

Negative Life Events and Time Perspective Among Adolescents

Julie V. Chandler and Zena R. Mello*

Department of Psychology, San Francisco State University

ABSTRACT. We examined negative life events and time perspective in adolescents. Negative life events were nonnormative experiences including school suspension, running away from home, or the death of a family member. Time perspective referred to thoughts and feelings about the past, present, and future. We assessed multiple dimensions including orientations and positive and negative feelings about time. Participants were 790 adolescents and data were self-reported. Findings indicated that (a) adolescents who experienced the highest number of negative life events were oriented toward the past, whereas adolescents who experienced the fewest negative life events were oriented toward the three time periods equally, and (b) negative life events were positively associated with negative feelings and inversely associated with positive feelings about time.

Keywords: time perspective, life events, time attitudes, and time relation

As adolescents mature, they undergo a variety of positive and negative experiences including making new friends or flunking a school grade. However, negative life experiences in adolescence have been shown to affect psychological well-being in this developmental period and to impact adulthood. For example, according to the Centers for Disease Control and Prevention (CDC, 2019), adverse childhood experiences (ACES) such as abuse or parental separation or divorce have been positively associated with risky health behaviors, chronic health conditions, lower academic achievement, lost time from work, and early death. The CDC (2019) has noted that, as the number of ACES increases, the risk for these outcomes increases as well.

Given the relationship between negative life events and adverse outcomes, it is important to examine factors that could influence these associations. One such factor is time perspective. Time perspective is a cognitive and motivational construct that refers to one's thoughts and feelings toward the past, present, and future (Lewin, 1942; Mello, 2019; Zimbardo & Boyd, 1999). Studies have shown associations among time perspective and many important areas of adolescent development, including academic achievement (Andretta et al., 2014; Mello et al., 2013; Zimbardo & Boyd, 1999),

running away (Mello et al., 2017), substance use (Keough et al., 1999; McKay et al., 2016), and mental well-being (Konowalczyk et al., 2018; Mello et al., 2013). However, research has yet to examine how negative life events are related to time perspective.

Examining the association between time perspective and negative life events has the potential to broaden the understanding of adolescents' experiences with negative life events. Time perspective is a multitemporal (past, present, and future) and multidimensional construct (thoughts and feelings). Time perspective offers a new way to understand negative life events in adolescents. Thus, the present study sought to address this gap in knowledge by investigating the associations between time perspective and negative life events among adolescents.

Negative Life Events

Negative life events refer to undesirable experiences (Swearingen & Cohen, 1985a). Examples include school suspension, death of a close friend, and the experience of a serious illness or injury (Swearingen & Cohen, 1985a). One of the most widely used measures to assess negative life events among adolescents is the Junior High Life Experiences Survey (JHLES; Swearingen & Cohen, 1985a). In their original study of 233 adolescents, Swearingen

SPRING 2021

PSI CHI
JOURNAL OF
PSYCHOLOGICAL
RESEARCH

and Cohen (1985a) reported that the most common negative life event was an increase in arguing with parents (34%), followed by breaking up with a boyfriend/girlfriend (33%), and breaking up with a close friend (20%). Since then, the JHLES has been used in many studies with adolescents and children (Brown & Fite, 2016; Dinya et al., 2009; Ge et al., 2006; King et al., 2017; Lasgaard et al., 2016; Swearingen & Cohen, 1985b).

Research using the JHLES (Swearingen & Coen, 1985a) has indicated that negative life events are positively correlated with state anxiety and trait anxiety. For example, Brown and Fite (2016) demonstrated that, among 294 elementary school-aged children, exposure to negative or stressful life events was positively associated with higher levels of anxiety, even after controlling for prior levels of peer victimization and depressive symptoms. Brown and Fite (2016) also observed that higher levels of anxiety, as a result of exposure to negative life events, increased the likelihood of being victimized by peers.

Negative life events have also been related to maladjustment. For example, in a study of 233 seventh- and eighth-grade students, Swearingen and Cohen (1985a) reported that negative life events were positively correlated with depression and the number of school days missed. These authors also observed a positive relationship between negative life events and psychological distress, specifically depression, among adolescents. Similarly, Hibbard et al. (1990) reported that physical and emotional abuse was associated with considering or attempting suicide, and laxative use and vomiting to lose weight among adolescents.

Negative life events have been associated with other psychological outcomes among adolescents. In a study with 978 high school students, Lasgaard et al. (2016) demonstrated that adolescents who were frequently exposed to negative life events experienced more loneliness. Additionally, King et al. (2017) demonstrated that, among 259 adolescents aged 14 to 17 years old, the number of negative life events experienced was positively related to alcohol involvement among adolescents. Further, Dinya et al.'s (2009) study of 644 new outpatient Hungarian adolescents from five local child psychiatric centers in Western Hungary showed that adolescents who experienced a high number of negative life events and who were more heavily impacted by negative life events had the most maladaptive and risky ways of coping.

Research has shown that experiencing negative life events in adolescence is also related to health

in adulthood. For example, Felitti et al. (1998) reported a strong positive relationship between adverse childhood experiences (ACES) and the development of multiple risk factors for several leading causes of death in adults including cancer, chronic lung disease, ischemic heart disease, and liver disease. This study examined several categories of ACES among 9,508 adults: physical abuse, sexual abuse, psychological abuse, maternal experienced violence, or household members who were mentally ill, abuse substances, suicidal, or ever imprisoned. They observed that participants who had experienced four or more categories of ACES were 4 to 12 times more at risk of developing alcoholism, abusing drugs, developing depression, and attempting suicide. Moreover, the number of ACES categories was positively related to the presence of adult diseases including liver disease, ischemic heart disease, cancer, chronic lung disease, and skeletal fractures. Similarly, other research has also indicated that experiencing negative life events is associated with delinquency in young adults (Hoffman, 2010).

Time Perspective

Time perspective has long been considered to be a powerful predictor of human behavior (Lewin, 1942). Studies with adults have shown how it is associated with many areas of health including academic achievement and substance use (Keough et al, 1999; Zimbardo & Boyd, 1999). More recently, Mello and Worrell (2015) theorized that time perspective is a cognitive and multidimensional construct that is particularly salient in adolescence. These authors proposed that time perspective differs between individuals. They proposed a model of time perspective with distinct time periods including the past, present, and future and multiple dimensions including time orientation, time frequency, and time attitude. *Time orientation* refers to the relative emphasis one has toward the past, present, and future. *Time frequency* refers to how often one thinks about each time period, and *time attitude* refers to whether one feels more negatively or positively about each time period. These dimensions are measured with the Adolescent and Adult Time Inventory (AATI; Mello & Worrell, 2007). Examining distinct time periods and dimensions enables researchers to generate a more nuanced understanding of time perspective in adolescents.

Although research has not yet examined negative life events and time perspective specifically, studies have examined topics similar to negative life events. For example, Mello et al. (2013) conducted

a study with adolescents and risky behaviors that included missing school, smoking, and shoplifting. Findings indicated that adolescents who were oriented toward solely the present or the future engaged in more risky behaviors than their counterparts who were oriented toward multiple time periods simultaneously, and that adolescents who viewed the time periods as unrelated also reported engaging in more risky behavior than adolescents who viewed time periods as related to one another. In a study of adolescents who had run away from home, Mello et al. (2017) observed that runaways had more negative feelings and less positive feelings toward time periods than adolescents who did not run away. Furthermore, runaways were oriented toward fewer time periods and perceived the time periods as being less related than their counterparts who did not run away from home. Notably, these results remained once controlling for academic achievement and maternal education. Overall, across these studies a pattern was observed that emphasizing multiple periods was associated with healthier developmental outcomes.

Studies with adult participants have indicated relationships between variables similar to negative life events and time perspective. In their study, Zimbardo and Boyd (1999) examined whether, among college students, negative thoughts of the past were positively associated with anxiety, low self-esteem, and depression. They also demonstrated that positive thoughts of the past were negatively associated with aggression, anxiety, and depression. Further, in their study of 2,627 participants aged 14–67 years, Keough et al. (1999) observed that having a risk-taking, hedonistic attitude toward life was positively associated with increased risky health behaviors such as using alcohol, tobacco, and other drugs and having a greater number of sexual partners. Research has also shown that having a fatalistic, hopeless attitude toward life and the future (i.e., having a negative attitude toward the future) is related to regular tobacco use, less seatbelt use, and less safer sex practices among men (Henson et al., 2006).

Negative Life Events and Time Perspective in Adolescence

Adolescence is an important developmental period to examine the association between negative life events and time perspective. Adolescents may suffer from adverse physical and psychological experiences that carry over to adulthood making this age period important to investigate (Felitti et al.,

1998; Hoffman, 2010). Moreover, time perspective is especially salient in adolescence because of the developmental changes that happen in this period of the lifespan (Mello & Worrell, 2015). Specifically, a hallmark of adolescence is identity formation, a process of integrating past, present, and future selves (Erikson, 1968).

Modern approaches to identity, specifically, narrative identity (Adler et al., 2017), are also particularly relevant for understanding the associations between time perspective and negative life events in adolescents. *Narrative identity* refers to “dynamically reconstructed representations of events” (Adler et al., 2017, p. 5). This multifaceted construct refers to an individual’s conception of their life story that incorporates a reconstructed past, a perceived present, and an imagined future—topics that embody temporal components akin to time perspective. Moreover, narrative identity proposes that, when individuals describe events, they may affectively shift from positive to negative (i.e., contamination) or negative to positive (i.e., redemption). In this way, adolescents may experience negative life events and then vary individually in how the event is represented in their identity. Thus, narrative identity offers an additional framework for interpreting the ways that negative life events might be associated with time perspective in adolescents.

The Present Study

Our study sought to extend knowledge on the relationship between negative life events and time perspective by examining how multiple dimensions and periods of time perspective are associated with negative life events. Thus, our study posed the following research question: How are negative life events related to time perspective? Time perspective was examined with a multidimensional measure that assesses time orientation, time frequency, and time attitudes (Mello & Worrell, 2007). Previous research has shown negative life events to be associated with negative outcomes such as loneliness, peer victimization, and alcohol use (Brown & Fite, 2016; King et al., 2017; Lasgaard et al., 2016). Furthermore, past research has shown that adolescents who viewed the past, present, and future as unrelated reported riskier behavior (Mello et al., 2013). Based on these studies, we hypothesized that adolescents who have experienced more negative life events would be more likely to (a) be oriented toward the past, (b) think less often about time periods, and (c) report less favorable feelings about the time periods than their counterparts.

SPRING 2021

PSI CHI
JOURNAL OF
PSYCHOLOGICAL
RESEARCH

Method

Participants and Procedure

Participants included 790 adolescents. The average age was 15.81 years ($SD = 1.22$). The sample was 56% female; 6% Black or African American, 18% Asian, 15% White, 43% Hispanic or Latino, and 15% more than one race or other racial/ethnic group. Maternal education was assessed on a scale that ranged from 1 (*no high school diploma/GED*) to 6 (*doctoral/MD/PhD/JD*). The mean level of maternal education for the sample was 2.77 ($SD = 1.61$), indicating an average between obtaining a high school diploma or GED, or an associate's degree.

Data were obtained from two public Grade 9 to 12 high schools in the Western region of the United States. Participants were invited to complete the surveys with announcements made in the classroom. Participants who were interested were provided consent and assent forms. Students who returned the completed forms constituted the sample. Upon returning the surveys, each participant received a compensation of \$10. The Institutional Review Board (IRB) at San Francisco State University approved the procedures for this study (IRB# H15-33c).

Measures

Negative Life Events

Negative life events were measured with the Junior High Life Experiences Survey (JHLES; Swearingen & Cohen, 1985a). The JHLES is a self-report measure that includes 39 items, 25 of which are negative, 9 of which are positive, and 5 of which are neutral. The most frequent way of using the JHLES is to create separate positive and negative variables. Response options are either *yes* or *no*. Participants were asked to report if they had experienced a negative life event in the past six months. For the purposes of the current study, a negative life event variable was created by summing the total number of negative life events experienced. This form of categorization is similar to prior research (Brown & Fite, 2016). In the current study, the scores were internally consistent, as indicated by Cronbach's alpha ($\alpha = .79$).

Time Perspective

Time perspective was measured with the Adolescent and Adult Time Inventory (AATI; Mello & Worrell, 2007). The AATI included three components: time orientation, frequency, and attitudes. *Time orientation* included a single-item

categorical variable that asks participants to select a configuration of circles among a series of circle configurations that vary in size (see Table 1 for illustration). Larger circles indicated an emphasis toward a particular time period. Each circle configuration consists of three circles labeled past, present, and future that were presented to participants. The following instructions were provided: "Select one figure below that shows how important the past, the present, and the future are to you, with larger circles being more important to you." Seven sets of circle figures were presented that indicated the relative importance of (a) the past, (b) the present, (c) the future, (d) the past and future, (e) the past and present, (f) the present and future, and (g) all three periods, with the final configuration representing a "balanced" view of the time periods. The item has been used successfully in prior studies on psychological outcomes of adolescents (e.g., Mello et al., 2013; Mello et al., 2017). Given that time orientation is a single-item variable and not a traditional scale with multiple items, reliability coefficients are not available.

Time frequency was assessed with three continuous, Likert-type items that asked participants how frequently they think about the past, present, and future, respectively. Response options ranged from 1 (*almost never*) to 5 (*almost always*). The scales have been used successfully in prior studies that examine the psychological outcomes of adolescents (Mello et al., 2009). Given that these are single items, reliability coefficients are not available.

Time attitudes was assessed with six 5-item continuous subscales that ascertain one's positive and negative attitudes toward the past, present, and future. These subscales included Past Positive ($\alpha = .83$), Past Negative ($\alpha = .85$), Present Positive ($\alpha = .85$), Present Negative ($\alpha = .85$), Future Positive ($\alpha = .88$), and Future Negative ($\alpha = .82$). Response options ranged from 1 (*totally disagree*) to 5 (*totally agree*). The psychometric properties of the time attitude subscale have been reported in several studies with adolescent samples and indicate the scale yields internally consistent subscales and a six-factor structure (e.g., Mello et al., 2016).

Results

Preliminary Analyses

Descriptive statistics are shown in Table 2. As indicated, preliminary analyses showed that almost half of the participants experienced a death of someone close to them. Specifically, in the past

six months, 30.04% experienced the death of a grandparent, aunt, uncle, or cousin, 15.26% of participants experienced the death of a close friend, 6.45% experienced the death of a parent, and 7.40% experienced the death of a sibling. Moreover, 10.98% of participants were assaulted, robbed, or had been the victim of a violent crime.

Primary Analyses

Negative Life Events and Time Orientation

A one-way analysis of variance showed that negative life events were related to time orientation, $F(6, 605) = 5.02$, $p < .001$ (see Table 1). Specifically, adolescents who experienced the most negative life events ($M = 7.07$, $SD = 5.89$) had a time orientation that emphasized the past over the present and future compared to adolescents who experienced the fewest negative life events ($M = 3.54$, $SD = 2.56$) who reported a “balanced” time orientation, indicating that they were oriented equally toward the past, present, and future. It is worth noting that response options included groups with unequal sample sizes, which was consistent with previous literature (Mello et al., 2013). Bonferroni post-hoc comparison tests indicated several pair-wise differences: participants who were oriented toward the present and future simultaneously or who were balanced reported fewer negative life events compared to participants who were oriented toward the past solely, the past and future simultaneously, or the past and present simultaneously.

We evaluated the effect size of the results for time orientation in multiple ways. First, we examined the model and determined that the effect size for this finding was small based on the f value (5.02) and eta-squared $\eta^2 = .05$. Second, given theory and prior research that has shown how “balanced” (i.e., response Option 7) was associated with healthier developmental outcomes (e.g., Mello et al., 2013), we generated pair-wise Cohen’s d values between “balanced” and the remaining response options. These analyses indicated that effect sizes between the “balanced” perspective (i.e., response Option 7) and the other response options ranged from small to large: past (i.e., response Option 1; $d = 1.04$); the present (i.e., response Option 2; $d = 0.24$); the future (i.e., response Option 3; $d = 0.26$); the past and the future (i.e., response Option 4; $d = 0.50$); the past and the present (i.e., response Option 5; $d = 0.62$); and the present and the future (i.e., response Option 6; $d = 0.02$).

TABLE 1

Negative Life Events and Time Orientation***

#	Label	Circle Configuration	n (%)	Negative Life Events	
				M	SD
1	Past	○ ○ ○	15 (2.45)	7.07 ^a	5.89
2	Present	○ ○ ○	47 (7.68)	4.45	4.94
3	Future	○ ○ ○	80 (13.07)	4.50	4.38
4	Past-Future	○ ○ ○	98 (16.04)	4.99 ^b	3.32
5	Past-Present	○ ○ ○	22 (3.60)	5.50 ^c	4.66
6	Present-Future	○ ○ ○	282 (46.15)	3.59 ^{a,b,c}	4.66
7	Balanced	○ ○ ○	68 (11.13)	3.54 ^{a,b,c}	2.56

Note. Circle configuration names are shown for clarity and are not included on actual instrument. Percentages are rounded.

a = Bonferroni Test ($p < .10$) (1 > 6) (1 > 7)

b = Bonferroni Test ($p < .10$) (4 > 6) (4 > 7)

c = Bonferroni Test ($p < .10$) (5 > 6) (5 > 7)

*** $p < .001$.

TABLE 2

Frequency of Negative Life Events (N = 790)

Negative Life Event	n	%
School suspension	68	8.6
Broke up with boy friend/girl friend	243	30.8
Broke up with close friend	245	31
Close friend died	101	12.8
Seriously ill/injured	149	18.9
Mother/father seriously ill/injured	121	15.3
Brother/sister seriously ill/injured	81	10.3
Not accepted into important extracurricular activity	107	13.5
Parent lost a job	117	14.8
Favorite pet died	87	11
Ran away from home	66	8.4
Flunked a grade	76	9.6
Brother/sister had serious trouble (e.g., arrested, pregnancy)	80	10.1
Started wearing braces or glasses	162	20.5
Assaulted, robbed, or victim of other violent crime	73	9.2
Family member a victim of violence	71	9
Mother or father died	42	5.3
Brother or sister died	49	6.2
Grandparent, aunt, uncle, or cousin died	201	25.4
Argued more with parents	305	38.6
Family had serious financial troubles	161	20.4
Because of job change or other reason, mother/father spent much more time away from home	149	18.9
Parents argued much more with each other	159	20.1
Parents divorced or separated	89	11.3

SPRING 2021

PSI CHI
JOURNAL OF
PSYCHOLOGICAL
RESEARCH

Negative Life Events and Time Frequency

Negative life events were also associated with time frequency (see Table 3). Negative life events were inversely related to thinking frequently about the present ($r = -0.12, p < .001$). Similarly, negative life events were inversely related to thinking frequently about the future ($r = -0.10, p < .01$). However, these relationships were small in effect size drawing from Cohen (1992). Moreover, there was no association between negative life events and thinking frequently about the past ($r = 0.02, p = .66$).

Negative Life Events and Time Attitudes

Negative life events and time attitudes were related to one another in theoretically expected directions (see Table 3). Results indicated that negative life events were inversely associated with positive feelings about the past ($r = -.21, p < .001$) and positively related to negative feelings about the past ($r = .27, p < .001$). Additionally, negative life events were inversely related to positive feelings about the present ($r = -.18, p < .001$) and positively associated with negative feelings about the present ($r = .22, p < .001$). Negative life events were also inversely associated to positive feelings about the future ($r = -.13, p < .001$) and positively related to negative feelings about the future ($r = .18, p < .001$). These relationships were small in magnitude. Based on Cohen's (1992) guidelines, the effect sizes for these associations were mostly small. The largest effect was observed between negative life events and negative feelings about the past (i.e., $r = .27$).

Discussion

The current study sought to bridge research on negative life events and time perspective. Previous research has shown that the number of negative life events experienced is related to mental health indicators such as higher levels of anxiety (Brown & Fite, 2016) and risky behavior (King et al., 2017). We sought to extend this topic of negative life events to time perspective. Our study provided new knowledge about the relationship between negative life events and time perspective. We showed how employing a multitemporal (past, present, and future) and multidimensional (thoughts and feelings) model of time perspective (Mello, 2019; Mello & Worrell, 2015) yielded new information about associations between time perspective and negative life events. Overall, findings indicated that negative life events were associated with several time perspective dimensions including time orientation, time frequency, and time attitudes in a sample of adolescents.

Our study generated new knowledge by showing how multiple time periods and multiple dimensions of time perspective were related to negative life events. As hypothesized, we observed relationships among negative life events and time orientation. Adolescents who experienced the most negative life events emphasized the past over the present and future. Conversely, adolescents who experienced the fewest negative life events displayed a "balanced" time orientation, indicated by an equal orientation toward the past, present, and future, or a "present-future" orientation, indicated by a joint emphasis toward the present and future. This finding is consistent with previous research that has shown that adolescents who are oriented toward multiple periods report the healthiest outcomes compared to their counterparts who are oriented solely toward one time period (Mello et al., 2013; Mello et al., 2017). Moreover, negative life events were inversely related to how frequent adolescents reported thinking about the present and the future. This is somewhat consistent with prior research that has shown how adolescents who run away from home, who are assumed to have experienced negative life events, think about the present less often than their counterparts who have not run away from home (Mello et al., 2017).

As we expected, negative life events were inversely related to positive feelings about the past, present, and future. Similarly, negative life events were positively associated with negative feelings about the past, present, and future. These findings

TABLE 3**Correlations Among Negative Life Events, Time Frequency, and Time Attitudes**

	1	2	3	4	5	6	7	8	9
1. Negative Life Events									
Time Perspective									
Time Frequency									
2. Past	-.02								
3. Present	-.12***	.30***							
4. Future	-.10**	.27***	.33***						
Time Attitudes									
5. Past Positive	-.21***	-.02	.17***	.13***					
6. Past Negative	.27***	.21***	-.07*	.01	-.55***				
7. Present Positive	-.18***	-.10**	.23***	.11**	.48***	-.32***			
8. Present Negative	.22***	.27***	-.05	.04	-.26***	.54***	-.36***		
9. Future Positive	-.13***	.04	.21***	.33***	.30***	-.08*	.56***	-.33***	
10. Future Negative	.18***	.07*	-.16***	-.16***	-.13***	.41***	-.34***	.58***	-.53***

* $p < .05$. ** $p < .01$. *** $p < .001$.

are consistent with previous research that has shown how attitudes toward time are associated with risky behaviors (McKay et al., 2014), and mental well-being (Konowalczyk et al., 2018). Specifically, McKay et al. (2014) demonstrated that adolescents who held more positive and less negative attitudes toward the time periods used fewer substances than their counterparts. Conversely, these authors showed that adolescents who held negative attitudes about the time periods used more substances than their counterparts. Moreover, Konowalczyk et al. (2018) reported that, among adolescents, negative feelings about the time periods were associated with lower mental well-being, and more psychological and somatic symptomatology. Our study extended this body of research and demonstrated that time feelings are associated with negative life events in adolescents.

Theoretically, this study provides support for the temporal qualities of negative life events, as we demonstrated associations between the self-reported negative life events that adolescents experienced and their time perspective. These findings provide further support for the seminal work of Erikson (1968) who described the value of forming an identity that integrated past, present, and future selves for healthy development in adolescence. This study also lends itself to more contemporary approaches to identity including narrative identity (Adler et al., 2017). Specifically, the association between time perspective and negative life events may be connected via the adolescents' reflection and interpretation of the unfavorable experience.

Overall, the current study expanded the literature by examining a new area, specifically the relationship between life events and time perspective. Experiencing life events has been shown to be associated with many outcomes (e.g., Felitti et al., 1998), and now we have extended this relationship to time perspective. Although previous studies have examined the relationship between negative life events and adolescent outcomes, and between time perspective and adolescent outcomes, no studies to our knowledge have examined the relationship between negative life events and time perspective. Thus, the current study offers a novel expansion of the literature in this area.

Implications

The current study provides preliminary evidence that time perspective is associated with negative life events in adolescents. It is important that these results be replicated. After such studies are

completed, a possible implication of this line of research could be to use the time perspective scales as a nonintrusive diagnostic tool to identify adolescents who are experiencing negative life events. Given that the time perspective scales do not mention specific life events, they could be used as subtle form of assessment that serves as an indicator of negative life events. This might be useful when adolescents are reticent to report the negative experiences they have had in life. It is possible that this type of tool could facilitate the effectiveness of adolescent-serving professionals including clinicians, counselors, and educators.

Limitations and Future Directions

Our study was one of the first to examine the relationship between negative life events and time perspective, but it also had some limitations. First, we did not assess the impact of the life event on the participant. It is possible that the time perspectives of adolescents may be especially impacted by negative life events that had a large impact on their life. Future studies should seek to replicate our findings while also considering the degree that negative life events impacted the adolescent. Second, our study was cross-sectional, which limits our ability to understand the direction of association between negative life events and time perspective. It is possible that the time perspective of the adolescent *before* they experienced the negative life event contributed to how the event impacted their life, including their time perspective. Future research would benefit from longitudinal studies to determine the causal relationships between these topics. Third, validity or manipulation checks were not completed. Thus, we were unable to confirm the occurrence of the life-events that the adolescents reported. Future studies should seek to include other reports, such as those of parents, teachers, or school counselors in an effort to validate the life-events. Lastly, response options for the time orientation variable included groups with unequal sample sizes. Although the percentage of responses in each response option was similar to prior studies (Mello et al., 2013), future studies should seek to replicate these results with a more equal distribution of responses among response options.

Conclusion

Our study sought to explore the relationship between negative life events and time perspective among adolescents. Using self-reported data with 790 adolescents, we found that participants who


SPRING 2021

PSI CHI
JOURNAL OF
PSYCHOLOGICAL
RESEARCH

experienced a higher number of negative life events were more oriented toward the past. Additionally, participants who experienced a high number of negative life events thought less frequently about the present and future and had negative attitudes toward the past, present, and future. Future research should focus on developing interventions to help educate adolescents who have experienced a large number of negative life events of their potential outcomes and to help shift the way they think about time so that they may achieve more positive outcomes in adulthood.

References

- Adler, J. M., Dunlop, W. L., Fivush, R., Lilgendahl, J. P., Lodi-Smith, J., McAdams, D. P., McLean, K. C., Pasupathi, M., & Syed, M. (2017). Research methods for studying narrative identity: A primer. *Social Psychological and Personality Science*, 8(5), 519–527. <https://doi.org/10.1177/194850617698202>
- Andretta, J. R., Worrell, F. C., & Mello, Z. R. (2014). Predicting educational outcomes and psychological well-being in adolescents using time attitude profiles. *Psychology in the Schools*, 51(5), 434–451. <https://doi.org/10.1002/pits.21762>
- Brown, S., & Fite, P. J. (2016). Stressful life events predict peer victimization: Does anxiety account for this link? *Journal of Child and Family Studies*, 25(8), 2616–2625. <https://doi.org/10.1007/s10826-016-0428-3>
- Centers for Disease Control and Prevention. (2019). About adverse childhood experiences. <https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/aboutace.html>
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112(1), 155–159. <https://doi.org/10.1037/0033-2909.112.1.155>
- Dinya, E., Csorba, J., Sorfozo, Z., Steiner, P., Ficsor, B., & Horvath, A. (2009). Profiles of suicidality and clusters of Hungarian adolescent outpatients suffering from suicidal behavior. *Psychopathology*, 42(5), 299–310. <https://doi.org/10.1159/000228839>
- Erikson, E. (1968). *Identity: Youth and crisis* (1st ed.). Norton.
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine*, 14(4), 245–258. [https://doi.org/10.1016/s0749-3797\(98\)00017-8](https://doi.org/10.1016/s0749-3797(98)00017-8)
- Ge, X., Natsuaki, M. N., & Conger, R. D. (2006). Trajectories of depressive symptoms and stressful life events among male and female adolescents in divorced and nondivorced families. *Development and Psychopathology*, 18(1), 253–273. <https://doi.org/10.1017/S0954579406060147>
- Hibbard, R. A., Ingersoll, G. M., & Orr, D. P. (1990). Behavioral risk, emotional risk, and child abuse among adolescents in a nonclinical setting. *Pediatrics*, 86(6), 896–901.
- Henson, J. M., Carey, M. P., Carey, K. B., Maisto, S. A. (2006). Associations among health behaviors and time perspective in young adults: Model testing with bootstrapping replication. *Journal of Behavioral Medicine*, 29(2), 127–137. <https://doi.org/10.1007/s10865-005-9027-2>
- Hoffmann, J. P. (2010). A life-course perspective on stress, delinquency, and young adult crime. *American Journal of Criminal Justice*, 35(3), 105–120. <https://doi.org/10.1007/s12103-010-9072-4>
- Keough, K. A., Zimbardo, P. G., & Boyd, J. N. (1999). Who's smoking, drinking, and using drugs? Time perspective as a predictor of substance use. *Basic and Applied Social Psychology*, 21(2), 149–164. <https://doi.org/10.1207/15324839951036498>
- King, K. M., Pedersen, S. L., Louie, K. T., Pelham, W. J., & Molina, B. S. G. (2017). Between- and within-person associations between negative life events and alcohol outcomes in adolescents with ADHD. *Psychology of Addictive Behaviors*, 31(6), 699–711. <https://doi.org/10.1037/adb0000295>
- Konowalczyk, S., McKay, M. T., Wells, K. E., & Cole, J. C. (2018). The influence of time attitudes profile membership on mental well-being and psychosomatic symptomatology: A United Kingdom-based prospective study. *Psychiatry Research*, 261, 375–382. <https://doi.org/10.1016/j.psychres.2017.12.071>
- Lasgaard, M., Armour, C., Bramsen, R. H., & Goossens, L. (2016). Major life events as predictors of loneliness in adolescence. *Journal of Child and Family Studies*, 25(2), 631–637. <https://doi.org/10.1007/s10826-015-0243-2>
- Lewin, K. (1942). Time perspective and morale. In K. Lewin (Ed.), *Resolving social conflicts and field theory in social science* (pp. 80–93). American Psychological Association.
- McKay, M. T., Andretta, J. R., Magee, J., & Worrell, F. C. (2014). What do temporal profiles tell us about adolescent alcohol use? Results from a large sample in the United Kingdom. *Journal of Adolescence*, 37(8), 1319–1328. <https://doi.org/10.1016/j.adolescence.2014.09.008>
- McKay, M. T., Percy, A., Cole, J. C., Worrell, F. C., & Andretta, J. R. (2016). The relationship between time attitudes profiles and self-efficacy, sensation seeking, and alcohol use: An exploratory study. *Personality and Individual Differences*, 97, 203–209. <https://doi.org/10.1016/j.paid.2016.03.060>
- Mello, Z. R. (2019). A construct matures: Time perspective's multidimensional, developmental, and modifiable qualities. *Research in Human Development*, 16(2), 93–102. <https://doi.org/10.1080/15427609.2019.1651156>
- Mello, Z. R., Finan, L. J., & Worrell, F. C. (2013). Introducing an instrument to assess time orientation and time relation in adolescents. *Journal of Adolescence*, 36(3), 551–563. <http://dx.doi.org/10.1016/j.adolescence.2013.03.005>
- Mello, Z. R., Walker, E. B., Finan, L. J., Stiasny, A., Wiggers, I. C. S., McBroom, K. A., & Worrell, F. C. (2017). Time perspective, psychological outcomes, and risky behavior among runaway adolescents. *Applied Developmental Science*, 22(3), 233–243. <https://doi.org/10.1080/10888691.2016.1276455>
- Mello, Z. R., & Worrell, F. C. (2007). The Adolescent Time Inventory-English. Unpublished scale: University of California, Berkeley.
- Mello, Z. R., & Worrell, F. C. (2015). The past, the present, and the future: A conceptual model of time perspective in adolescence. In Stolarski M., van Beek W., & Fioulaine, N. (Eds.), *Time perspective theory: Review, research and application. Essays in honor of Philip Zimbardo*. Springer.
- Mello, Z. R., Worrell, F. C., & Andretta, J. R. (2009). Variation in how frequently adolescents think about the past, the present, and the future in relation to academic achievement. *Research on Child and Adolescent Development [Diskurs Kindheits- und Jugendforschung]*, 4, 173–183.
- Mello, Z. R., Zhang, J. W., Barber, S. J., Paoloni, V. C., Howell, R. T., & Worrell, F. C. (2016). Psychometric properties of time attitude scores in young, middle, and older adult samples. *Personality and Individual Differences*, 101, 57–61. <http://dx.doi.org/10.1016/j.paid.2016.05.037>
- Swearingen, E. M., & Cohen, L. H. (1985a). Measurement of adolescents' life events: The Junior High Life Experiences Survey. *American Journal of Community Psychology*, 13(1), 69–85. <https://doi.org/10.1007/BF00923260>
- Swearingen, E. M., & Cohen, L. H. (1985b). Life events and psychological distress: A prospective study of young adolescents. *Developmental Psychology*, 21(6), 1045–1054. <https://doi.org/10.1037/0012-1649.21.6.1045>
- Zimbardo, P. G., & Boyd, J. N. (1999). Putting time in perspective: A valid, reliable individual-differences metric. *Journal of Personality and Social Psychology*, 77(3), 1271–1288. <https://doi.org/10.1037/0022-3514.77.6.1271>

Author Note. Julie V. Chandler  <https://orcid.org/0000-0003-2369-7480>

Zena R. Mello  <https://orcid.org/0000-0001-8218-9801>

Julie V. Chandler is now at the Department of Psychology at Central Michigan University, Mount Pleasant, MI.

We have no known conflict of interest to disclose. Special thanks to *Psi Chi Journal* reviewers for their support.

Correspondence concerning this article should be addressed to Zena R. Mello, Department of Psychology, San Francisco State University, 1600 Holloway Ave., San Francisco, CA, 94132. Email: zmello@sfsu.edu. Telephone: (415) 338-7557. Fax: (719) 338-2398.

SPRING 2021

PSI CHI
JOURNAL OF
PSYCHOLOGICAL
RESEARCH

***Psi Chi Journal of Psychological Research* 2020 Reviewers**

We sincerely appreciate the hard work on the part of the following individuals who each completed at least one review in 2020. Without the assistance of such dedicated professionals, *Psi Chi Journal* would not be able to function.—Debi Brannan (Editor)

Glena Lynne Andrews
George Fox University

Trey Asbury
Texas Woman's University

Lara K. Ault
Saint Leo University

Angela Banitt Duncan
Washburn University

Daniel Wade Barrett
Western Connecticut State University

Susan E. Becker
Colorado Mesa University

Michelle Beddow
Saginaw Valley State University

Chris Bjornsen
Longwood University

Stefanie S. Boswell
University of the Incarnate Word

Karen Brakke
Spelman College

MaryAnne Britt
Northern Illinois University

Sheila Brownlow
Catawba College

Candice Burkett
University of Montana Western

Brittany Canfield
California Southern University

Mary Jo Carnot
Chadron State College

Bradley James Caskey
Birmingham-Southern College

Shawn R. Charlton
University of Central Arkansas

Sarah Cronin
Bemidji State University

Grace Deason
University of Wisconsin—La Crosse

Teddi S. Deka
Missouri Western State University

Fabiana DesRosiers
Dominican College

Kristen Ann Diliberto-Macaluso
Berry College

Melanie M. Domenech Rodriguez
Utah State University

Martin J. Downing
Lehman College

Gregory Scott Drury
Stephen F. Austin State University

Leslie G. Eaton
State University of New York
at Cortland

Ryan Craig Ebersole
Albany Medical Center

Jared Franklin Edwards
Southwestern Oklahoma State
University

Jorie H. Edwards
Southwestern Oklahoma State
University

Mindy J. Erchull
University of Mary Washington

Deb Esty
Baldwin Wallace University

Shlomit Flaisher-Grinberg
Saint Francis University

Tifani Fletcher
West Liberty University

Andrew Sheldon Franklin
Norfolk State University

Azenett A. Garza Caballero
Weber State University

Rebecca Gilbertson
University of Minnesota Duluth

Jennifer M. Gonder
Farmingdale State College

Rupa Gordon
Augustana College

Heather Haas
University of Montana Western

Jonathan J. Hammersley
Western Illinois University

Thomas Fredrick Harlow
University of Maryland
Global Campus

Sarah Herrmann
Weber State University

Karen Yvette Holmes
Norfolk State University

Marya T. Howell-Carter
Farmingdale State College

Robert Hymes
University of Michigan—Dearborn

Lori Elizabeth James
University of Colorado—
Colorado Springs

Fanli Jia
Seton Hall University

Nancy Davis Johnson
Queens University of Charlotte

Marla Johnston
Farmingdale State College

April Jones
Walden University

Nancy J. Karlin
University of Northern Colorado

Emily Keener
Slippery Rock University

Allen Hayward Keniston
University of Wisconsin—Eau Claire

Jackie Kibler
Northwest Missouri State University

Casey Anne Knifsend
California State University,
Sacramento

Penny Koontz
Marshall University

David S. Kreiner
University of Central Missouri

William John Lammers
University of Central Arkansas

Marianne Elizabeth Lloyd
Seton Hall University

Stella G. Lopez
University of Texas at San Antonio

Amy Madewell
Oklahoma State University

Pam Marek
Kennesaw State University

Gina Mariano
Troy University

Tammy McClain
West Liberty University

Julie Guay McIntyre
Russell Sage College

Albee Mendoza
Wesley College

Cindy Miller-Perrin
Pepperdine University

Tara Mitchell
Lock Haven University

Betsy L. Morgan
University of Wisconsin—La Crosse

Walter Murphy
Texas A&M University—
Central Texas

Daniele Nardi
Ball State University

Susan L. O'Donnell
George Fox University

Valerie Perez
Wesley College

Marilyn Petro
Nebraska Wesleyan University

Lindsay A. Phillips
Albright College

Dee Posey
Washington State University

Mark G. Rivardo
Saint Vincent College

Lisa Rosen
Texas Woman's University

Raylene Ross
University of South Carolina

David A. Saarmio
Arkansas State University

Nicholas Salter
Hofstra University

Donald Saucier
Kansas State University

Lauren Fruh VanSickle Scharff
U. S. Air Force Academy

Pamela Schuetze
Buffalo State College

Carl W. Scott
University of St. Thomas

Paul Scott
Rockhurst University

Katharine Suzanne Shaffer
University of Baltimore

Ayesha Shaikh
Whittier College

Leigh A. Shaw
Weber State University

Madelynn D. Shell
The University of Virginia's College
at Wise

David Bryan Simpson
Valparaiso University

Christina S. Sinisi
Charleston Southern University

Merry J. Sleight
Winthrop University

Paul Curtis Smith
Alverno College

Fernanda Sofio Woolcott
Princeton University

Tammy L. Sonnentag
Xavier University

Shana Southard-Dobbs
Lander University

Kathryn Sperry
Weber State University

Crystal N. Steltenpohl
University of Southern Indiana

Rebecca Marie Stoddart
Saint Mary's College

Roxanne L. Sullivan
Bellevue University

Christy Teranishi Martinez
California State University
Channel Islands

Leonell Torres-Pagan
University of Puerto Rico

Kimberli R. H. Treadwell
University of Connecticut

Dunja Trunk
Bloomfield College

Mary Utley
Drury University

Scott VanderStoep
Hope College

Allison A. Vaughn
San Diego State University

Taylor Wadian
University of Cincinnati
Blue Ash College

Rebekah Wanic
University of San Diego

Kathleen West
University of North Carolina
at Charlotte

Wayne Wilkinson
Arkansas State University

J. Austin Williamson
Augustana College

Jamie G. Wood
Pittsburg State

William D. Woody
University of Northern Colorado

Jason R. Young
Hunter College

Evan L. Zucker
Loyola University New Orleans

SPRING 2021

**PSI CHI
JOURNAL OF
PSYCHOLOGICAL
RESEARCH**



Alliant International University
California School
of Professional Psychology

Your Career in Psychology Starts Here

Choose your path:

- Clinical Psychologists • Marriage and Family Therapists • Clinical Counselors
• Organizational Psychologists • Organizational Behavior Psychologists • Organizational
Development Psychologists • Psychopharmacologists

SPRING 2021

PSI CHI
JOURNAL OF
PSYCHOLOGICAL
RESEARCH

psichi.alliant.edu



AMERICAN
PSYCHOLOGICAL
ASSOCIATION

APA Journals Calls for Papers

**LEARN HOW TO SUBMIT
YOUR MANUSCRIPT TO
AN APA JOURNAL!**

[TO.APA.ORG/CFP2021](https://to.apa.org/cfp2021)



PSI CHI COVID-19

Member Support Fund

Help Students Affected by COVID-19

Consider making a gift to the **Psi Chi COVID-19 Member Support Fund**. Once \$25,000 is raised, Psi Chi will in turn match these gifts to support students adversely affected by the pandemic.

Your Gifts Will

1. assist eligible students who cannot afford the Psi Chi membership fee,
2. help members who cannot afford graduation cords, and

Visit <https://psichi.com/COVID19Donation>

SPRING 2021

PSI CHI
JOURNAL OF
PSYCHOLOGICAL
RESEARCH

Publish Your Research in *Psi Chi Journal*

Undergraduate, graduate, and faculty submissions are welcome year round. Only one author (either first author or coauthor) is required to be a Psi Chi member. All submissions are free. Reasons to submit include

- a unique, doctoral-level, peer-review process
- indexing in PsycINFO, EBSCO, and Crossref databases
- free access of all articles at psichi.org
- our efficient online submissions portal

View Submission Guidelines and submit your research at www.psichi.org/?page=JN_Submissions

Become a Journal Reviewer

Doctoral-level faculty in psychology and related fields who are passionate about educating others on conducting and reporting quality empirical research are invited become reviewers for *Psi Chi Journal*. Our editorial team is uniquely dedicated to mentorship and promoting professional development of our authors—Please join us!

To become a reviewer, visit www.psichi.org/page/JN_BecomeAREviewer

Resources for Student Research

Looking for solid examples of student manuscripts and educational editorials about conducting psychological research? Download as many free articles to share in your classrooms as you would like.

Search past issues, or articles by subject area or author at www.psichi.org/journal_past

Add Our Journal to Your Library

Ask your librarian to store *Psi Chi Journal* issues in a database at your local institution. Librarians may also e-mail to request notifications when new issues are released.

Contact PsiChiJournal@psichi.org for more information.



Register an account:
<http://pcj.msubmit.net/cgi-bin/main.plex>

