, 2008; Mirsu-Paun & Oliver, 2017; Monroe et al., 1999), we hypothesized that among initially romantically involved adolescents, those who experienced a breakup would report higher subsequent internalizing symptoms compared to those who stayed romantically involved (Hypothesis 1b).

Second, consistent with the mood regulation theory (Davila, 2008; Davila et al., 2019) and some evidence supporting this theory (Davila et al., 2009), we hypothesized that among initially single adolescents, higher levels of internalizing symptoms would be associated with a greater likelihood of subsequently entering into a romantic relationship (Hypothesis 2a). Lastly, considering the well-documented interpersonal difficulties in depression and anxiety (Coyne, 1976b; Davila et al., 2019; de Lijster et al., 2018; Hames et al., 2013) and related evidence among adolescent romantic relationships (Ha et al., 2012), we hypothesized that among initially romantically involved adolescents, higher depressive symptoms would be associated with a higher likelihood of subsequently experiencing a breakup (Hypothesis 2b). We specifically wanted to examine the two directions separately for initially single and initially romantically involved adolescents to address the limitations in prior research that tested this association among all adolescents regardless of their initial relationship status. As such, this study allowed us to more accurately identify what may be driving the association between these two constructs in either direction.

Considering the limited research on sexually diverse youth and growing evidence on several potentially meaningful moderators, we explored whether any of the four hypothesized associations were moderated by sexual orientation, gender, and age. We did not have *a priori* hypotheses for these moderators due to inconsistent or limited findings in the literature.

MATERIALS AND METHODS

Participants

Participants included in this study were adolescent students ($N = 1136$) in 14 Colorado public high schools (age: $M = 15.3$ years, $SD = 1.4$ years, range = 13–19 years; gender identity: 41.0% boys, 56.9% girls, 0.7% transgender, 0.4% gender nonconforming, 1.0% gender not listed). As part of a cluster-randomized controlled trial (citation anonymized for masked review), participants' high schools were assigned to receive REAL Essentials Advance, a healthy relationship education curriculum designed for youth ($n = 7$), or instruction-as-usual ($n = 7$). Participants were racially and ethnically diverse, though Asian and Black or African American participants were underrepresented racial minority groups in the current sample (cf. Jones et al., 2021). In terms of race, 2.0% identified as American Indian/Alaska Native, 3.3% Asian, 1.5% Black or African American, 0.2% Native Hawaiian or Other Pacific Islander, 37.1% identified as White, 29.4% multiracial, and 26.6% other race. Regarding ethnicity (assessed separately from race), over half of the sample (55.3%) identified as Hispanic or Latine. Regarding sexual orientation, 8.8% of participants identified as bisexual, 2.5% identified as gay or lesbian, 83.6% identified as heterosexual/straight, and 5.1% reported being not sure about their sexual orientation. Regarding country of origin, 10.8% of participants reported being born outside the United States, and two thirds of participants (67.7%) reported that at least one of their parents was born outside the United States. About a third of participants (31.2%) reported speaking a language other than English (e.g., Spanish) most of the time at home. Consistent with prior research based on this sample (citation anonymized for masked review), we created a binary sexual diversity status variable to indicate whether participants identified as sexually diverse or not (1 = gay or lesbian, bisexual, or not sure; 0 = heterosexual/straight).

Procedures

As mentioned above, data were from a cluster-randomized controlled trial of REAL Essentials Advance (citation anonymized for masked review). Data collection took place between August 2017 and June 2019. Participants in the two conditions did not differ on the primary outcomes tested in the parent study (e.g., relationship skills, internalizing symptoms; Huntington et al., 2022). As such, we do not expect the random assignment to influence our findings and therefore included all participants in our analytic sample.

Parents of potential participants were sent opt-in forms to sign by their teachers, which served as the consent process for adolescents to enroll in the study. Afterwards, evaluation staff informed the potential participants of the study information, and participants gave informed assent via an electronic form prior to receiving any programming. Participants were invited to complete a total of four surveys at the following time points: before receiving any program content (Wave 1), at the conclusion of any programming (Wave 2), 6 months following Wave 1 (Wave 3), and 12 months following Wave 1 (Wave 4). The first two surveys were administered by evaluation staff in classes. For the 6- and 12-month follow-up surveys, evaluation staff reminded participants via text, email, and, in some cases, at school to complete the follow-up surveys. Participants completed surveys at all time points online (e.g., via mobile phone, tablet, or computer). Participants received a $10 gift card for completing the 6-month follow-up survey and a $20 gift card for completing the 12-month follow-up survey. The average lengths of time intervals between each pair of adjacent surveys were: 2.4 months ($SD = 0.6$) between Waves 1 and 2, 4.1 months ($SD = 1.2$) between Waves 2 and 3, and 5.9 months ($SD = 1.1$) between Waves 3 and 4. All study procedures were approved by the University of Denver's Institutional Review Board. This study was conducted according to the American Psychological Association Code of Ethics.

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Measures

Relationship involvement

At each wave, we measured participants' current relationship status with the following question, "Do you have a boyfriend/girlfriend?" with response options of *Yes* (coded as 1) and *No* (coded as 0). Approximately a third of participants reported being romantically involved at each wave (see Table 1 for the percentages at each wave).

Internalizing symptoms

At each wave, we measured participants' internalizing symptoms using the Internalizing Symptoms Scale for Children (Merrell & Walters, 1998). Ten questions were used to assess depressive and anxiety symptoms (e.g., "I feel like crying," "I worry about things"). Participants rated how often they experienced those symptoms over the past month using a 5-point Likert scale (1 = *none of the time*, 2 = *some of the time*, 3 = *half of the time*, 4 = *most of the time*, and 5 = *all of the time*). Participants' ratings were averaged to produce a composite score for their internalizing symptoms. This scale demonstrated high internal reliability (Cronbach's α) in the current sample at each wave (Wave 1: $\alpha = .89$; Wave 2: $\alpha = .89$; Wave 3: $\alpha = .90$; Wave 4: $\alpha = .91$). See Table 1 for means and standard deviations of internalizing symptoms at each wave.

Analytic plan

This is a secondary analysis of a larger study, and analyses of the current study were not preregistered. All analyses were conducted in R statistical software (Version 4.4.3; R Core Team, 2025). We first computed descriptive statistics and zero-order correlations of key study variables (i.e., relationship status and internalizing symptoms) at each wave of data collection. To get a sense of the stability of participants' relationship status across the study period, we examined the percentages of participants who, across all completed surveys, only reported single status, only reported romantically involved status, and reported at least one change in relationship status (i.e., switched from single to romantically involved or vice versa).

We conducted multilevel modeling to test our hypotheses, which accounted for the nested nature of our data (i.e., time points [Level 1] nested within participants [Level 2]; Raudenbush & Bryk, 2002). We first restructured our four-wave longitudinal data into long format using time points that have available data for each participant. We then created lagged relationship status and internalizing symptom variables, which would allow us to examine temporal associations between these variables via multilevel modeling. Because we kept only time points that have available data for each participant, lagged relationship status (or internalizing symptom) for a time point represents relationship status (or internalizing symptoms) that was most recently reported prior to that time point. This approach allowed us to maximize the usage of available data and increase statistical power.

We conducted multilevel linear and logistic regressions for continuous (internalizing symptoms) and binary (relationship status) outcome variables, respectively, using the lme4 R package (Bates et al., 2015). When testing hypotheses that pertain to initially single participants (Hypotheses 1a and 2a), we subset the data to keep only rows where lagged relationship status was coded as 0 (single). Similarly, when testing hypotheses pertaining to initially romantically involved participants, we subset the data to keep only rows where lagged relationship status was coded as 1 (in relationship). All analyses controlled for interval length (i.e., number of days between the lagged survey and the current survey).

TABLE 1 Descriptive statistics of relationship status and internalizing symptoms at each time point.

	Time 1 ($N = 981$)		Time 2 ($N = 932$)		Time 3 ($N = 777$)		Time 4 ($N = 735$)	
Variable	**% or *M* (*SD*)**	***n***	**% or *M* (*SD*)**	***n***	**% or *M* (*SD*)**	***n***	**% or *M* (*SD*)**	***n***
All: Relationship status (% romantically involved)	31.1%	973	30.1%	907	34.2%	742	35.9%	671
All: Internalizing symptoms (*M*, *SD*)	2.29 (0.81)	974	2.27 (0.83)	929	2.33 (0.88)	776	2.32 (0.91)	721
Single: Internalizing symptoms (*M*, *SD*)	2.22 (0.80)	666	2.21 (0.81)	633	2.26 (0.87)	488	2.22 (0.89)	421
Romantically involved: Internalizing symptoms (*M*, *SD*)	2.44 (0.82)	300	2.45 (0.81)	272	2.47 (0.86)	253	2.49 (0.89)	236
t test for difference in internalizing symptoms[a]	$t = -3.90$, df = 562.7, $p < .001$ Cohen's $d = 0.27$		$t = -4.14$, df = 512.4, $p < .001$ Cohen's $d = 0.29$		$t = -3.12$, df = 512.5, $p = .002$ Cohen's $d = 0.24$		$t = -3.71$, df = 487.5, $p < .001$ Cohen's $d = 0.30$	

Note: This table presents descriptive data of relationship status and internalizing symptoms for all participants, as well as internalizing symptoms among romantically involved and single participants separately, for each time point. *N* = number of participants who had data on relationship status and/or internalizing symptoms; *n* = number of participants who had data on the respective variable.

Abbreviations: df, degrees of freedom; *M*, mean.

[a]Welch's two-sample *t* test examining differences in internalizing symptoms between single and romantically involved adolescents at each time point; Cohen's *d* was calculated by dividing the absolute difference between the two group means by the *SD* of the full sample at baseline.

To test whether relationship status change predicts subsequent internalizing symptoms, we tested the following model (i.e., Model 1):

$$\text{Level 1 Model: Internalizing symptoms}_{ti} = \beta_{0i} + \beta_{1i}\left(\text{Relationship status}_{ti}\right) + \beta_{2i}\left(\text{Internalizing symptoms}_{(t-1)i}\right) + \beta_{3i}\left(\text{Interval length}_{ti}\right) + r_{ti}$$

Level 2 Model:

$$\beta_{0i} = \gamma_{00} + u_{0i}$$
$$\beta_{1i} = \gamma_{10}$$
$$\beta_{2i} = \gamma_{20}$$
$$\beta_{3i} = \gamma_{30}$$

Of interest to Hypothesis 1a and 1b is β_{1i}. Because analyses were conducted separately for initially single and initially romantically involved adolescents, β_{1iLo} indicates whether change of one's relationship status from t–1 to t predicts internalizing symptoms at t, controlling for internalizing symptoms at t–1 and interval length.

To test whether internalizing symptoms predict subsequent change of relationship status, we tested the following model (i.e., Model 2):

$$\text{Level 1 Model: Logit}(P(\text{Relationship status}_{ti} = 1)) = \beta_{0i} + \beta_{1i}\left(\text{Internalizing symptoms}_{(t-1)i}\right) + \beta_{2i}\left(\text{Interval length}_{ti}\right)$$

Level 2 Model:

$$\beta_{0i} = \gamma_{00} + u_{0i}$$
$$\beta_{1i} = \gamma_{10}$$
$$\beta_{2i} = \gamma_{20}$$

Logit(P(Relationship status$_{ti}$ = 1) represents the likelihood (in logits) of being in a romantic relationship for participant i at time t. Of interest to Hypothesis 2a and 2b is β_{1i}, which indicates whether internalizing symptoms at t–1 predicts relationship status change from t–1 and t, controlling for interval length.

To test the moderation effects of sexual orientation, gender, and age, we tested each moderator individually by entering the moderator at Level 2 and its cross-level interaction with relationship status at t (for Model 1) or with internalizing symptoms at t–1 (for Model 2). For sexual orientation, in addition to testing the moderating effect of identifying as sexually diverse, we conducted a separate set of analyses only among sexually diverse participants to further test whether one's specific sexual orientation (gay or lesbian, bisexual, or not sure) moderated the bidirectional association between relationship status change and internalizing symptoms. Specifically, we repeated the moderation analyses in a subsample consisting of only sexually diverse participants and used the specific sexual orientation variable (i.e., a three-level categorical variable with the following levels: gay or lesbian, bisexual, not sure) as the moderator. For moderation by gender, we included only boys and girls in the analysis due to limited sample sizes of gender-diverse adolescents in the current sample. Any significant ($p < .05$) interactions were probed via simple slope analyses. We also probed marginally significant ($p < .10$) interactions (simple slopes are presented in the respective table notes, and narrative descriptions of these findings are presented in Section 1 of the Supporting Information).

Sensitivity analysis

We also considered conducting three-level multilevel modeling, with time points (Level 1) nested within participants (Level 2) within schools (Level 3). The intraclass correlation coefficients (ICCs) of relationship status and internalizing symptoms at the school level were .028 and .049. These ICC values are negligible and do not warrant multilevel modeling at the school level (Hox, 2013). To ensure this was the case, we conducted sensitivity analyses to test whether our findings would change when schools were modeled as the third level in multilevel modeling testing our hypotheses. Additionally, to confirm our expectation that participants' group assignment (i.e., intervention or control) in this cluster-randomized controlled trial would not impact the results of the current research questions, we conducted sensitivity analyses including group assignment as a covariate in our analyses testing the four hypotheses.

RESULTS

Descriptive and preliminary analyses

Table 1 presents data missingness and descriptive statistics of romantic involvement and internalizing symptoms by time point. At each time point, about a third of adolescents reported currently being in a relationship. Participants who reported being romantically involved showed significantly higher levels of internalizing symptoms than single participants did at each time point (Table 1). Among all participants, 561 (49.4%) reported being single across all surveys they completed, 194 (17.1%) reported only romantically involved relationship status, and the remaining 381 (33.5%) reported a change of relationship status at least once.

The ICCs for relationship status and internalizing symptoms were .41 and .68, respectively. This suggests that 59% and 32% of the variability of relationship status and internalizing symptoms, respectively, existed at the within-person level. Participants' scores of internalizing symptoms across different time points were all significantly and highly correlated with each other, with the six pairwise Pearson correlations ranging from r = .59 to r = .77. See Section 2 of the

Supporting Information for correlations between romantic involvement and internalizing symptoms across all four waves of data collection.

Main analyses testing hypotheses and moderation

Does relationship status change predict subsequent internalizing symptoms?

Among initially single participants, entering into a relationship did not predict subsequent internalizing symptoms, $b = -0.01$, $SE = 0.04$, $p = .81$, controlling for internalizing symptoms at the prior time point (Table 2, Panel A); this finding did not support Hypothesis 1a. Among initially romantically involved participants, leaving a relationship did not predict subsequent internalizing symptoms, $b = 0.07$, $SE = 0.05$, $p = .23$, controlling for prior internalizing symptoms (Table 2, Panel B); this finding did not support Hypothesis 1b.

Moderation analyses among initially single adolescents

The association between relationship status change and subsequent internalizing symptoms among initially single adolescents was significantly moderated by sexual diversity status, $b = -0.50$, $SE = 0.11$, $p < .001$. Simple slope analyses probing the interaction suggested the association was only significant for sexually diverse adolescents, $b = -0.43$, $SE = 0.10$, $p < .001$, but not for heterosexual adolescents, $b = 0.07$, $SE = 0.04$, $p = .10$, suggesting that entering into a relationship predicted lower internalizing symptoms for initially single sexually diverse adolescents.

Further analyses testing the moderating effect of specific sexual orientation showed that the association between relationship status change and subsequent internalizing symptoms significantly differed between the specific sexual orientations. Specifically, the negative association between relationship status change and subsequent internalizing symptoms was significantly weaker for those who identified as bisexual relative to those who were unsure of their sexual orientation, $b = 0.72$, $SE = 0.34$, $p = .03$, and to those who identified as gay or lesbian, $b = 0.42$, $SE = 0.20$, $p = .04$; the latter two groups did not differ in the strength of the association, $b = 0.30$, $SE = 0.36$, $p = .40$. Simple slope analyses showed that entering into a relationship predicted significantly lower subsequent internalizing symptoms for single adolescents who identified as gay/lesbian, $b = -0.90$, $SE = 0.31$, $p = .004$, and those who were unsure of their sexual orientation, $b = -0.60$, $SE = 0.17$, $p < .001$, but this association was not significant for those who identified as bisexual, $b = -0.18$, $SE = 0.12$, $p = .16$ (see Figure 1).

However, the association between relationship status change and subsequent internalizing symptoms among initially single adolescents was not moderated by gender, $b = -0.05$, $SE = 0.08$, $p = .58$, or age, $b = 0.03$, $SE = 0.04$, $p = .48$ (Table 2, Panel A).

Moderation analyses among initially romantically involved adolescents

The association between relationship status change and subsequent internalizing symptoms among initially romantically involved adolescents was not moderated by sexual diversity status, $b = 0.19$, $SE = 0.14$, $p = .17$, gender, $b = -0.21$, $SE = 0.12$, $p = .07$, or age, $b = -0.01$, $SE = 0.06$, $p = .88$ (Table 2, Panel B). Specific sexual orientation (gay or lesbian, bisexual, or not sure) also did not moderate this association (pairwise interaction effects $ps > .41$).

Do internalizing symptoms predict subsequent relationship status change?

Among initially single participants, higher internalizing symptoms were associated with a greater likelihood of entering into a relationship, $b = 0.56$, $SE = 0.11$, $p < .001$ (Table 3, Panel A); this finding supported Hypothesis 2a. Among initially romantically involved participants, internalizing symptoms were not associated with subsequent change of relationship status, $b = 0.18$, $SE = 0.12$, $p = .12$ (Table 3, Panel B); this finding did not support Hypothesis 2b.

Moderation analyses among initially single adolescents

The association between internalizing symptoms and subsequent relationship status change among initially single adolescents was not moderated by sexual diversity status, $b = -0.48$, $SE = 0.27$, $p = .08$, gender, $b = -0.12$, $SE = 0.24$, $p = .63$, or age, $b = 0.08$, $SE = 0.10$, $p = .42$ (Table 3, Panel A). Specific sexual orientation also did not moderate this association (pairwise interaction effects $ps > .14$).

Moderation analyses among initially romantically involved adolescents

The association between internalizing symptoms and subsequent relationship status change among initially romantically involved adolescents was not moderated by sexual diversity status, $b = 0.10$, $SE = 0.29$, $p = .72$, gender, $b = -0.19$, $SE = 0.29$, $p = .51$, or age, $b = -0.22$, $SE = 0.13$, $p = .08$ (Table 3, Panel B). Specific sexual orientation also did not moderate this association (pairwise interaction effects $ps > .13$).

Sensitivity analyses

Sensitivity analyses revealed that our findings pertaining to the four hypotheses remained the same when schools were modeled as a third level in multilevel analyses. Similarly, including group assignment as a Level 2 covariate did not alter our findings.

DISCUSSION

While the concurrent link between romantic involvement and higher internalizing symptoms is well-established

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TABLE 2 Relationship status change predicting subsequent internalizing symptoms.

Variable	No moderator			Moderator = gender			Moderator = age			Moderator = sexual diversity status		
Predictor	*b* (*SE*)	*p*	Pseudo R^2 [95% CI]	*b* (*SE*)	*p*	Pseudo R^2 [95% CI]	*b* (*SE*)	*p*	Pseudo R^2	*b* (*SE*)	*p*	Pseudo R^2 [95% CI]
Panel A: Predicting internalizing symptoms among adolescents whose relationship status$_{t-1}$ = Single												
Intercept	0.59 (0.04)	<.001		0.55 (0.05)	<.001		0.59 (0.04)	<.001		0.60 (0.05)	<.001	
Internalizing symptoms$_{t-1}$	0.74 (0.02)	<.001		0.71 (0.02)	<.001		0.74 (0.02)	<.001		0.72 (0.02)	<.001	
Interval length	0.00 (0.02)	.97		−0.00 (0.02)	.80		−0.00 (0.02)	.91		0.01 (0.02)	.74	
Relationship status$_t$	−0.01 (0.04)	.81	.000 [.000, .004]	0.06 (0.07)	.40		−0.01 (0.04)	.80		0.07 (0.04)	.10	
Moderator	–	–		0.19 (0.04)	<.001		0.01 (0.02)	.63		0.22 (0.05)	<.001	
Relationship status$_t$ × Moderator	–	–		−0.11 (0.08)	.19	.001 [.000, .007]	0.03 (0.04)	.48	.000 [.000, .005]	**−0.50 (0.11)**	**<.001**	.015 [.005, .030]
Panel B: Predicting internalizing symptoms among adolescents whose relationship status$_{t-1}$ = Romantically involved												
Intercept	0.67 (0.09)	<.001		0.52 (0.10)	<.001		0.67 (0.09)	<.001		0.71 (0.09)	<.001	
Internalizing symptoms$_{t-1}$	0.71 (0.03)	<.001		0.69 (0.03)	<.001		0.72 (0.03)	<.001		0.69 (0.03)	<.001	
Interval length	−0.06 (0.03)	.02		−0.06 (0.03)	.03		−0.04 (0.03)	.11		−0.06 (0.03)	.02	
Relationship status$_t$	0.07 (0.05)	.23	.000 [.000, .015]	0.18 (0.09)	.052		0.06 (0.06)	.31		0.03 (0.06)	.58	
Moderator	–	–		0.33 (0.09)	<.001		0.02 (0.05)	.68		0.04 (0.11)	.72	
Relationship status$_t$ × Moderator	–	–		−0.22 (0.11)	.054[a]	.006 [.000, .023]	−0.01 (0.06)	.88	.000 [.000, .008]	0.19 (0.14)	.17	.003 [.000, .016]

Note: This table presents findings on how relationship status change predicted subsequent internalizing symptoms among initially single (Panel A) and initially romantically involved adolescents (Panel B), with and without moderation by gender, age, and sexual diversity status. The results of most interest to study hypotheses are bolded; their effect sizes are indicated by pseudo R^2 and its 95% confidence interval (CI). Interval length and age variables were standardized (*z*-scored) so that their values were comparable to other predictors in the model. Relationship status: 0 = currently single, 1 = currently romantically involved. Gender: 0 = boy, 1 = girl. Sexual diversity status: 0 = heterosexual, 1 = sexually diverse (gay or lesbian, bisexual, or not sure).

[a]Probing marginally significant interaction between relationship status and gender among initially romantically involved adolescents: simple slope for boys: $b = 0.18$, $SE = 0.09$, $p = .052$; simple slope for girls: $b = -0.04$, $SE = 0.07$, $p = .55$.

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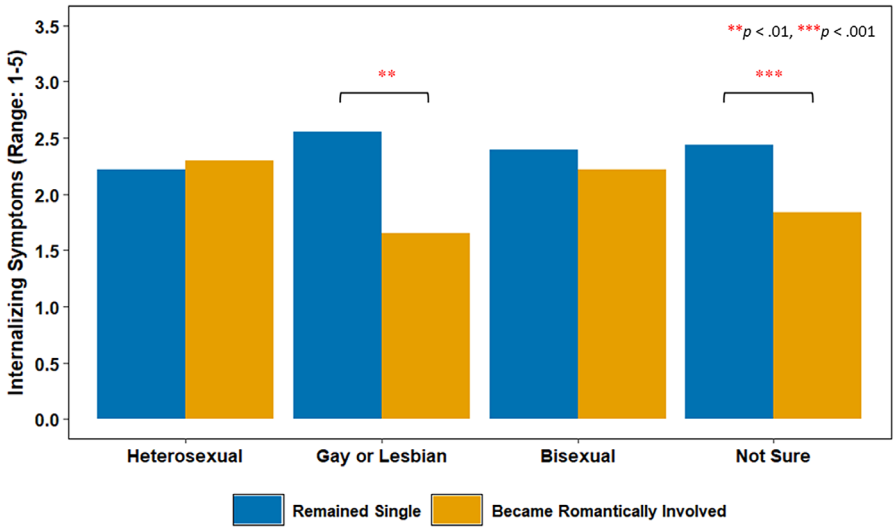

FIGURE 1 Relationship status change predicting subsequent internalizing symptoms among initially single adolescents, as moderated by sexual orientation identities. $^{**}p < .01$, $^{***}p < .001$.

among heterosexual adolescents (Davila et al., 2016, 2019; Luginbuehl et al., 2025), relatively fewer studies have examined how changes in romantic involvement may be associated with changes in internalizing symptoms over time. Mixed results have emerged regarding the directionality of this association and its moderators. Additionally, research focused on romantic relationships and mental health outcomes in sexually diverse youth is extremely limited, which is concerning given the elevated rates of mental health concerns and the potentially protective functions romantic relationships may serve among sexually diverse youth. Given that romantic experiences are socially normative and serve important developmental functions in adolescence (Carver et al., 2003; Connolly et al., 2023; Furman & Buhrmester, 1992; Snapp et al., 2025), the current study sought to further clarify how changes in relationship status and internalizing symptoms are associated with each other over time. Extending prior literature, we examined the longitudinal associations between changes in relationship status and internalizing symptoms separately among initially single and initially romantically involved adolescents to provide a more nuanced understanding of the interplay between these two constructs. We also tested three moderators of the associations (i.e., sexual orientation, age, and gender). Overall, we found that although entering into or leaving a romantic relationship did not predict higher internalizing symptoms over time across all participants, entering into a relationship predicted lower internalizing symptoms over time for certain sexually diverse adolescents. Additionally, higher internalizing symptoms predicted a greater likelihood of entering into a romantic relationship among initially single adolescents, supporting the theory that adolescents may enter relationships to boost their preexisting low mood or gain social support (Davila et al., 2016, 2019).

Relationship status change and subsequent internalizing symptoms

In testing whether changes in relationship status predicted subsequent internalizing symptoms, we first tested whether entering into a relationship predicted higher internalizing symptoms among initially single adolescents. Contrary to our prediction, we found that across all participants, initially single adolescents who entered into a romantic relationship did not subsequently report higher internalizing symptoms compared to those who remained single. Interestingly, sexual orientation moderated the association between entering into a relationship and subsequent internalizing symptoms among initially single adolescents. Consistent with previous literature (Whitton et al., 2018), we found that among initially single sexually diverse youth, entering into a relationship predicted *lower* levels of internalizing symptoms compared to staying single, although this association was not significant among their heterosexual counterparts. Sexually diverse adolescents are vulnerable to experiences of social isolation, rejection, and loneliness due to heteronormative attitudes from teachers, peers, or parental figures (Snapp et al., 2025). Thus, being romantically involved may bring forth social support and a sense of belonging and safety that are lacking in other areas (Diamond & Alley, 2022; Snapp et al., 2025). Additionally, during adolescence when identity development is occurring, romantic relationships can serve as a "safe space" for sexually diverse youth to safely explore their identities and identity expressions. These beneficial effects of romantic relationships can boost one's confidence and self-esteem and may buffer against the negative impact of minority stressors among sexually diverse adolescents (Johns et al., 2013; Meyer, 2003; Whitton et al., 2018). Thus, romantic involvement may be protective for certain sexually diverse youth.

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TABLE 3 Internalizing symptoms predicting subsequent relationship status change.

Variable	No moderator			Moderator = gender			Moderator = age			Moderator = sexual diversity status		
Predictor	***b* (*SE*)**	***p***	**Pseudo R^2**	***b* (*SE*)**	***p***	**Pseudo R^2**	***b* (*SE*)**	***p***	**Pseudo R^2**	***b* (*SE*)**	***p***	**Pseudo R^2**
Panel A: Predicting relationship status$_t$ among adolescents whose relationship status$_{t-1}$ = Single												
Intercept	−3.12 (0.32)	<.001		−3.37 (0.47)	<.001		−2.95 (0.32)	<.001		−3.26 (0.34)	<.001	
Interval length	0.45 (0.08)	<.001		0.45 (0.08)	<.001		0.46 (0.08)	<.001		0.45 (0.08)	<.001	
Internalizing symptoms$_{t-1}$	**0.56 (0.11)**	**<.001**	.069 [.046, .095]	0.61 (0.20)	.003		0.49 (0.11)	<.001		0.62 (0.12)	<.001	
Moderator	–	–		0.62 (0.56)	.27		−0.04 (0.27)	.90		1.49 (0.80)	.06	
Internalizing symptoms$_{t-1}$ × Moderator	–	–		−0.15 (0.24)	.54	.000 [.000, .004]	0.08 (0.10)	.42	.000 [.000, .004]	−0.48 (0.27)	.08[a]	.000 [.000, .004]
Panel B: Predicting relationship status$_t$ among adolescents whose relationship status$_{t-1}$ = Romantically involved												
Intercept	0.18 (0.31)	.56		−0.18 (0.55)	.75		0.21 (0.33)	.52		0.22 (0.35)	.51	
Interval length	−0.15 (0.09)	.12		−0.11 (0.10)	.25		−0.13 (0.10)	.21		−0.14 (0.09)	.14	
Internalizing symptoms$_{t-1}$	0.19 (0.12)	.12	.002 [.000, .013]	0.21 (0.25)	.40		0.19 (0.13)	.14		0.18 (0.14)	.21	
Moderator	–	–		0.79 (0.69)	.25		0.84 (0.33)	.01		−0.43 (0.83)	0.61	
Internalizing symptoms$_{t-1}$ × Moderator	–	–		−0.14 (0.29)	.64	.001 [.000, .012]	−0.22 (0.13)	.08[b]	.006 [.000, .023]	0.10 (0.29)	0.72	.001 [.000, .011]

Note: This table presents findings on how internalizing symptoms predicted subsequent relationship status change among initially single (Panel A) and initially romantically involved adolescents (Panel B), with and without moderation by gender, age, and sexual diversity status. Significant results that are of most interest to study hypotheses are bolded. Interval length and age variables were standardized (*z*-scored) so that their values were comparable to other predictors in the model. Relationship status: 0 = currently single, 1 = currently romantically involved. Gender: 0 = boy, 1 = girl. Sexual diversity status: 0 = heterosexual, 1 = sexually diverse (gay or lesbian, bisexual, or not sure).

[a]Probing marginally significant interaction between internalizing symptoms and sexual diversity status among initially single adolescents: simple slope for heterosexual adolescents: $b = 0.62$, $SE = 0.12$, $p < .001$; simple slope for sexually diverse adolescents: $b = 0.14$, $SE = 0.25$, $p = .56$.

[b]Probing marginally significant interaction between internalizing symptoms and age among initially romantically involved adolescents: simple slope for younger (−1 *SD* age) adolescents: $b = 0.41$, $SE = 0.18$, $p = .02$; simple slope for older (+1 *SD* age) adolescents: $b = -0.03$, $SE = 0.18$, $p = .85$.

Notably, in line with prior findings (Whitton et al., 2018), the protective functions of romantic involvement appeared to be present only for adolescents who identified as monosexual (gay or lesbian) and were unsure of their sexual orientation, but not for bisexual adolescents. This likely suggests that bisexual adolescents may experience unique stressors when romantically involved, such as heightened invalidation within their social network and the larger sexually diverse community for their nonmonosexual sexual orientation and their sexual orientation being wrongly assumed through the gender of their partner (Dyar et al., 2014). Future research might examine how the gender of bisexual adolescents' romantic partner(s) may be associated with their feelings towards their identity expression or validation and their risk for internalizing symptoms. Bisexual adolescents who are romantically involved with a different-sex partner may experience heightened identity confusion and invalidation (due to being perceived as heterosexual or as an out-group member to the sexually diverse community), whereas those who are romantically involved with a same-sex partner may experience greater identity validation and social support from the sexually diverse community, serving as protection from internalizing symptoms. Broadly, our findings add to the larger literature demonstrating more consistent benefits of romantic relationships for gay and lesbian individuals than for bisexual individuals (Du Bois, Guy, et al., 2019; Du Bois, Legate, et al., 2019; Feinstein et al., 2016; Hsieh & Liu, 2019; Hsu & Mernitz, 2024; Whitton et al., 2018). As most research to date was cross-sectional and focused on adults, we extend the literature by clarifying the directionality of this association in a demographically diverse adolescent sample.

The null finding among heterosexual adolescents did not support the stress and coping model (Davila, 2008) or align with prior evidence demonstrating that romantic involvement predicts higher subsequent internalizing symptoms (Davila et al., 2004; Joyner & Udry, 2000; Starr et al., 2012; Szwedo et al., 2015). It is worth noting that most participants in the current sample identified as Hispanic or Latine and had at least one parent born outside the United States. Though mixed evidence exists, some research shows that romantic involvement may be especially beneficial for youth of color, including Hispanic or Latine youth (Carter et al., 2015; La Greca & Harrison, 2005; Whitton et al., 2021). In a Hispanic-majority adolescent sample, La Greca and Harrison (2005) found that romantic involvement was associated with lower social anxiety symptoms and was not associated with depressive symptoms. Future research should explore unique individual, relationship, and cultural characteristics shared among Hispanic/Latine youth or youth from immigrant families that could potentially contribute to reduced risks and even beneficial functions associated with being romantically involved (e.g., strong values of family and relationship commitment, acculturative stress).

Besides the unique demographic characteristics of the current sample, another possible explanation for this is that our longitudinal surveys were sometimes only a few months apart from each other, which was generally shorter compared to other prior studies that had survey intervals ranging from 6 months to 3 years (Davila et al., 2004; Joyner & Udry, 2000; Starr et al., 2012; Szwedo et al., 2015). As such, some participants in our sample who reported a relationship status change from single to being romantically involved may have newly entered into that relationship and thus were experiencing the "honeymoon" phase of being with a new romantic partner. One study found that adolescents who recently fell in love reported decreased symptoms of depression and anxiety (Bajoghli et al., 2017). It may also be the case that within this sample of public high school students, adolescent dating is particularly socially acceptable, expected, and normative for many. In fact, van Zantvliet et al. (2020) found that adolescent romantic involvement was more strongly associated with higher internalizing symptoms among adolescent girls when it was less aligned with peer norms around dating (i.e., lower proportion of classmates with prior dating experience; van Zantvliet et al., 2020). Thus, the psychological risk associated with romantic involvement could be dependent on one's environment and social norms.

The discrepancy between our own findings and some prior findings in the literature is also likely due in part to the inconsistent measurement of adolescent romantic involvement across studies (as also discussed in Davila et al., 2009). For example, some studies operationalized romantic involvement as having recently been in a romantic relationship or engaged in dating activities (held hands or kissed someone; Joyner & Udry, 2000; Starr et al., 2012), whereas others defined those in a romantic relationship based on their current or recent relationship status (e.g., whether they were in a romantic relationship or had a boyfriend or girlfriend; Davila et al., 2004; Starr & Hammen, 2016; Szwedo et al., 2015; van Zantvliet et al., 2020). In fact, Davila et al. (2009) found that recent dating activities, but not relationship status, prospectively predicted higher depressive symptoms among adolescent girls. It may be that engaging in more casual dating activities (e.g., sexual or dating behaviors in short-term relationships, noncommitted relationships, or with casual partners) poses greater risk for internalizing symptoms for adolescents than being in a more stable romantic relationship (Ciairano et al., 2006; Mendle et al., 2013; Shulman et al., 2009). Additionally, these prior studies, and the current study, vary in other aspects, including the age group of the adolescents and the timeframe within which the association between romantic involvement and internalizing symptoms was examined. It is important for future research to systematically discern what kinds of romantic experiences pose risk for whom and on what timescale.

Among initially romantically involved adolescents, experiencing a relationship status change (i.e., a breakup) did not predict subsequent internalizing symptoms. This finding was surprising given prior evidence suggesting the negative psychological consequences of breakups among adolescents (Mirsu-Paun & Oliver, 2017; Monroe et al., 1999). One explanation may be that, unlike in prior studies examining the psychological impact of breakups (Chen et al., 2009; Hou et al., 2013; Monroe et al., 1999),

we did not explicitly ask participants whether they experienced a breakup. It is possible that our measurement of relationship ending based on one's reported relationship status at two adjacent survey points may not accurately reflect whether a breakup has occurred or if adolescents perceived the end of a relationship as a breakup. For example, adolescents who were in a casual romantic relationship that ended may not report it as a breakup. Our surveys also did not capture how and why the breakup happened. Assessing the nature and reasons for the breakup would offer important context for understanding current or future risks for psychological distress (i.e., a mutually decided-upon breakup vs. a one-sided breakup). Some youth may experience psychological relief after ending an unhealthy relationship. Adolescents' characteristics, such as attachment styles, may also impact the psychological distress adolescents experience following a breakup. Prior research—mostly based on adult samples—has shown that insecure attachment, particularly anxious attachment, is linked to more psychological distress after a breakup (Gehl et al., 2024; Heshmati et al., 2021; Shaver & Vernon, 2003). Limited work has been done with adolescents (Mirsu-Paun & Oliver, 2017).

Internalizing symptoms and subsequent relationship status change

Regarding whether internalizing symptoms predict subsequent changes in relationship status, we found that among single adolescents, higher internalizing symptoms predicted a greater likelihood of subsequently entering into a relationship. This finding was consistent with our hypothesis and some prior findings that internalizing symptoms predicted romantic involvement 1 year later (Davila et al., 2009; van Zantvliet et al., 2020). Together, these findings could support the notion that adolescents may use romantic involvement and associated experiences (shared activities, words of affirmation) as a form of coping mechanism to improve preexisting low mood and self-esteem and to gain social support (Davila, 2008; Davila et al., 2009, 2019). As this theory has received inconsistent support thus far, future research should further explore adolescents' motivations for entering into romantic relationships and more explicitly examine the mood-regulating motivation, particularly among dysphoric adolescents. Besides this theory, there may be other contextual factors contributing to both higher levels of depressive symptoms and a greater likelihood of entering into a relationship (e.g., challenges in family relationships or friendships, academic stress, hormonal and biological changes during puberty). Future research should take into account these contextual stressors when testing the mood regulation theory and when examining the link between depressive symptoms and adolescent romantic involvement more broadly.

Among initially romantically involved adolescents, higher internalizing symptoms did not predict one's subsequent likelihood of experiencing a breakup. This null finding may reflect the heterogeneous ways in which internalizing symptoms manifest in romantic relationships and the distinct ways they can influence relationship decisions among romantically involved adolescents. It may be that for some adolescents, higher internalizing symptoms predict a higher likelihood of breaking up due to interpersonal difficulties associated with internalizing symptoms and decreased ability to maintain a healthy relationship (Coyne, 1976a; Davila et al., 2019; de Lijster et al., 2018; Hames et al., 2013). For others, feeling depressed or anxious may make them cling on to (as opposed to leave) romantic relationships as a form of mood regulation or source of comfort and due to fear of feeling worse after a relationship ending. Relatedly, certain relationship processes that tend to accompany internalizing symptoms may help preserve the relationship or improve relationship quality, at least in the short term. For example, adolescents with higher internalizing symptoms tend to engage in corumination, or the process of excessively discussing one's negative feelings and problems with others (Rose, 2021). It has been found that corumination with romantic partners is positively associated with partner support and relationship satisfaction (Ames-Sikora et al., 2017; Calmes & Roberts, 2008). Thus, it is important for researchers and clinicians to attend to the various ways in which internalizing symptoms could manifest in and influence adolescent romantic relationships.

Limitations and future directions

It is important to note several limitations of the current study. First, we assessed relationship status at four separate time points that are on average 4–5 months apart. As such, these assessments likely did not capture all possible changes in relationship status and internalizing symptoms that could have occurred between survey time points. For example, regarding relationship status, we do not know if participants were in the same romantic relationship if they reported being in a relationship at two adjacent time points. Relatedly, we do not have data on the nature of these relationships, such as the length or commitment level of these relationships. Given the rapidly changing nature of adolescent romantic relationships, future research may benefit from more frequent assessments of adolescents' romantic experiences (including relationship status) and the characteristics of these relationships (e.g., stability) to better understand when and how different aspects of adolescent romantic relationships are associated with their psychological well-being over both short- and long-term time spans (Tienda et al., 2023). Additionally, we acknowledge that certain demographic questions used in this study could benefit from more inclusive language, such as refraining from using the term "other" for social constructs (e.g., use "prefer to self-describe" instead), considering race and ethnicity as integrated identities, and including more options and nuanced language for assessing gender identity and sexual

orientation (Feinstein et al., 2023). Further, this study had a small sample size for certain sexually diverse subgroups (gay, lesbian, and "not sure" subgroups) and is limited in gender diversity. Future research should recruit more diverse samples regarding gender and sexual orientation and attend to the unique experiences of youth with intersecting identities (e.g., sexually diverse youth of color). Finally, although we examined how sexual orientation, gender, and age could influence the link between adolescents' relationship status change and internalizing symptoms, future studies should explore the role of additional factors (e.g., peer relationships, family environment, access to community support) in these associations.

Clinical implications

Regarding clinical implications, our null findings on the link between entering into a relationship or breaking up and subsequent internalizing symptoms likely reflect the complex tradeoff between risks and benefits associated with changes in relationship status and the context-dependent nature of this association. For example, entering into a romantic relationship did not increase risk for internalizing symptoms on average in the current sample, which consisted primarily of Hispanic/Latine adolescents. It also appeared protective for certain sexually diverse youth (e.g., gay, lesbian, or "not sure"). Thus, parents, school counselors, and clinicians should take an informed approach when discussing with adolescents how romantic relationships may influence their mental health, taking into account their unique experiences associated with their identities. For adolescents at elevated risks for discrimination and social rejection (e.g., sexually diverse youth), it is important for trusted adults to understand and validate the sense of safety, belonging, and self-worth that romantic relationships can bring and potentially benefit their mental health.

Our finding that higher internalizing symptoms may increase the likelihood of entering into a relationship among single adolescents highlights the importance of having conversations with adolescents about motivations for entering a relationship. Trusted adults can discuss with adolescents how symptoms of depression and anxiety can impact their decision-making in romantic relationships and lead to actions that bring short-term relief but negative long-term consequences (e.g., stress associated with being in a low-quality relationship). Adolescents with elevated internalizing symptoms may also benefit from interventions that broaden their emotion regulation and coping repertoires (e.g., unified protocol for adolescents; Ehrenreich-May et al., 2017). Ultimately, the goal of these conversations and interventions is to maximize the emotional and social benefits adolescents can glean from a supportive and fulfilling romantic relationship (when there is one) and minimize the long-term psychological risk that may be posed by adolescent romantic relationships.

CONCLUSION

In this longitudinal study, we examined the bidirectional associations between romantic involvement and internalizing symptoms among a diverse group of adolescents. We extended the prior literature by distinguishing adolescents' initial relationship status, which allowed for a novel examination of how changes in romantic involvement may predict different levels of internalizing symptoms over time for both initially single and romantically involved adolescents.

We found that higher internalizing symptoms predicted a greater likelihood of entering into a romantic relationship among initially single adolescents. Although entering into a romantic relationship did not predict subsequent internalizing symptoms across all adolescents, it predicted lower internalizing symptoms among certain sexually diverse adolescents. These findings contribute to our understanding of the interplay of changes in relationship status and mental health and inform how school counselors and clinicians counsel adolescents on the benefits and risks associated with romantic relationships.

AUTHOR CONTRIBUTIONS

All listed authors have contributed to the manuscript substantially and have agreed to the final submitted version. Contributions are as follows: **Daphne Y. Liu:** Conceptualization; data curation; formal analysis; methodology; resources; software; visualization; writing—original draft; writing—review and editing. **Claire L. Chapman:** Conceptualization; visualization; writing—original draft; writing—review and editing. **Yunying Le:** Conceptualization; formal analysis; methodology; supervision; visualization; writing—review and editing. **Nicholas S. Perry:** Conceptualization; data curation; resources; supervision; visualization; writing—review and editing. **Galena K. Rhoades:** Conceptualization; data curation; funding acquisition; investigation; methodology; project administration; resources; supervision; visualization; writing—review and editing.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICAL APPROVAL STATEMENT

All study procedures were approved by the University of Denver Institutional Review Board on February 14, 2017 under project title (IRB#: 977115). This study was conducted according to the American Psychological Association Code of Ethics.

PATIENT CONSENT STATEMENT

Parents of potential participants were sent opt-in forms to sign by their teachers, which served as the consent process for adolescents to enroll in the study. Afterwards, evaluation staff informed the potential participants of the study information, and participants gave informed assent via an electronic form prior to receiving any programming.

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SUPPORTING INFORMATION

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