Daily Social and Affective Lives of Homeless Youth: What is the Role of Teacher and Peer Social Support?

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Abstract

Youth spend a significant amount of time in school surrounded by and interacting with teachers and peers. For doubled-up homeless youth (i.e., youth who share housing with a series of friends and/or extended family members), in-school relationships may be important for their emotional functioning. The current study captured dynamic processes by which in-school teacher and peer social support (i.e., baseline assessments of prior support and daily early-day reports of school day support) influence homeless youth's daily emotional well-being, as assessed by positive and negative affect later in the day. Specifically, we used a baseline survey in combination with a 10-day twice-a-day diary design to examine the competing influences of prior (i.e., between-person) and daily (i.e., within-person) social support from teachers and peers during the school day. Baseline teacher support and early-day peer support were associated with higher later-day positive affect. In contrast, baseline peer support was associated with lower later-day negative affect. Baseline peer support moderated the association between early-day peer support and later-day positive affect, in that there was a significant effect of early-day peer support and later-day positive affect for youth who reported medium and high levels of baseline peer support. However, the later-day positive affect of youth who reported low baseline levels of social support did not appear to benefit from early-day peer support. Results suggest that the source of support (i.e., teacher and peer) differently influences daily affect and that receiving daily in-school support can promote daily positive affect while mitigating negative affect for doubled-up homeless youth. Overall, study findings suggest that providing peer and teacher social support is a promising prevention and intervention approach for fostering resilience among doubled-up homeless youth.

Keywords

Homeless youth; teacher support; peer support; positive affect; negative affect; daily diary

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Introduction

Over 1.3 million homeless youth are enrolled in U. S. schools (National Center for Homeless Educations [NCHE], 2016). Youth homelessness, as defined by the McKinney-Vento Act (MVA; Stewart B. McKinney Homeless Assistance Act of 1987, 2010), occurs when youth under the age of 21 lack a "fixed, regular, and adequate nighttime residence" (SEC. 725). The largest portion of youth classified as homeless by the MVA (75%) are those who share housing with a series of friends and/or extended family members due to economic hardship, which is often called being doubled-up (NCHE, 2016). Not only are doubled-up youth the most common subpopulation of homeless youth, this population also experiences distinct risks while doubled-up and are among the least studied group of homeless youth (Curry, Morton, Matjasko, Dworsky, & Samuels, 2017; Rog & Buckner, 2007).

Homeless students experience numerous challenges, such as inconsistent caregiver support and a lack of academic resources, that are detrimental to academic achievement and engagement (for reviews see Buckner, 2008, 2012; Masten et al., 2014; Miller, 2011). On average, 16% of homeless students miss more than three weeks of school each year and 15% to 30% repeat at least one grade (Bassuk, DeCandia, Beach, & Berman, 2014; Rubin et al., 1996; Wood, Valdez, Hayashi, & Shen, 1990; Zima, Wells, & Freeman, 1994). Moreover, incidents of homelessness are linked to both initial reductions in academic achievement and decreased academic performance over time, resulting in widening achievement gaps between youth who experience homelessness and their stably housed peers (Cutuli et al., 2013). Not surprisingly, homeless youth are frequently held back and drop out of school at alarming rates when compared to their stably housed peers (Hynes, 2014).

Like other contextual challenges, homelessness does not uniformly impact all youth who are unfortunate enough to experience it (see Masten, 2012). For some youth, homelessness begins a cycle of problems starting with academic issues that can culminate in employment difficulties and involvement with the criminal justice system (Kushel, Hahn, Evans, Bangsberg, & Moss, 2005; Metraux & Culhane, 2006; Morewitz, 2016). Others somehow overcome the challenges of homelessness, stay engaged in school, and go on to live stable lives. This heterogeneity in outcomes is consistent with the Risk and Resilience framework (e.g., Masten, 2001, 2011), which frames youths' frequent ability to overcome substantial contextual adversity as "ordinary magic." At the core of the Risk and Resilience framework is the notion that resilience is a process that unfolds over time (Rutter, 2012) as the individual leverages the relatively few positive opportunities available to them and builds and maintains their relationships with supportive institutions and people.

To examine the process of resilience as it unfolds, there is a need for data collection methods that obtain repeated assessments of experiences and reactions (i.e., multiple assessments within the same day) so that analyses can be used to investigate how individuals adapt to their environments daily (Almeida, 2005). The current study used a daily diary approach to investigate the process in which doubled-up homeless youth maintain emotional well-being on a daily timescale (i.e., how daily social support is associated with daily affect) that more closely corresponds to the timing in which homeless youth must adapt to their experiences. Daily assessments of in-school teacher and peer social support (i.e., early-day assessments)

capture routine experiences occurring in youths' learning environment. These daily in-school experiences likely carry over to influence the emotional states of youth after school (i.e., later-day positive and negative affect), thus potentially capturing within-person processes of daily resilience. This daily approach allows us to examine how doubled-up homeless youth's prior experiences (i.e., baseline reports of social support) can either facilitate or impede the protective influence of daily experiences. The combined use of baseline and daily assessments provides insight into how prior social support might be linked to long-term outcomes by evaluating the degree to which daily social support is associated with daily emotional well-being.

Supportive relationships are a critical resource through which resilience may be fostered and sustained (e.g., Juvonen, 2006; Wentzel, Russell, & Baker, 2016). Within the school setting, support from teachers and peers promotes a variety of school-related competencies during adolescence (see Juvonen, 2006; Wentzel, 2009, for reviews). However, few studies have examined the competing influence of teacher and peer support on mental health and academic outcomes (e.g., Tian, Tian, & Huebner, 2016; Wentzel, Russell, & Baker, 2016), and none have examined these associations among doubled-up homeless youth. Previous research has conceptualized teacher and peer relationships as stable environmental contexts, but there is a growing interest in daily variation in school experiences that may influence daily adjustment and long-term academic achievement given that youth spend over 30 hours a week in school (Kolbe, Partridge, & Reilly, 2012). For example, daily negative in-school experiences are associated with maladaptive increases in negative emotions (Morrow, Hubbard, Barhight, & Thomson, 2014; Nishina & Juvonen, 2005; Reynolds & Repetti, 2008) and mental health functioning (Bai & Repetti, 2018) in community-based samples. Thus, daily positive in-school experiences with teachers and peers may influence youth's daily emotional well-being and be critical to understanding the link between in-school support and long-term academic engagement (e.g., Wentzel, 1998). Considering the former, the current study utilized an experience sampling daily diary design to capture in-school social support received by doubled-up homeless youth to investigate the dynamic process of adaptation effecting daily emotional well-being. Specifically, we used a baseline survey and a 10-day twice-a-day diary design to disentangle the contribution of baseline (between-person) and early-day (within-person) social support from teachers and peers on later-day positive and negative affect.

Positive and Negative Affect

Positive and negative affect are distinct emotional states. Positive affect is characterized as happiness, joy, and sense of well-being and negative affect encompasses anger, contempt, disgust, guilt, fear, and nervousness (Diener & Emmons, 1985). Positive affect is associated with approach behavior as well as improved memory, problem solving, and learning (Bryan, Mathur, & Sullivan, 1996; Elliot & Thrash, 2002). In contrast, negative affect is associated with depressed emotions, poor behavioral inhibition, and poor cognitive processing (e.g., reduced ability to organize and recall information; Ellis, Thomas, & Rodriguez, 1984). Within the classroom, positive and negative affect are associated with academic functioning through their influence on cognitive processing, learning strategies, self-regulated learning, and motivation to learn (Pekrun, Frenzel, Goetz, & Perry, 2007). For example, positive affect

influences approach-related behaviors that motivate students toward desired goals and broadens the problem-solving approaches students use, resulting in enhanced academic competence (Davidson, Jackson, & Kalin, 2016; Fredrickson, 2001; Rothbart & Bates, 2006).

More recently, studies have begun to consider the role general trait emotional well-being and emotions toward academics play in academic achievement (e.g., Pekrun, Elliot, & Maier, 2006, 2009). This body of work has provided two key findings. First, both general negative affect and specific negative affect toward academics are associated with poor academic functioning (Gumora & Arsenio, 2002). Second, students' emotions toward academics are associated with their motivation and learning, which in turn, influences their academic achievement (Mega, Ronconi, & De Beni, 2014). These findings rely on conventional retrospective survey methods to infer the influence of school-related emotions on long-term academic achievement. Considering the former, correlates of homeless youth's daily positive and negative affect may be an important, yet unexplored, factor for their long-term academic success (e.g., attending school, remaining academically engaged).

In-School Social Support: Teachers and Peers

Social support occurs when individuals provide resources meant to improve the receiver's ability to cope with distress and adversity (Demaray & Malecki, 2002). In-school social support may be especially pertinent as students spend a significant amount of time around and interacting with teachers and peers (Kolbe et al., 2012). Peer relationships are one aspect of in-school support that is associated with healthy functioning, as adolescence is a time when youth strive to establish autonomy from familial relationships (Smetana, Campione-Barr, & Metzger, 2006; Steinberg & Morris, 2001) and have not yet developed the skills needed to independently cope with distress (Zimmer-Gembeck & Skinner, 2011). In-school social support is associated with an enriching school environment, which may buffer against psychosocial distress that homeless youth otherwise experience, by attenuating or preventing negative affect (e.g., Wigfield, Eccles, & Rodriguez, 1998). In addition, in-school social support may also directly influence homeless youth's positive affect by increasing positive experiences and engendering a sense of belongingness.

Homeless youth are characterized as receiving inadequate social support because of environmental instability (Menke, 2000; Tavecchio, Thomeer, & Meeus, 1999). Given that homeless youth, both those living on the streets and doubled-up with other families, lack parental support, receiving social support from other sources may be an important and malleable resilience factor (Bao, Whitbeck, & Hoyt, 2000; Ennett, Bailey, & Federman, 1999; Kipke, Unger, O'Connor, Palmer, & Lafrance, 1997; Rew, Taylor-Seehafer, Thomas, & Yockey, 2001; Unger et al., 1998). Unger et al. (1998) found that instrumental and emotional support were associated with problem-focused coping and were protective against mental health problems in homeless youth, whereas social isolation was associated with emotion-focused coping, a risk for mental health problems. In additon, Bao et al. (2000) found that the more independent youth were from caregivers, the more dependent they were on peer social support, although both family and peer support reduced depression.

Teacher social support.—Teacher-student relationships are increasingly important during adolescence, when youth are in need of non-parental adult role models and support (Wigfield et al., 1998). Supportive teacher-student relationships, characterized by the presence of closeness, warmth, and positivity, are important to creating learning environments where students can engage academically and socially (DeSantis King, Huebner, Suldo, & Valois, 2006; Rosenfeld, Richman, Bowen, Richman, & Bowen, 2000). Supportive teacher-student relationships are thought to provide stability and encouragement, which influence day-to-day classroom engagement, facilitate the development of social and self-regulation skills, and contribute to long-term academic achievement (see Roorda, Koomen, Spilt, & Oort, 2011 and Sabol & Pianta, 2012 for reviews). For example, positive teacher-student relationships have been found to attenuate risks associated with living in poverty by improving at-risk youth's academic performance and psychological well-being (Bowen & Chapman, 1996; Malecki, Demaray, Elliott, & Nolten, 2006). In addition to directly contributing to students' academic and socioemotional functioning, positive teacher relationships can buffer against the negative effects of behavioral and demographic risks (Sabol & Pianta, 2012). Similar to youth living in poverty, teacher support may be even more influential for homeless youth because homelessness is often characterized by inconsistent caregiver support and fragmented family relationships (Hyde, 2005; Whitbeck, Hoyt, & Yoder, 1999; Wolfe, Toro, & McCaskill, 1999). Thus, doubled-up homeless youth, either because they have left their home due to difficulties with their parents or merely have less parental contact due to no longer living with their family of origin, may have less access to parental support and be more likely to need, and perhaps seek out, extra-familial adults for social support.

Peer social support.—Peer relations become increasingly important during adolescence, as youth increasingly rely on peers to meet social needs (Lam, McHale, & Crouter, 2014; Levitt, Guacci-Franco, & Levitt, 1993; Wentzel, Barry, & Caldwell, 2004). Peer support is characterized by the presence of intimate and supportive interpersonal relationships (Meece, Laird, Villarruel, & Luster, 2006). Among both low- and high-risk youth, peer social support is associated with improved social skills, self-esteem, and school adjustment (Cook, Herman, Phillips, & Settersten, 2002; Demaray & Malecki, 2002). Similar to teacher relationships, the impact of peer social support on homeless youth may be particularly robust because of their often complicated or non-existent relationships with parents (Hyde, 2005; Whitbeck et al., 1999; Wolfe et al., 1999). Compared to teacher or close friend support, general peer support has been identified as a consequential source of support associated with emotional well-being (e.g., Davidson & Demaray, 2007; Wentzel, 1998).

Daily Diary Approach and Conceptual Model

Daily diary designs assess participants multiple times on a fast-scale resulting in the interval of time between assessments being shorter compared to annual or semesterly assessments commonly used in long-term panel designs. Daily diary designs are longitudinal because they involve collecting repeated assessments on a fast-time scale and confer two major methodological advantages: 1) they improve the validity of assessments and 2) establish a closer temporal order of events (Almeida, 2005; Bolger, Davis, & Rafaeli, 2003; Shiffman, Stone, & Hufford, 2008; Stone, Shiffman, & DeVries, 1999). Repeated assessments of

participants in their natural environment and in near real-time improves the ecological validity of responses by reducing recall bias and allowing individuals to report on experiences that are missed by retrospective assessments that cover longer timeframes (Bolger, Davis, & Rafaeli, 2003; Shiffman, Stone, & Hufford, 2008). Thus, rather than being constrained to baseline assessments of the general prevalence of experiences or behaviors that occur over a long timeframe, daily assessments allow participants to report on context-bound phenomena (e.g., experience in schools) that occur over a shorter period of time. Moreover, completing multiple assessments per day establishes a temporal order in which one construct precedes another (i.e., early-day experiences precede later-day behaviors). Therefore, within-day associations exclude influences that remain stable over the duration of the study and can more readily establish directionality (see Bolger et al., 2003; Larson & Almeida, 1999 for explanation of within-person advantages). That is, the identified within-person associations are not confounded by between-person differences in individual characteristics or environments that can disrupt findings from between-person designs (Bolger et al., 2003; Larson & Almeida, 1999). Although insulated from the effects of between-person confounds, and similar to other non-randomized designs, within-person associations are not able to infer causality and can be undercut by confounding variables such as earlier experiences.

Past research has conceptualized constructs, such as social support, as a static environmental influence rather than an experience that can vary by over time. To examine resilience as a process, daily diary approaches assess individuals on a timescale that more closely tracks the link between experiences and outcomes to identify antecedents, correlates, and consequences that characterize homeless youth's daily adaptive or maladaptive reactions. Assessments of behaviors on multiple timescales can concurrently investigate static or slowly changing individual traits (or contextual factors) and more rapidly changing or varying interpersonal interactions that have been implicated in fostering resilience in homeless youth. Baseline assessments capture prior individual characteristics or contextual factors that do not change on a fast timescale (e.g., ethnicity, socioeconomic status, or broad school climate perceptions), as well as prior experiences (e.g., support and stressful life events) that may prime how individuals respond to daily experiences. Thus far, the homelessness literature has primarily examined associations between individual traits, experiences, or behaviors on slowly changing timescales (depicted by the striped boxes and Path 1 in Figure 1). Daily assessments capture variation in constructs on a fast timescale to examine within-person associations between daily experiences and behavior (depicted by the shaded boxes and Path 2 in Figure 1). Thus, the resilience process is captured by within-person associations between daily experiences and behavior, which may then result in long-term indicators of resilience or adversity (depicted by Path 4 in Figure 1). The present study is based on a conceptual framework (see Figure 1) that integrates conventional survey methods and daily diary approaches to investigate the competing influence of prior and daily in-school teacher and peer social support. Specifically, our objective is to gain an understanding of whether prior support influences homeless youth's responses to daily in-school support in such a way that within-person associations are modified by baseline differences (depicted by the dashed box and solid lines in Figure 1).

Current Study

The current study investigated the protective influence of teacher and peer social support for doubled-up homeless students. Baseline and daily diary surveys were used to capture the competing effects of prior and daily teacher and peer support on daily fluctuations in positive and negative affect. Baseline assessments of prior teacher and peer social support captured between-person differences in support that may be associated with daily experiences. A 10-day twice-a-day diary design was used to assess homeless youth's daily fluctuations in teacher and peer social support, positive affect, and negative affect. Four research aims were addressed. First, we wanted to determine the amount of between- and within- person variation in homeless youth's early-day social support experiences and later-day positive and negative affect. We hypothesized that there would be substantial within-person and between-person variation in daily assessments. Second, we assessed the differential predictive contribution of between- and within-person assessments. We hypothesized that between- and within- person social support would each contribute to positive and negative affect. Third, we evaluated the contribution of social support from specific sources (i.e., teachers and peers); we hypothesized that teacher and peer social support would be associated with increases in positive affect and decreases in negative affect. Fourth, we considered the potential moderating role of between-person differences (baseline reports of) in social support. Within-day associations between daily social support and affect were expected to be modified by baseline levels of social support, such that inadequate levels of baseline social support would reduce the association between daily social support and later-day affect.

Method

Participants

Participants (N = 98) were doubled-up homeless youth (i.e., youth either sharing housing or "couch surfing") identified by a non-profit organization that provides support and resources to homeless students in a large U. S. Southwestern city (66% female; 66% Latinx, M_{age}= 17.02, SD_{age}=1.43, range=14 to 20 years old). The majority of participants identified as Latinx (66%) followed by White (9.3%), African American (9.3%), Asian (3.1%), Pacific Islander (4.1%), and Other (8.2%). Participants met the following inclusion criteria: 1) currently enrolled in high school; 2) classified as "homeless" according to the MVA; and 3) currently living with a non-parent. The director of the non-profit organization identified participants who met MVA inclusion criteria from twelve high schools in the metropolitan region.

Procedure

Youth were contacted by the MVA liaison at their high school to participate in the current study. Participants completed a paper baseline survey at their school that involved providing demographic information and assessing baseline levels of psychosocial functioning, school climate, social support, and mental health indicators. The current study drew its assessments of prior social support from this baseline survey. Participants were then provided a smartphone that had internet access, text messaging capability, and the daily survey application. They also received training on how to complete daily assessments on the

smartphone by a member of the research team. Smartphones prompted participants to respond to questions at 3:30 P.M. regarding their experiences during the school day and at 9:00 P.M. regarding experiences after school; they completed the survey for a ten-day block of time. Data were collected on critical daily social and academic experiences of participants across both weekdays and weekends. The after-school assessment time was chosen to avoid interfering with academic activities or school-related tasks (e.g., class time, extracurricular activities). The evening assessment time was selected to best capture daily experiences while avoiding interfering with students' afternoon and evening routines (e.g., afternoon work responsibilities, homework completion, bedtime).

If participants did not complete the survey after the first alarm, they were prompted every 15 minutes for the next hour to complete the survey. After one initial prompt and three reminders, the request was terminated until the next daily assessment. During the 10-day survey period, text messages were sent to participants' smartphones that thanked them for their participation and encouraged them to continue to complete assessments to increase survey compliance. Participants were compensated $3.50 per survey, resulting in as much as $70 for full participation. At no point during this study did participants report experiencing harm or unpleasant experiences related to their participation. Consistent with ethical procedures delineated by Meade and Slesnick (2002) for researching homeless minors, youth were able to self-consent to participate in the study because there was minimal risks associated with participation, requiring parental consent would infringe on their autonomy, and requiring parental consent might not have been in their best interest. A university Institutional Review Board approved all study procedures.

Measures

Baseline teacher and peer support.—The Child and Adolescent Social Support Scale (CASSS; Malecki, Demaray, & Elliott, 2000) is a 60-item rating scale that measures different forms of social support on a six-point scale ranging from "*Never*" to "*Always.*" Each scale assesses the frequency of emotional, informational, appraisal, and instrumental support from five sources: parents, teachers, schoolmates, close friends, and school. The CASSS displays five factors and strong internal consistency (a = .92 to .96 depending on the subscale scores). The instrument also displays convergent/concordant and divergent/ discriminate validity (Malecki et al., 2000; Malecki et al., 2006). Only teacher and schoolmate (i.e., peer) support were examined in the current study. Baseline teacher support was assessed with 12 items (e.g., "How often a teacher makes sure I have what I need for school?") that displayed excellent internal consistency (a = .94). Baseline peer support was assessed with 12 items (e.g., "How often schoolmates ask me to join activities?") that also displayed excellent internal consistency (a = .94).

Early-day teacher and peer support.—After school, youth completed two 3-item scales that assessed whether teachers or other staff persons and schoolmates (peers) were supportive, understanding, and/or complimentary. Items were rated on a four-point scale ranging from "*No*" to "*Yes, very much.*" The three items for teacher (a = .88) and peer (a = .82) support displayed good internal consistency. More information on daily items is included in the Appendix.

Later-day positive affect.—Later-day positive affect was measured with five items that assessed the extent to which youth experienced positive moods (i.e., joy, happiness, inspiration, determination, and calmness). The content and format of these items were based on the Positive and Negative Affect Schedule for Children (PANAS-C; Watson & Clark, 1999). Items were rated on a 100-point slider-scale and they displayed good internal consistency ($a = .85$). More information on daily items is included in the Appendix.

Later-day negative affect.—Later-day negative affect was measured with seven items that assessed the extent to which youth experienced negative emotions (i.e., sadness, loneliness, shamefulness, anger, anxiousness, irritation, and stress). The content and format of these items were based on the Positive and Negative Affect Schedule for Children (PANAS-C; Watson & Clark, 1999). Items were rated on a 100-point slider-scale and they displayed adequate internal consistency ($a = .75$). More information on daily items is included in the Appendix.

Data Analytic Plan

For inclusion in the analysis, participants must have completed the baseline assessments ($n = 87$) and a minimum of four days of daily diary data ($n = 91$), based on procedures established by Bolger and Laurenceau (2013). This resulted in an analytic sample of 87 individuals. When youth with incomplete daily diary data ($n=7$) were compared to the analytic sample ($n = 87$), there were no differences in baseline teacher support ($t[92] = -0.54$, $p = 0.75$) or peer support ($t[92] = -1.06$, $p = 0.15$). In addition, when youth with any missing data were compared to the analytic sample based on age ($t[97] = 0.74$, $p = 0.41$), sex ($\chi^2 [1, n = 98] = 0.18$, $p = .67$), and self-reported grade point average ($t[96] = -0.86$, $p = 0.31$), there was no difference. This analysis only included days youth attended school and had contact with teachers and peers, resulting in 468 occasions of measurement after weekends, holidays, and days that participants skipped school were removed. Daily diary data produces multiple assessments for each participant that violate the assumption that assessments are independent and identically distributed. To accommodate this dependency, multilevel modeling (MLM) was used (Bolger & Laurenceau, 2013; Raudenbush & Bryk, 2002). MLM was conducted using maximum likelihood estimation in the Linear and Nonlinear Mixed Effects Models (NLME) package of R (version 3.1–122). MLM was employed to estimate within-person associations between early-day support and later-day positive and negative affect, as well as whether the associations are moderated by between-person differences in baseline social support. The relationship between within-person (level 1) and between-person (level 2) associations is represented by the following equations:

Level 1:

$$Affect_{it} = \beta_{0i} + \beta_{1i} Early\ Day\ Teacher\ Support_{it} + \beta_{2i} Early\ Day\ Peer\ Support_{it} + \varepsilon_{it}$$

Level 2:

$$\beta_{0i} = \gamma_{00} + \gamma_{01} Baseline\ Teacher\ Support + \gamma_{02} Baseline\ Peer\ Support + \upsilon_{0i}$$

$$\beta_{1i} = \gamma_{10} + \gamma_{11} Baseline \quad Teacher \quad Support + \upsilon_{1i}$$

$$\beta_{2i} = \gamma_{20} + \gamma_{21} Baseline \quad Peer \quad Support + \upsilon_{2i}$$

In the preceding model, i indexed individuals and t indexed time points. Models were fit with random-intercepts and slopes (i.e., υ_{0i}, υ_{1i}, and υ_{2i}) and residual error terms (e.g., ε_{it}). The gammas are sample-level parameters (i.e., υ_i) that represent unexplained between-person differences in an individual's prototypical effects.

The nature of significant interaction terms was probed by calculating the regions of significance (Preacher, Curran, & Bauer, 2006). This tool allows confidence bands to be plotted around the interaction point that represents the conditional effects of the interaction term. The confidence band indicated what range of values of the predictor (early-day support) were significantly shaped by the moderator (baseline social support).

Results

Intraclass correlation coefficients (ICCs) of daily variables reflect the proportion of the total variance in each construct accounted for by the clustering of between-person variance (Aim 1). The ICC estimates indicated that 52% of variance in early-day teacher support, 50% of variance in early-day peer support, 53% of variance in late-day positive affect, and 47% of variance in late-day negative affect was explained by between-person differences. The remaining proportion of variance (almost 50% of each construct) was explained by within-person variation. Positive and negative affect were weakly and inversely correlated ($r = -.16$, $p < .01$), indicating that these are independent constructs that warrant independent examination. Predictors (i.e., teacher and peer social support) were correlated with each outcome in the hypothesized direction—positively with positive affect and negatively with negative affect. Descriptive statistics, ICCs, and correlations between all measures are presented in Table 1.

A series of MLMs were estimated to investigate the unique and combined effects of baseline and daily diary assessments on both outcomes (Aims 2, 3, and 4): Model 1 included the main effects of baseline assessments; Model 2 included the main effects of early-day assessments; Model 3 combined the main effects of baseline and early-day diary assessments; Model 4 added two-way interactions between baseline and early-day measures; and Model 5 presented the most parsimonious model and added a lagged control variable that assessed the outcome earlier in the day. Adding the lagged control to Model 5 decreased the possibility that the within-person associations between early-day predictors and later-day affect were influenced by earlier experiences of affect. Random effects and −2 log likelihood estimates (−2LL; smaller values indicating a good fit) are presented for each model. However, estimates for models that are not nested cannot be directly compared. Thus, the robustness of the findings was strengthened by accounting for earlier daily variation in affect. All models control for potential gender differences.

Table 2 presents the results of the multilevel regression models predicting later-day positive affect. Model 1 results indicated that when gender differences were accounted for ($b = -13.55$, $p < .01$), baseline teacher social support significantly predicted later-day positive affect ($b = 6.09$, $p < .01$). Baseline peer social support was not associated with later-day positive affect ($b = 1.14$, *ns*). The direction of the results, therefore, indicated that female youth experienced less later-day positive affect and that higher levels of baseline teacher support was associated with more later-day positive affect. Model 2 results indicated that when gender differences were accounted for ($b = -10.46$, $p < .01$), early-day peer support significantly predicted later-day positive affect ($b = 5.20$, $p < .01$). Early-day teacher social support was not associated with later-day positive affect ($b = 0.78$, *ns*). Higher early-day peer support was associated with greater later-day positive affect. Model 3 combined main effects of baseline and early-day assessments. When gender differences were accounted for ($b = -13.67$, $p < .01$), both baseline assessments of teacher support ($b = 5.85$, $p < .01$) and early-day peer social support ($b = 5.06$, $p < .01$) significantly predicted later-day positive affect. Model 4 examined interactions between baseline and early-day reports of social support. Here we found a significant interaction between baseline peer support and early-day peer support ($b = 3.12$, $p < .01$), while accounting for main effects. The interaction between baseline teacher support and early-day teacher support was not significant ($b = -0.55$, *ns*). Model 5 dropped the non-significant interaction term and added a lagged variable of positive affect (i.e., the score of positive affect assessed earlier in the day) to test the robustness of the interaction. Model 5 presents the final model after controlling for early-day positive affect ($b = 0.50$, $p < .01$) and gender ($b = -7.80$, $p < .01$). Both baseline teacher support ($b = 3.20$, $p < .01$) and the interaction between baseline peer support and early-day peer support ($b = -7.45$, $p < .01$) predicted later-day positive affect. We used the *pseudo*-R^2 from Singer and Willett (2003) to calculate the local effect size, this value captures the proportion of within-person and level-2 intercept variance explained by the final model. The within-person predictors explained 29.69% of within-person variance in unconditional model (e.g., variance in the model prior to adding a predictor) and baseline main effects and the cross-level interaction explained 2.02% of level-2 intercept variance.

Conditional main effects were examined to aid interpretation of the significant two-way interaction between baseline peer support and early-day peer support (see Frazier, Tix, & Barron, 2004). Predictors (i.e., baseline peer support and early-day peer support) were centered to reflect youth with low and high levels (i.e., ±1*SD*) of each construct. The associations between early-day peer support and later-day positive affect are shown for youth with low and high levels of baseline peer social support in Figure 2. Among youth who had low baseline peer social support, there was no association between low levels of early-day peer support and later-day positive affect ($b = 2.68$, *ns*). For youth with medium ($b = 3.91$, $p < .01$) and high ($b = 5.14$, $p < .01$) baseline peer social support, however, early-day peer support was associated with higher later-day positive affect. The effects of the moderator (e.g., baseline peer support) were clarified by identifying the specific range of values at which the regression of later-day positive affect on early-day peer support moves from non-significance to significance, known as the region of significance (RoS; Preacher et al., 2006). RoS analysis showed the lower bounds of when early-day peer support is

moderated by baseline peer support. For all values above 2.51, baseline peer support significantly moderated the effects of early-day peer support on later-day positive affect.

Table 3 presents the results of the MLM predicting later-day negative affect. Model 1 includes the main effects of baseline peer and teacher social support. Results indicated that baseline peer support significantly predicted later-day negative affect ($b = -4.32$, $p < .01$), whereas baseline teacher support did not ($b = -2.12$, *ns*). There were no gender differences associated with later-day negative affect ($b = 5.23$, $p < ns$); however, for consistency across models, gender was entered as a control. The direction of effects indicated that higher baseline peer support was associated with lower later-day negative affect. In Model 2, the effects of early-day support were examined. Model results indicated that early-day peer support significantly predicted later-day negative affect ($b = -2.38$, $p < .05$). Early-day teacher support, however, did not predict later-day negative affect ($b = 0.20$, *ns*). Model 3 combined the main effects for both baseline and early-day assessments of social support. Both baseline ($b = -4.80$, $p < .01$) and early-day ($b = -2.50$, $p < .05$) assessments of peer support significantly predicted later-day negative affect. Model 4 examined interactions between baseline and early-day social support; however, neither interaction was significant. Model 3 was the most parsimonious model and ultimately retained to examine the robustness of the within-person associations. The robustness of Model 3 was examined by including a lagged variable of negative affect (i.e., the score of negative affect assessed earlier in the day). Model 5 presents the final model, after controlling for early-day negative affect ($b = 0.34$, $p < .05$), in which baseline peer support ($b = -3.49$, $p < .01$) significantly predicted later-day negative affect. The within-person predictors explained 17.99% of within-person variance in the unconditional model (e.g., variance in the model prior to adding a predictor) and the baseline main effects explained 11.34% of level-2 intercept variance.

Discussion

The current study examined the degree to which daily (earlier-day) teacher and peer social support during school are associated with doubled-up homeless youth's daily (later-day) emotional well-being and how these associations vary by youth's prior social support from teachers and peers (depicted by the bolded arrows in Figure 1). Doubled-up homeless youth's prior social support was assessed with a baseline survey and daily variation in social support and affect was assessed across 10 days twice-a-day via smartphone surveys. Daily assessments revealed that doubled-up homeless youths' in-school social support, positive affect, and negative affect fluctuated substantially on a day-to-day basis, supporting our first hypothesis. This finding is not surprising given previous evidence of similar within-person variation in peer victimization (Nishina & Juvonen, 2005), positive affect, and negative affect (Nezlek & Plesko, 2003; Watson, 1988).

Analyses also revealed that social support was associated with higher positive affect and lower negative affect, indicating that social support promotes positive emotional responses while mitigating negative ones. The direct influence of early-day social support on the later-day affect of doubled-up homeless youth parallels and expands on evidence that social support can be protective in populations of homeless youth (Bao et al., 2000; Ennett et al.,

1999; Kipke et al., 1997; Unger et al., 1998). Social support may improve homeless youth's affect states (i.e., higher positive affect and lower negative affect) in a way that enhances their ability to respond to adversity, as higher positive and lower negative affect are associated with academic achievement through improved cognitive processing, learning strategies, and self-regulated learning in stably housed youth (Pekrun et al., 2007).

The between- and within-person associations with later-day affect were more complex than hypothesized in our second hypothesis. Early-day teacher support and baseline peer support were associated with later-day positive affect and the associations remained significant when the corresponding daily and baseline assessments were taken into account. In addition, early-day teacher support was associated with later-day positive affect after accounting for prior day positive affect. The use of twice-a-day assessments for ten days establishes a temporal order of events, in which early-day support (as well as prior day positive affect) precedes later-day positive affect, supporting the possible directionality of effects. However, this does not establish causality. These findings indicate that homeless youth's early-day teacher support in school was carried into later in the day and contributed to their emotional states (i.e., positive affect). Consistent with our hypothesis for the second aim, daily variation and baseline between-person differences (i.e., support before the 10 days of assessments) captured independent social support processes that contribute to later-day positive affect.

In contrast, both variation in early-day and baseline reports of peer support were associated with later-day negative affect, which suggests that there is a distinct impact of early-day and baseline peer support on later-day negative affect. However, the within-person association of early-day peer support with later-day negative affect was no longer significant when early-day negative affect was accounted for. These findings indicate that the contribution of early-day peer support on within-person variation in later-day negative affect overlaps with the contribution of individuals' early-day negative affect. The use of repeated assessment was thus better able to identify an indicator that may be used for future interventions - in this case, spillover of earlier daily negative affect.

Daily diary assessments provide insight into the processes that underlie how homeless youth experience social support in ways that have previously been unexamined. The role within-person variation in social support plays exemplifies the dynamic process of resilience at the core of the Risk and Resilience framework, particularly as it pertains to at-risk populations such as homeless youth. Future research should investigate whether within-person variation in social support that occurs on a fast timescale (i.e., day-to-day) influences homeless youth's ability to achieve long-term milestones that indicate resilience such as graduating from high school (depicted by Path 4 in Figure 1).

The third aim of this study investigated the impact of specific sources of support by testing the concurrent contribution of teacher and peer social support. In this population, receiving social support from peers in school may be particularly meaningful for fostering positive affect and buffering against negative affect, whereas receiving social support from teachers may only foster positive affect. In this vein, positive teacher support has been linked to better academic and social functioning (see Roorda, Koomen, Spilt, & Oort, 2011 and Sabol &

Pianta, 2012 for reviews). When both sources of support are examined, peer support, not teacher support, has been linked to improved externalizing behaviors, internalizing behaviors, and negative thoughts such as running away (Bowen & Chapman, 1996; Demaray & Malecki, 2002; Malecki et al., 2006). Teacher support has been associated with less problem behavior during early and middle childhood, when school performance is closely linked to children's self-regulation in samples of stably housed youth (see Leflot, van Lier, Verschueren, Onghena, & Colpin, 2011). Within the context of the current study, daily negative affect may operate as an indicator of mental health risk, rather than as an indicator of boarder behavioral problems. The current study provides insight on how the impact of social support may differ for at-risk adolescents. The adverse experiences that doubled-up homeless youth face may not be consistent with the support teachers provide, while peers may be more able to mitigate risks that contribute to negative affect. Although these findings are not definitive, they suggest that teachers and peers are meaningful to homeless youth's affect states and that there may be a differential effect of teacher and peer social support for each valence of affect (i.e., positive and negative).

There are several reasons why teacher support may contribute to homeless students' positive affect states yet not necessarily prevent negative affect. Most notably, a general distrust of adults harbored by many homeless youth may make them more guarded and less socially and emotionally connected with teachers, which might make them less affected by teacher social support (Kryda & Compton, 2009; Kurtz, Lindsey, Jarvis, & Nackerud, 2000). Regardless of students' background, teachers are expected to provide a supportive learning environment and not to inhibit students' learning though critical or judgmental exchanges. Thus, while teachers may provide students with support and be non-judgmental, homeless youth may not be prone to disclosing aspects about their lives that are more closely linked to negative affect. While teachers may be more likely to be primarily supportive and be less likely to be openly critical, peers are more likely to vary in both how supportive *and* critical they are (Berndt & McCandless, 2009). It may be that the full spectrum of supportive *and* critical peer interactions facilitates youth's ability to form and benefit from peer relationships. Moreover, being at-risk for school failure and relatively less connected to school than their stably housed peers may make doubled-up youth more sensitive to any peer interactions, supportive *and* critical, rather than responsive to supportive teacher interactions.

The fourth aim of the study further investigated the associations between early-day social support and later-day affect by examining whether within-person associations across the 10 days of daily diary assessments were modified by participants' reports of social support at baseline (depicted by Path 3 in Figure 1). The association between early-day peer support and later-day positive affect was modified by baseline peer support in that early-day peer support did not benefit youth who had low baseline levels of peer support. Interestingly, a compounding effect of early-day peer support and medium and high levels of baseline peer support was linked to higher later-day positive affect. Thus, doubled-up homeless youth who reported medium and high levels of baseline peer support, daily support had a direct effect on positive affect. Moreover, low levels of support reported at baseline was linked to attenuated associations between early-day peer support and later-day positive affect. This finding may indicate that youth have a blunted response to daily support when they perceive their general peer social support as poor.

Study Limitations and Future Directions

Study results should be interpreted in the context of several limitations. First, daily assessments of teacher and peer support were developed from existing measures for the current study to ensure that items matched the timeframe being assessed, were easily interpretable, reduced participant burden, and were relevant to the lives of doubled-up homeless youth. There are a limited number of standardized assessments that capture the desired daily time frame because the majority of questionnaires assess a longer recall time frame or do not designate a recall timeframe (see Shiffman et al., 2008). Accordingly, there is need for the development and validation of daily measures fit for diverse populations. Second, although social support was assessed before positive and negative affect, there is a possibility that associations between these variables occur on a faster timescale (e.g., moment-to-moment). Positive and negative affect may need to be assessed immediately after homeless youth receive social support with more intensive daily assessments to determine real-time responses. Third, and somewhat related, we did not include between-person differences in positive and negative affect (i.e., baseline assessments) in our analyses because within-person associations were the focus of the study. Fourth, it is possible that daily assessments change participants' experiences or behaviors by requiring them to repeatedly evaluate their lives, known as reactivity bias (Bolger et al., 2003). In this case, daily assessments may lead youth to modify their attention to the social support they receive. Future studies should investigate whether homeless youth react to assessment procedures. Fifth, our findings can only be generalized to doubled-up homeless youth with similar characteristics of the current sample. The current sample of homeless youth participated in a program that supports the high school graduation of homeless youth. Therefore, this sample represents a subpopulation of homeless youth who were still engaged in school and seeking support, at least to some degree. Further research is needed to examine whether the present findings extend to other subpopulations of homeless youth by systematically examining the effects of peer and teacher support across subgroups of homeless youth. There may not be universal risk and protective factors that influence all homeless youth, but risk and protective factors specific to the different pathways to homelessness, such as aging out or leaving foster care, leaving their home to avoid parental abuse, or being kicked out because of one's sexual identity (Cochran, Stewart, Ginzler, & Cauce, 2002; Leeuwen et al., 2006; Moore, 2005; Tompsett, Fowler, & Toro, 2009). Sixth, this study does not include a housed comparison group so we cannot state whether the social support and emotional well-being of doubled-up homeless youth differ from those of housed youth. Finally, although this study has provided an innovative contribution to the homelessness and school literature by examining the process of resilience on a fast timescale, the association between daily experiences and long-term academic outcomes was not examined (depicted by Path 4 in Figure 1). Future studies should combine daily diary and conventional longitudinal designs to investigate whether protective mechanisms that operate on fast timescale facilitates long-term academic resilience.

Implications for Practice and Policy

Unfortunately, existing intervention programs for homeless youth display low efficacy (Altena, Brilleslijper-Kater, & Wolf, 2010). Interventions may need to target protective factors specific to the risks that lead to homelessness. In the current study, teacher and peer

social support were found to be indicators of resilience for doubled-up homeless youth, suggesting that enhancing social support is a promising intervention approach for fostering resilience in homeless youth. This evidence is congruent with intervention programs that utilize mentors and peer-led groups to deliver their intervention in similar subpopulations of homeless youth (Bartle-Haring, Slesnick, Collins, Erdem, & Buettner, 2012). Peer-led, compared to adult-led, groups have been associated with youth retaining more intervention material, being willing to take responsibility for their own actions, and increasing their willingness to assist friends (Ferguson, 2007; Fors & Jarvis, 1995).

Current homeless youth intervention programs may be limited by the fact that they neglect to target youth's interpersonal relationships. Teacher relationships may be a particularly overlooked protective factor for homeless students because of environmental instability, poor school attendance, stigma associated with homelessness, or a general distrust of adults that results in fragmented or even non-existent relationships with teachers. Our findings indicated that teacher-student relationships are one area that could be improved upon to facilitate teachers operating as a more salient protective factor in school settings. One avenue for improving homeless students' relationships with teachers is through professional trainings for Local Homeless Education Liaisons as part of the McKinney-Vento Act (MVA; Stewart B. McKinney Homeless Assistance Act of 1987, 2010). Current MVA trainings focus on informing teachers of educational and transportation resources, but could be supplemented with providing targeted skills to help teachers identify and build supportive relationships with homeless students. In addition, MVA trainings could encourage teachers to pair identified homeless youth with other students who can provide support and guidance.

Although more research is needed in this regard, homeless youth may also benefit from interventions that aim to improve all students' social-emotional functioning (Sulkowski, 2016). For example, universal intervention programs such as social-emotional learning, bullying prevention programs, and positive behavior intervention plans may help students feel more comfortable and included in schools. Homeless youth may also benefit from more intensive intervention programs (e.g., Circle of Friends and Check-in/Check Out) that can be used to support at-risk youth (Sulkowski & Michael, 2014). As school-based frameworks evolve to be more targeted and inclusive of all students, tailored prevention and intervention approaches may be more commonly employed to support homeless youth.

Conclusion

To our knowledge, this is the first study to use a daily diary design to examine associations between in-school peer and teacher social support and homeless youth's positive and negative affect. Daily assessments were used to examine how potential pathways to academic resilience may unfold in the lives of homeless youth by capturing the dynamic transactions between daily variation in external (i.e., social support) and internal (i.e., affect) experiences. The association between baseline and daily assessments of social support with daily affect indicated that the emotional states of homeless youth are more complex than previous survey methods have been able to consider. Overall, this study highlights the importance of social support as a key approach to fostering resilience in homeless youth.

Homeless youth benefit from receiving social support from both teachers and peers, as these two sources of support appear to differentially influence daily positive and negative affect.

Acknowledgments

Appendix

Appendix Table.

Daily-dairy Assessments Items

Construct	Item
Early-day Teacher Support	At school today, did a teacher or other staff person compliment you?
	At school today, did a teacher or other staff person let you know they understand your problems?
	At school today, did a teacher or other staff person *give you emotional or social support?*
Early-day Peer Support	At school today, did any schoolmates compliment you?
	At school today, did any schoolmates let you know they understand your problems?
	At school today, did any schoolmates give you emotional or social support?
Later-day Positive Affect	After school today, did you feel joyful?
	After school today, did you feel relaxed?
	After school today, did you feel happy?
	After school today, did you feel determined?
	After school today, did you feel calm?
	After school today, did you feel inspired?
Later-day Negative Affect	After school today, did you feel angry?
	After school today, did you feel ashamed?
	After school today, did you feel sad?
	After school today, did you feel anxious?
	After school today, did you feel irritable?
	After school today, did you feel lonely?
	After school today, did you feel stressed?

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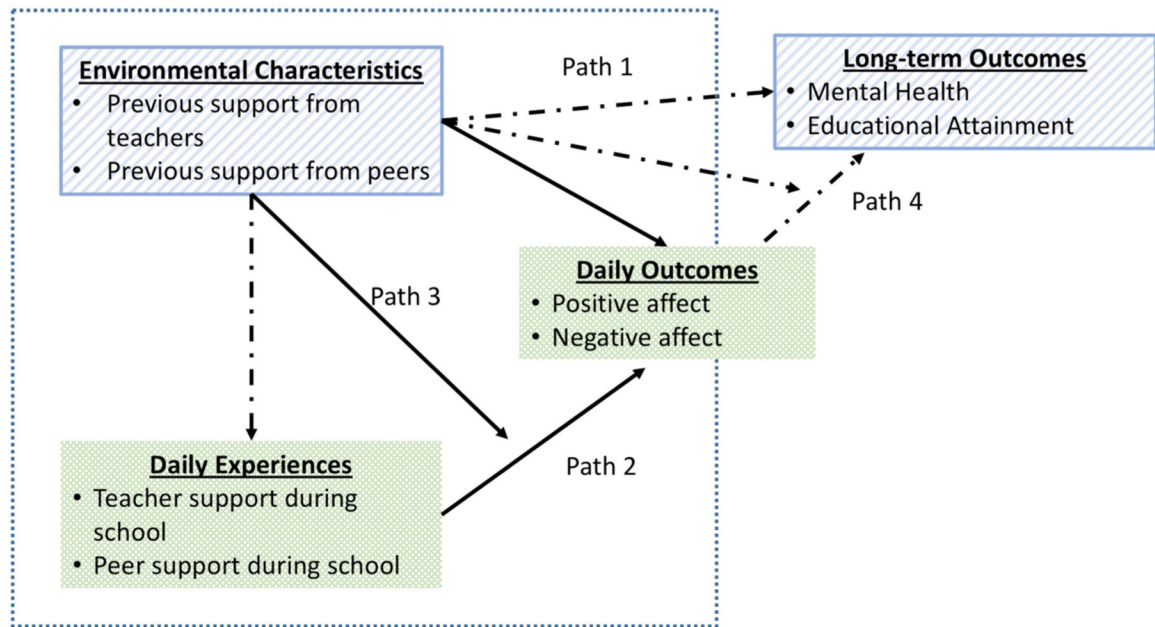
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Figure 1.
Conceptual model of how between-person differences in individual traits, experiences, or behaviors on a slow-changing timescale operated in conjunction with daily experiences and behaviors on a fast-changing timescale to influence long-term outcomes in homeless youth. Solid lines represent pathways being tested in the present study and dotted lines represent untested theorized pathways.
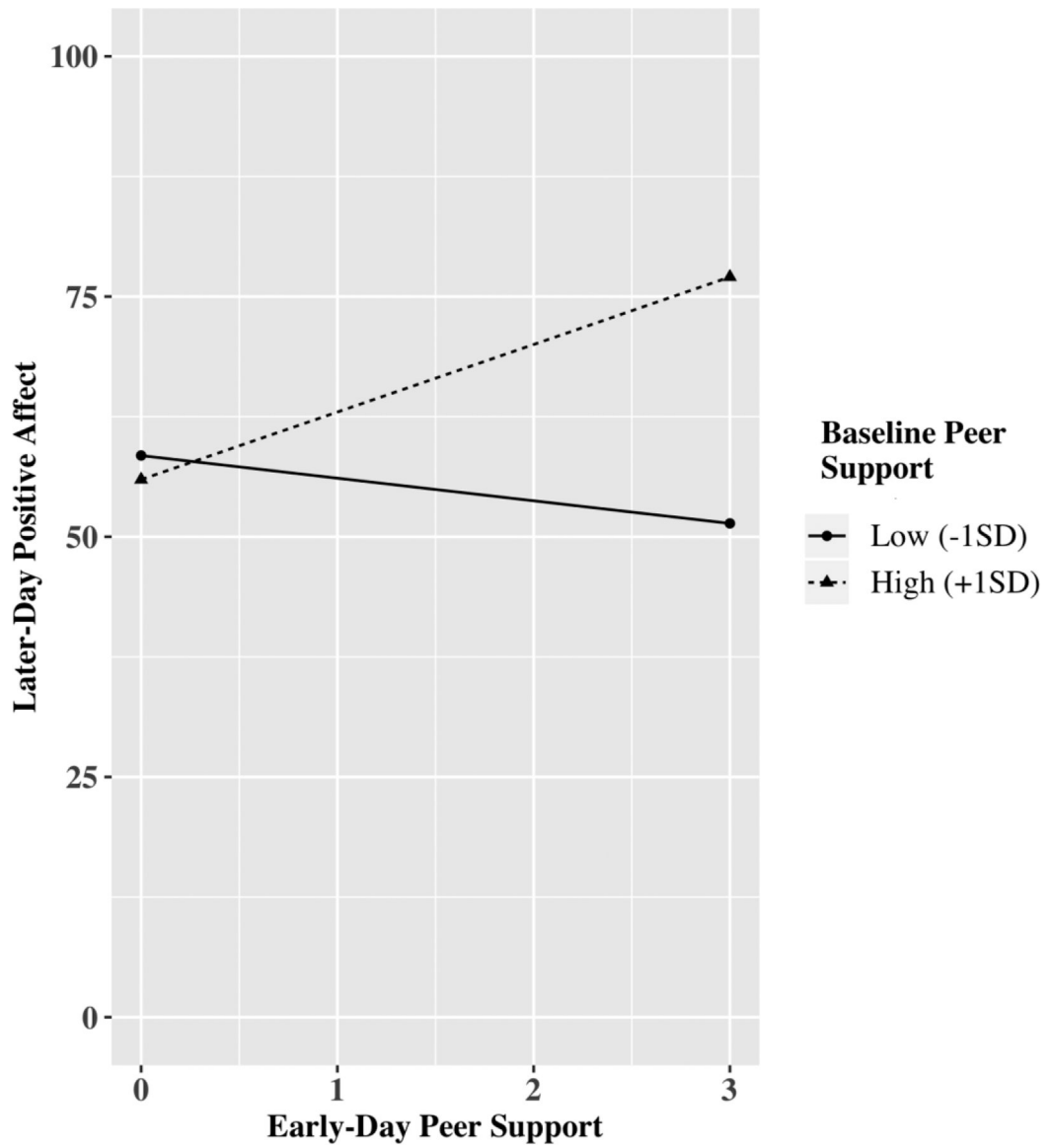
Figure 2.
The effects of early-day peer support on later-day positive affect moderated by baseline peer support

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Table 1

Correlation Matrix with Means and Standard Deviations

	ICC	1	2	3	4	5	6	M(SD)
1. Gender	-							0.67 (0.47)
2. Baseline Peer Support	-	0.01						3.91 (1.23)
3. Baseline Teacher Support	-	0.09**	0.38***					4.36 (1.07)
4. Early-Day Peer Support	0.5	−0.18***	0.14**	0.10*				0.73 (0.89)
5. Early-Day Teacher Support	0.48	−0.12**	0.21***	0.25***	0.55***			0.63 (0.89
6. Later-Day Positive Affect	0.53	−0.23***	0.16***	0.25***	0.33***	0.31***		57.65 (29.19)
7. Later-Day Negative Affect	0.47	0.10**	−0.26***	−0.18***	−0.15**	−0.06	−0.17***	20.37 (23.24)

Notes. ICC = Intraclass correlation (proportion of between-person variance), *M* = Mean,

SD = Standard Deviation.

*
p < .05;

**
p < .01,

****
p < .001.

Table 2

Multilevel Models of Social Support Main and Interaction Effects on Later-day Positive Affect

	Model 1		Model 2		Model 3		Model 4		Model 5	
	b	SE	b	SE	b	SE	b	SE	b	SE
Fixed Effects										
Intercept (γ_{00})	35.47**	9.46	62.23**	4.11	30.08**	9.36	40.80**	11.14	24.38**	7.03
BTS (γ_{01})	6.09**	2.05			5.85**	2.06	5.88*	2.31	3.20*	1.39
BPS (γ_{02})	1.14	1.81			2.46	1.81	−0.54	2.09	−1.14	1.39
EDTS (γ_{03})			0.78	1.69	0.13	1.61	1.76	6.22	−1.87	1.48
EDPS (γ_{04})			5.20**	1.70	5.06**	1.75	−6.48	4.48	−7.45*	3.44
BTS × EDTS (γ_{21})							−0.55	1.36		
BPS × EDPS (γ_{22})							3.12**	1.13	2.50**	0.88
Control										
Gender	−13.55**	4.30	−10.46*	4.66	−13.67**	4.30	−12.83**	4.25	−7.80**	2.92
Positive Affect Lag									0.50**	0.04
Random Effects										
Residual Variance ($\sigma^2\ u_{1i}$)	434.34		364.59		370.40		371.67		328.75	
Intercept Variance ($\sigma^2\ u_{0i}$)	315.12		348.28		365.03		333.91		88.89	
EDPS ($\sigma^2\ u_{1i}$)			13.05		32.92		19.63		0.17	
EDTS ($\sigma^2\ u_{2i}$)			16.74		3.79		6.38		0.06	
−2Log-likelyhood	−4016.70		−2152.02		−2108.11		−2102.22		−2029.96	

Notes. BTS= Baseline Teacher Support, BPS= Baseline Peer Support, EDTS= Early-day Teacher Support,

EDPS= Early-day Peer Support.

**
$p < .01$.

Table 3

Multilevel Models of Social Support Main and Interaction Effects on Later-day Negative Affect

	Model 1		Model 2		Model 3		Model 4		Model 5	
	b	SE	b	SE	b	SE	b	SE	b	SE
Fixed Effects										
Intercept (γ_{00})	43.98**	8.36	22.72**	3.94	49.59**	9.82	49.97**	10.57	30.34**	7.84
BTS (γ_{01})	−2.12	1.81			−2.10	2.13	−2.18	2.24	−1.28	1.65
BPS (γ_{02})	−4.32**	1.60			−4.80*	1.88	−4.85*	2.01	−3.49*	1.45
EDTS (γ_{03})			0.20	1.31	1.12	1.30	−2.69	3.31	1.86	1.25
EDPS (γ_{04})			−2.38*	1.27	−2.50*	1.27	−2.51	1.27	−1.47	1.23
BTS × EDTS (γ_{21})							0.11	1.12		
BSS × EDPS (γ_{22})							0.05	0.87		
Control										
Gender	5.23	3.80	0.45	4.59	1.78	4.50	1.80	4.52	0.64	3.47
Negative Affect Lag									0.34**	0.04
Random Effects										
Residual Variance ($\sigma^2\, u_{1i}$)	257.77		229.32		232.73		233.83		232.81	
Intercept Variance ($\sigma^2\, u_{0i}$)	254.41		366.50		332.70		333.28		328.22	
EDPS ($\sigma^2\, u_{1i}$)			2.45		0.03		0.04		0.03	
EDTS ($\sigma^2\, u_{2i}$)			2.93		0.19		0.25		0.19	
−2Log-likelyhood	−3798.74		−2056.95		−2016.83		−2015.02		−1980.66	

Notes. BTS= Baseline Teacher Support, BPS= Baseline Peer Support, EDTS= Early-day Teacher Support,

EDPS= Early-day Peer Support.

*
$p < .05$;

**
$p < .01$.