Trapped by Family or Compensating for Deficiency? The Impact of Negative Family Events on Effective Leadership Behavior

Authors: Liu Depeng, Li Juexing, Zhang Shengjun, Pang Xuhong, Wang Zheng, Li Juexing

Date: 2023-12-22T00:00:00+00:00

Abstract

Existing literature presents two inconsistent perspectives—family-encumbered and compensatory—on how negative family events influence effective leadership behavior cross-domain at the within-individual level. This paper introduces cross-domain leadership identity theory and, through two experience sampling method studies, finds that: at the within-individual level, leaders' experiences of negative family events produce, on the one hand, a family-encumbered effect that reduces leadership identity and effective leadership behavior through ego depletion; on the other hand, they also produce a compensatory effect that enhances leadership identity and effective leadership behavior through compensation. When leaders possess high levels of extraversion, negative family events experienced at the within-individual level enhance leadership identity and promote effective leadership behavior. When leaders possess low levels of extraversion, negative family events experienced at the within-individual level reduce leadership identity and decrease effective leadership behavior. This research deepens understanding of how negative family events affect effective leadership behavior, enriches knowledge regarding the role of extraversion in leadership, and expands antecedent research on leadership identity.

Full Text

Trapped by Family or Compensated from Work? The Influence of Daily Negative Family Events on Daily Effective Leadership Behaviors

LIU Depeng[1], LI Juexing[2], ZHANG Shengjun[3], PANG Xuhong[3], WANG Zheng[4]
(1 School of Management, Shandong University, Jinan 250100, China)

(2 School of Economics and Management, Yunnan Normal University, Kunming 650500, China)
(3 School of Business, Shanghai University of Finance and Economics, Shanghai 200433, China)
(4 School of Management, Zhejiang University, Hangzhou 310058, China)

Abstract

Existing literature presents two contradictory perspectives on how negative family events influence effective leadership behaviors at the within-person level: the "trapped-by-family" effect and the "compensation effect." This paper integrates these inconsistent views by introducing cross-domain leader identity theory. Through two experience sampling studies, we find that at the within-person level, leaders' daily negative family events simultaneously produce both effects. On one hand, they generate a trapped-by-family effect, reducing leader identity and effective leadership behaviors through ego depletion. On the other hand, they produce a compensation effect, enhancing leader identity and effective leadership behaviors through compensatory mechanisms. When leaders have high extraversion, negative family events increase leader identity and promote effective leadership behaviors at the within-person level. Conversely, when leaders have low extraversion, negative family events decrease leader identity and reduce effective leadership behaviors. These findings deepen our understanding of how negative family events affect effective leadership behaviors, enrich our knowledge of extraversion's role in leadership, and expand research on antecedents of leader identity.

Keywords: negative family events, effective leadership behavior, initial structure, transformational leadership, leader identity, extraversion

1. Introduction

1.1 Negative Family Events, Trapped-by-Family Effect, and Compensation Effect

Family and work represent the two most important domains in life that frequently influence each other across boundaries (Edwards & Rothbard, 2000; Xu et al., 2022). This paper focuses on how negative family events in the family domain affect effective leadership behaviors in the work domain. Because both family events and leadership behaviors exhibit significant within-person variance (Lin et al., 2021; McClean et al., 2019), we examine the within-person effects of negative family events on effective leadership behaviors.

Existing literature offers two contradictory views on how leaders' negative family events affect their effective leadership behaviors at the within-person level, which we term the "trapped-by-family effect" and the "compensation effect." The trapped-by-family effect posits that negative family events reduce need fulfillment in the family domain (Lin et al., 2021), generate negative emotions

(Carlson et al., 2011), and deplete self-control resources (Greenhaus & Powell, 2006), leaving leaders unable to enact effective leadership behaviors at work (Barnes et al., 2015). Therefore, this effect predicts a negative relationship between negative family events and effective leadership behaviors at the within-person level. Most empirical studies support this perspective (Courtright et al., 2016; Lin et al., 2021). For example, Courtright et al. (2016) found that at the within-person level, leaders' perceived work-family conflict increased ego depletion, which in turn led to abusive supervision toward subordinates.

The compensation effect, conversely, suggests that after experiencing negative family events, leaders actively seek meaning, rewards, or psychological comfort in other domains to compensate for deficiencies in the family domain (Edwards & Rothbard, 2000; Zedeck, 1992). The more negative the family events and the more meaningful and rewarding the work domain, the stronger the motivation to invest in work to compensate for family deficiencies and ensure overall benefits (Edwards, 1992; Edwards & Rothbard, 2000). Thus, this effect predicts a positive relationship between negative family events and effective leadership behaviors at the within-person level. Early discussions of the compensation effect primarily appeared in theoretical work on family-work interaction, though recent empirical studies have begun to provide support. For instance, Ganster et al. (2023) found that at the within-person level, partner incivility at home may prompt employees to engage in more helping behaviors at work to compensate for family deficiencies.

Clearly, the trapped-by-family effect and compensation effect make opposite predictions about how negative family events influence effective leadership behaviors. To integrate these inconsistent perspectives, we introduce cross-domain leader identity theory (Hammond et al., 2017) to examine leader identity as a mediator between negative family events and effective leadership behaviors, as well as boundary conditions that determine which effect emerges. This theory focuses on how events in non-work domains influence leader identity and leadership behaviors across domains, making it applicable to both between-person and within-person research.

1.2 Negative Family Events and Leader Identity: The Moderating Role of Extraversion

Leader identity refers to the extent to which individuals define themselves as leaders (Day et al., 2009; DeRue & Ashford, 2010). While previous research has focused on how leader identity emerges, changes, and functions within the work domain, relatively little attention has been paid to how experiences in non-work domains affect leader identity. In reality, leaders do not exist in isolation, and events in other domains influence their leader identity and corresponding leadership behaviors (Blanchard, 1999; Sandberg & Tsoukas, 2015). Hammond et al. (2017) extended leader identity theory to non-work domains, proposing cross-domain leader identity theory to explain how events in other domains affect effective leadership behaviors through leaders' psychological and cognitive

processes.

Cross-domain leader identity theory suggests that whether an event in a non-work domain enhances or diminishes leader identity and effective leadership behaviors depends on how leaders interpret the relationship between that event and their leader identity. Different interpretations lead to different identity work, causing changes in leader identity that ultimately affect leadership enactment in the workplace (Hammond et al., 2017). Leaders' interpretations are often multifaceted, potentially including various perspectives (Crawford et al., 2019; Hammond et al., 2017). In our research context, on one hand, negative family events consume substantial resources, and if leaders focus on the challenges and stresses of their leader identity—believing it will further deplete their scarce resources (Campbell et al., 2006; Lanaj et al., 2019)—they will reduce their leader identity, producing the trapped-by-family effect. On the other hand, negative family events often signify deficiencies in the family domain, and if leaders emphasize the positive valence and benefits of their leader identity—viewing it as an opportunity to compensate for family deficiencies—they will increase their leader identity, producing the compensation effect.

Cross-domain leader identity theory further posits that how leaders interpret the relationship between non-work domain events and leader identity is influenced by stable personal dispositions such as personality traits (Hammond et al., 2017). Which specific trait serves as a boundary condition depends on the research context. We focus on extraversion as a key personality characteristic. Highly extraverted individuals exhibit high reward sensitivity, high sociability, and high energy levels, whereas low extraversion individuals show high punishment sensitivity, low sociability, and low energy levels (Ashton et al., 2002; Grant, 2013). We focus on extraversion for two reasons. First, both negative family events and leadership primarily involve interpersonal and social interactions, making traits that reflect interpersonal tendencies particularly relevant as boundary conditions. Second, and more importantly, the literature indicates that high and low extraversion individuals differ significantly in how they interpret external environments and how these environments affect them, providing a basis for integrating the trapped-by-family and compensation effects.

We argue that high extraversion leads leaders to interpret their leader identity as compensation for family deficiencies, whereas low extraversion leads them to interpret it as further depletion of already scarce resources. Specifically: First, leaders' sensitivity to rewards versus punishments influences their interpretation tendencies. Reward-sensitive, highly extraverted leaders are more likely to value the positive valence and meaning of leader identity, believing its benefits can compensate for family losses (Bataille & Vough, 2022; Dutton et al., 2010; Edwards & Rothbard, 2000). In contrast, punishment-sensitive, low extraversion leaders are more likely to focus on the challenges and risks of leadership roles, believing they will further deplete resources already diminished by coping with negative family events (Ashton et al., 2002; Lanaj et al., 2019).

Second, leaders' sociability levels affect interpretation tendencies. Highly socia-

ble extraverted leaders believe they can better handle leadership demands and derive more positive emotions and benefits from social situations (Ashton et al., 2002; Judge & Zapata, 2015). Consequently, they are more likely to view leader identity as compensation for family deficiencies. Conversely, low extraversion leaders have low sociability, fewer social skills needed for leadership, difficulty appreciating the meaning of leader identity, and must expend substantial resources to handle these unfamiliar tasks (Ashton et al., 2002; Costa & McCrae, 1992). Thus, they are more likely to view leader identity as further depleting their limited resources.

Third, leaders' energy levels influence interpretation tendencies. Research suggests that after resource loss in one domain, individuals may either conserve remaining resources by reducing consumption in other domains or seek to acquire new resources elsewhere, with the choice depending on their overall resource level (Halbesleben et al., 2014; Xu et al., 2022). Energy represents a crucial resource (Halbesleben et al., 2014; Quinn et al., 2012). High-energy, highly extraverted leaders, when experiencing resource depletion from negative family events, are more inclined to acquire new resources, viewing leader identity as an opportunity to gain resources that compensate for family losses and thus choosing to identify with their leader role (Lilius, 2012; Parker et al., 2013). In contrast, low-energy, low extraversion leaders, after negative family events, are more inclined to conserve their limited remaining resources, viewing leader identity as further depleting their scarce resources and thus being less willing to identify with their leader role (Halbesleben et al., 2014; Parker et al., 2013).

In summary, we propose that extraversion serves as an important boundary condition determining whether the trapped-by-family effect or compensation effect emerges in the relationship between negative family events and leader identity. Therefore, we hypothesize:

Hypothesis 1: Leaders' extraversion moderates the within-person relationship between negative family events and leader identity. Specifically, for highly extraverted leaders, negative family events positively affect leader identity at the within-person level; for low extraversion leaders, negative family events negatively affect leader identity at the within-person level.

1.3 Leader Identity and Effective Leadership Behavior

Effective leadership behavior refers to leadership behaviors most likely to positively influence subordinates' and teams' attitudes, behaviors, and performance (DeRue et al., 2011; Yukl, 2012). Following Kotter's (2001) widely used dichotomy, we categorize effective leadership behavior into management and leadership functions, represented by initial structure and transformational leadership behaviors (Rosen et al., 2019). Initial structure encompasses routine management behaviors such as clarifying expectations, planning, task prioritization, monitoring, and providing feedback (Stogdill et al., 1962). Transformational leadership involves inspiring employees to transcend self-interest and instru-

mental considerations, demonstrating confidence and enthusiasm for achieving organizational goals (Bass, 1985).

Identity is a key driver of behavior (Markus & Wurf, 1987). Higher leader identity means that leadership role demands have greater priority and importance in leaders' minds compared to other options (Hammond et al., 2017). We argue that on days when leader identity is higher, leaders will exhibit more initial structure and transformational leadership behaviors. First, leader identity influences behavioral choices. On days with higher leader identity, leaders are more likely to enact effective leadership behaviors consistent with their role—namely, initial structure and transformational leadership (Lanaj et al., 2021; Lord et al., 2010). Second, leader identity affects information processing (Markus & Wurf, 1987). On days with higher leader identity, leaders view leadership demands more positively, psychologically amplifying the benefits of effective leadership behaviors while relatively ignoring potential costs, thus being more motivated to engage in initial structure and transformational leadership (Ashford & DeRue, 2012; Cunningham et al., 2023). Conversely, on days with lower leader identity, leaders engage less in role-consistent leadership behaviors and focus more on potential personal costs, thereby exhibiting fewer initial structure and transformational leadership behaviors. Recent research provides empirical evidence for the positive within-person effect of leader identity on effective leadership behaviors (Lanaj et al., 2021; 2022). Therefore, we propose:

Hypothesis 2: At the within-person level, leader identity positively affects (a) initial structure and (b) transformational leadership.

Cross-domain leader identity theory suggests that leaders with different personality traits may interpret the relationship between events in other domains and leader identity differently, resulting in varying levels of leader identity and ultimately different effects on leadership behaviors (Hammond et al., 2017). Based on this theory, we propose a moderated mediation hypothesis. Specifically, for highly extraverted leaders, negative family events are more likely to be interpreted as compensation for family losses and deficiencies, producing a compensation effect whereby negative family events positively affect initial structure and transformational leadership through increased leader identity. For low extraversion leaders, negative family events are more likely to be interpreted as further depletion of resources already diminished by coping with family events, producing a trapped-by-family effect whereby negative family events negatively affect initial structure and transformational leadership through decreased leader identity. Thus, we integrate the existing debate between trapped-by-family and compensation effects. We hypothesize:

Hypothesis 3: Extraversion moderates the within-person indirect effect of negative family events on (a) initial structure and (b) transformational leadership through leader identity. For highly extraverted leaders, negative family events positively affect initial structure and transformational leadership through increased leader identity; for low extraversion leaders, negative family events negatively affect initial structure and transformational leadership through de-

creased leader identity.

2 Study 1

2.1.1 Sample and Procedure

Study 1 aimed to test our hypotheses. Because we focused on within-person relationships among variables, we employed a time-lagged interval-based experience sampling method (ESM) to collect data. Participants were middle-level leaders (including branch managers and department heads) from three state-owned commercial banks in three cities in East China. We selected this sample for two reasons. First, bank middle managers work long hours, face high work intensity, and often spend after-work time on business entertainment. As leaders, they are expected to be "ideal employees" who devote themselves wholeheartedly to work, which affects family management and harmonious family relationships, making them more likely to experience negative family events (Dahm et al., 2015; Humberd et al., 2015). Second, commercial banks face intense competition and performance pressure, requiring both routine basic work and responses to challenging goals and dynamic environments, making both initial structure and transformational leadership essential components of effective leadership. Thus, commercial bank middle managers represent an appropriate sample.

After obtaining approval and support from senior bank management, we introduced the research purpose and procedures to 113 middle managers via WeChat. Participants completed one baseline survey and daily surveys three times per day for two weeks (10 workdays). To enhance participation, we provided immediate rewards via WeChat red packets for each completed survey, with participants receiving approximately 200 RMB total upon completion. We also offered cash prizes through a lottery for those completing all 30 daily surveys (two first prizes of 1,000 RMB each and five second prizes of 300 RMB each). Of the 113 managers, 110 agreed to participate.

All surveys were distributed through Wenjuanxing, with research assistants sending questionnaire links at scheduled times. In the first week, participants completed the baseline survey measuring between-person variables including demographics, extraversion, and manager self-efficacy. All 110 participants completed the baseline survey. Subsequently, 110 participants entered the two-week daily survey phase (10 consecutive workdays). To reduce common method bias, we separated the survey into three time points (Gabriel et al., 2019; Podsakoff et al., 2003). Based on participants' typical work schedules and existing research practices (Foulk & Lanaj, 2022; Sherf et al., 2019), we determined survey distribution and closing times. Time point 1 measured negative family events, positive family events, sleep quality, positive affect, and negative affect between 11:00-15:00. Our preliminary interviews revealed that middle managers need morning time for preparation and morning meetings, making this timeframe optimal for clear recall of the previous evening's family events. Time point 2 measured leader identity between 16:30-19:00. Time point 3 measured initial

structure and transformational leadership between 20:00-00:00, as middle managers frequently work late. On average, time point 1 surveys were completed at 13:35, time point 2 at 18:21, and time point 3 at 21:49.

To control for autoregressive effects, we controlled for the previous day's leader identity, initial structure, and transformational leadership. Therefore, if a participant's data for day t-1 were missing, day t data were also excluded. We retained only participants who completed three or more full days of daily surveys (Gabriel et al., 2019). After matching across three time points and applying these criteria, our final sample comprised 461 observations from 67 participants (average 6.88 observations per participant). We conducted non-response bias tests comparing the final sample with missing data on six variables (age, gender, education, departmental tenure, management level, and managerial position tenure), finding no significant differences, indicating no non-response bias. Among the 67 participants, the average age was 34.12 years (SD = 6.44), 68.66% were male, and average departmental tenure was 3.88 years (SD = 4.43).

2.1.2 Measures

All English scales were translated into Chinese following Brislin's (1986) translation-back-translation procedure. All scales used 7-point Likert formats measuring participants' agreement with each item.

Negative family events were measured using Lin et al.'s (2021) 5-item scale (e.g., "Yesterday after work, I had a fierce argument with my family members"; "Yesterday after work, I wanted to share something important with my family, but they showed no interest"). Within-person $\alpha = 0.95$.

Leader identity was measured using Lee et al.'s (2016) 4-item scale (e.g., "This afternoon, being a leader felt important to me"; "This afternoon, I saw myself as a leader"). Within-person $\alpha = 0.92$.

Initial structure was measured using Stogdill's (1963) 10-item scale (e.g., "This afternoon, I decided what should be done and how it should be done"; "This afternoon, I encouraged the use of uniform procedures"). Within-person $\alpha = 0.96$.

Transformational leadership was measured using Tepper et al.'s (2018) 4-item brief scale covering four dimensions (idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration), with one item per dimension. This brief version comprehensively measures transformational leadership while reducing participant burden, making it suitable for ESM research requiring multiple daily responses. Items included "This afternoon, I articulated a very appealing picture of the future for our team" and "This afternoon, I inspired others with my plans for the future." Within-person $\alpha = 0.92$.

Extraversion was measured using the Big Five scale from Donnellan et al. (2006), with extraversion as one dimension comprising 4 items (e.g., "I am

the life of the party"; "At parties, I talk to many people"). Within-person $\alpha = 0.62$. The relatively low reliability may be attributed to two factors. First, reliability coefficients are affected by sample size, with larger samples yielding higher coefficients. Our study collected extraversion data from only 67 individuals, which is relatively small and may have reduced reliability. Second, fewer items decrease α values. We used Donnellan et al.'s (2006) 20-item Big Five scale, with extraversion comprising items 1, 6, 11, and 16. Scale shortening reduces reliability coefficients (Raykov, 2007). Despite reduced reliability, the scale remains practical and reliable for several reasons. First, given the time constraints of ESM data collection and the fact that long questionnaires cause participant fatigue and response distortion (Donnellan et al., 2006), using a shortened version reduces participant burden, consistent with ESM best practices (Uy et al., 2016). Second, Donnellan et al. (2006) validated that their 20-item scale measures similar content as the original 50-item version without sacrificing explanatory validity. Finally, our extraversion α value remains within an acceptable range (> 0.6).

Control variables. At the within-person level, we controlled for positive affect, negative affect, sleep quality, and positive family events. Positive and negative affect were measured using Kercher's (1992) PANAS scale with 10 items total. Positive affect included "excited," "enthusiastic," "alert," "inspired," and "determined" (within-person $\alpha = 0.71$). Negative affect included "distressed," "upset," "afraid," "nervous," and "scared" (within-person $\alpha = 0.91$). Controlling for affect follows ESM best practices and helps address potential false positives and common method variance from same-source data (Gabriel et al., 2019). Additionally, controlling for affect rules out affect as an alternative explanatory mechanism (Weiss & Cropanzano, 1996; Lin et al., 2021). Following Lin et al.'s (2021) practice of controlling for negative family events when examining positive family events, we controlled for positive family events using Lin et al.'s (2021) 5-item scale rated at time point 1 (e.g., "Yesterday after work, I participated in fun activities with my family"; "Yesterday after work, I had an inspiring discussion with my family about something"). Within-person $\alpha = 0.97$. Sleep quality was measured using Barnes et al.'s (2015) 4-item scale (e.g., "Last night, I had trouble falling asleep"; "This morning when I woke up, I felt exhausted"). Within-person $\alpha = 0.89$. We reverse-coded sleep quality scores for easier interpretation. Previous research indicates that leaders' sleep quality significantly affects their effective leadership behaviors (Barnes et al., 2015; Courtright et al., 2016), and controlling for it rules out alternative explanatory mechanisms.

Following ESM best practice recommendations (Gabriel et al., 2019), we also controlled for autoregressive effects and within-person variable trends and cycles across the week. For autoregressive effects, we controlled for the previous day's leader identity, initial structure, and transformational leadership. For trends and cycles, we controlled for day of week, sine, and cosine. Day of week referred to Monday through Friday, as surveys were only distributed on workdays. Sine and cosine were calculated following Liu and West (2016): sine $= \sin(2\pi t/7)$, cosine $= \cos(2\pi t/7)$, where t represents the day of the week.

At the between-person level, we controlled for manager self-efficacy and work-family segmentation preference. Manager self-efficacy was measured using Fast et al.'s (2014) scale in the baseline survey (e.g., "As a manager, I can accomplish most goals I set for myself"; "As a manager, when facing difficult tasks, I am very confident I will complete them"). $\alpha = 0.97$. We also administered a one-time measure of work-family segmentation preference using Paustian-Underdahl et al.'s (2013) 4-item scale (e.g., "I don't like to think about work when I get home"; "I prefer to keep my personal life out of my work"). $\alpha = 0.85$.

2.1.3 Analysis Strategy

Given the multilevel nested structure (daily data nested within individuals), we conducted multilevel confirmatory factor analysis (CFA) using Mplus 8.3 (Muthén & Muthén, 2010) to examine the validity of key variables. Table 1 shows that the five-factor model fit best: $^2 = 1230.06$, df = 534, $^2/\text{df} = 2.30$ (< 5), RMSEA = 0.05 (< 0.08), CFI = 0.91 (> 0.9), TLI = 0.90 (> 0.9), within-person SRMR = 0.03 (< 0.08), between-person SRMR = 0.07 (< 0.08).

Table 1. Multilevel Confirmatory Factor Analysis (Study 1)

Model	^{2}	df	^{2}/df	$\Delta\,^2(\Delta\text{df})$	RMSEA	CFI	TLI	SRMR (within)	SRMR (between)
1. Five-factor: NFE, LI, IS, TFL, E	1230.06	534	2.30	—	0.05	0.91	0.90	0.03	0.07
2. Four-factor: NFE, LI, IS+TFL, E	1744.01	541	3.22	513.94(7)***	0.07	0.85	0.84	0.06	0.09
3. Three-factor: NFE, LI+IS+TFL, E	2763.35	546	5.06	1019.35(5)***	0.10	0.73	0.71	0.10	0.13

Model	^{2}	df	^{2}/df	$\Delta\ ^2$(Δdf)	RMSEA	CFI	TLI	SRMR (within)	SRMR (between)
4. Two-factor: NFE+LI, IS+TFL+E	2917.45	548	5.32	154.07(2)***	0.10	0.71	0.69	0.11	0.14

Note: N_{within} = 461, N_{between} = 67. NFE = negative family events, LI = leader identity, IS = initial structure, TFL = transformational leadership, E = extraversion. Δ^2(Δdf) compares each model to the previous model, all p < 0.001.

Similarly, we used multilevel path analysis (Preacher et al., 2010) to test hypotheses. A prerequisite for within-person analysis is sufficient within-person variance in daily measures. We therefore calculated within-person variance (σ^2), between-person variance (τ_{00}), and the proportion of within-person variance [$\sigma^2/(\sigma^2+\tau_{00})$] (Podsakoff et al., 2019), reported in Table 2 . Negative family events, leader identity, initial structure, transformational leadership, positive affect, negative affect, positive family events, and sleep quality showed within-person variance proportions of 26.26%, 34.33%, 36.50%, 44.64%, 38.13%, 33.33%, 61.00%, and 41.40%, respectively—sufficient for multilevel path analysis.

Table 2. Within-Person Variance Proportions (Study 1)

Variable	Within-person variance (σ^2)	Between-person variance (τ_{00})	Within-person variance proportion [$\sigma^2/(\sigma^2+\tau_{00})$]
1. Negative family events	0.42	1.18	26.26%
2. Leader identity	0.45	0.86	34.33%
3. Initial structure	0.53	0.92	36.50%

Variable	Within-person variance (σ^2)	Between-person variance (τ_{00})	Within-person variance proportion [$\sigma^2/(\sigma^2+\tau_{00})$]
4. Transformational leadership	0.56	0.69	44.64%
5. Positive affect	0.31	0.50	38.13%
6. Negative affect	0.26	0.52	33.33%
7. Positive family events	1.22	0.78	61.00%
8. Sleep quality	0.59	0.83	41.40%

Note: N_{within} = 461, N_{between} = 67.

2.2 Results

Descriptive statistics and correlations for Study 1 variables appear in Table 3 . At the within-person level, negative family events showed a significant negative correlation with initial structure (r = –0.11, p = 0.02), while leader identity showed significant positive correlations with both initial structure (r = 0.40, p < 0.001) and transformational leadership (r = 0.32, p < 0.001).

Table 3. Means, Standard Deviations, and Correlations (Study 1)

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Within-person level																		
1. Negative family events	2.97	1.27	—	– 0.11***	– 0.15***	– 0.36***	– 0.81***	– 0.25***	– 0.25***	0.47***	0.47***	0.93***	0.41***	0.11***	0.21***	0.36***	0.15***
2. Leader identity	4.51	1.05	– 0.21***	—	0.40***	0.32***	0.17***	0.65***	0.28***	– 0.20***	– 0.17***	0.13***	0.33***	0.54***	0.55***	0.41***	0.27***	0.15***
3. Initial structure	4.51	1.20	– 0.25***	0.19***	—	0.66***	0.21***	0.09***	0.15***	0.40***	0.32***	0.17***	0.65***	0.28***	– 0.20***	– 0.17***	–	0.13***
4. Transformational leadership	5.08	1.00	– 0.24***	0.15***	0.44***	—	0.11***	0.15***	0.05	0.04	0.21***	0.08	0.14***	0.48***	0.12***	0.05	0.07	
5. Positive affect	3.75	0.80	– 0.42***	0.13***	0.33***	0.54***	—	0.55***	0.41***	– 0.13***	– 0.11***	0.11***	– 0.32***	– 0.34***	– 0.14***	0.45***	0.92***	0.98***
6. Negative affect	3.58	0.90	0.37***	– 0.24***	– 0.27***	– 0.26***	— 0.95***	0.36***	0.54***	0.16***	0.44***	0.98***	0.92***	0.24***	0.21***			
7. Positive family events	3.87	1.41	– 0.23***	0.30***	0.39***	0.12***	0.56***	0.21***	– 0.21***	– 0.16***	0.35***	0.21***	0.56***	0.94***	0.28***	0.22***	0.52***	
8. Sleep quality	4.72	1.11	– 0.53***	0.21***	0.25***	0.20***	0.50***	0.27***	0.29***	– 0.25***	– 0.27***	0.24***	0.26***	0.17***	0.21***	0.17***	0.19***	

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
9. Leader identity (previous day)	4.51	1.05	–	0.53***	0.49***	0.32***	0.34***	0.11***	0.27***	0.17***	0.21***	0.25***	0.14***	0.27***	0.39***	0.16***		
			0.17***				0.26***											
10. Initial structure (previous day)	4.51	1.20	–	0.30***	0.99***	0.44***	0.39***	0.12***	0.25***	0.17***	0.66***	0.21***	0.10***	0.13***	0.15***			
			0.12**				0.25***						0.24***					
11. Transformational leadership (previous day)	5.08	1.00	–	0.22***	0.44***	0.91***	0.29***	0.28***	0.20***	0.21***	0.44***	0.11***	–	–	0.30***	0.15***		
			0.25***				0.24***						0.28***	0.28***				
12. Day of week	3.01	1.41	–	0.12***	0.19***	0.23***	0.19***	0.29***	0.16***	0.12***	0.19***	0.23***	–	–	–	–		
			0.14*				0.24***						0.58***	0.95***	0.46***	0.92***		
13. Sine	0.00	0.71	–	0.12***	0.21***	0.24***	0.21***	0.28***	0.18***	0.12***	0.21***	0.24***	0.69***		0.27***	0.28***	0.25***	
			0.12*				0.24***											
14. Cosine	−0.07	0.71	–	0.13***	0.20***	0.19***	0.17***	0.25***	0.16***	0.13***	0.20***	0.19***	0.27***	0.99***		0.21***	0.23***	
			0.12*				0.21***											
Between-person level																		
15. Extraversion	4.51	1.05	–	0.30***	0.22***	0.21***	0.14***	0.10***	0.13***	0.27***	0.39***	0.16***	0.13***	0.15***	0.15***		0.54***	
			0.17***				0.24***											

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
16. Manager self-efficacy	5.19	0.95	– 0.18***	0.35***	0.21***	0.17***	0.09*	0.28***	0.10*	0.14**	0.21***	0.17***	0.19***	0.29***	0.25***	0.21***	0.54***	—

Note: N_{within} = 461, N_{between} = 67. Within-person correlations reflect within-person variables after group-mean centering. Between-person correlations reflect within-person variables aggregated to the between-person level correlated with other between-person variables. Correlations above the diagonal are between-person; below the diagonal are within-person. p < 0.05, ** p < 0.01, *** p < 0.001.*

Multilevel path analysis results appear in Table 4 . Models 2 and 3 show that the main effect of negative family events on leader identity was non-significant (β = –0.06, ns), while extraversion positively moderated the relationship (β = 0.25, p < 0.001), indicating that the effect of negative family events on leader identity depends on extraversion. Figure 2 [Figure 2: see original paper] illustrates this interaction. Simple slope analyses revealed that for highly extraverted leaders, the relationship between negative family events and leader identity was significantly positive (slope = 0.18, p = 0.02). In contrast, for low extraversion leaders, the relationship was significantly negative (slope = –0.33, p < 0.001). The difference between these slopes was significant (d = 0.52, p < 0.001). Hypothesis 1 was supported.

Table 4. Multilevel Path Analysis Results (Study 1)

Predictor	Leader Identity	Initial Structure	Transformational Leadersh
Within-person level			
Day of week	0.04 (0.02)	0.05 (0.03)	0.03 (0.03)
Leader identity (previous day)	0.11 (0.09)	0.08 (0.06)	0.07 (0.05)
Initial structure (previous day)	—	0.44*** (0.11)	0.07 (0.07)
Transformational leadership (previous day)	—	0.11 (0.06)	0.39** (0.11)
Positive family events	–0.09* (0.04)	0.04 (0.03)	0.05 (0.04)
Negative family events	–0.06 (0.08)	–0.09* (0.04)	–0.13* (0.05)
Leader identity	—	0.19** (0.06)	0.21** (0.08)
Between-person level			
Manager self-efficacy	0.15** (0.05)	0.12* (0.05)	0.13** (0.05)
Work-family segmentation preference	–0.18* (0.08)	–0.05 (0.05)	–0.04 (0.06)
Negative family events × Extraversion	0.25*** (0.06)	—	—
Residual variances			
Within-person residual	0.42	0.53	0.56
Between-person residual	0.86	0.92	0.69

Predictor	Leader Identity	Initial Structure	Transformational Leadersh
Pseudo R^2	0.11	0.36	0.45

Note: N_{within} = 461, N_{between} = 67. p < 0.05, ** p < 0.01, *** p < 0.001.*

Figure 2. Moderating Effect of Extraversion on the Relationship Between Negative Family Events and Leader Identity (Study 1)

Hypotheses 2a and 2b proposed effects of leader identity on initial structure and transformational leadership. As shown in Models 5 and 7 of Table 4 , leader identity significantly and positively affected both initial structure (β = 0.19, p < 0.01) and transformational leadership (β = 0.21, p < 0.01). Hypotheses 2a and 2b were supported.

Table 5 presents the moderated mediation analysis results. When extraversion was low, the indirect effect of negative family events on initial structure through leader identity was significantly negative, with a 95% confidence interval of [–0.12, –0.02] that did not include zero. When extraversion was high, the indirect effect was significantly positive, with a 95% confidence interval of [0.0002, 0.08] that did not include zero. The difference between these indirect effects was significant, with a 95% confidence interval of [0.03, 0.18] that did not include zero. Hypothesis 3a was supported. Similarly, when extraversion was low, the indirect effect on transformational leadership was significantly negative [–0.14, –0.01]; when extraversion was high, it was significantly positive [0.0001, 0.09]. The difference was significant [0.03, 0.21]. Hypothesis 3b was supported.

Table 5. Moderated Mediation Analysis Results (Study 1)

Path	Extraversion Level	Indirect Effect	95% CI
Negative family events → Leader identity → Initial structure			
High extraversion	0.03 (0.02)	[0.0002, 0.08]	

Path	Extraversion Level	Indirect Effect	95% CI
Low extraversion	–0.06 (0.03)	[–0.12, –0.02]	
Difference	0.10 (0.04)	[0.03, 0.18]	
Negative family events → Leader identity → Transformational leadership			
High extraversion	0.04 (0.02)	[0.0001, 0.09]	
Low extraversion	–0.07 (0.04)	[–0.14, –0.01]	
Difference	0.11 (0.05)	[0.03, 0.21]	

Note: Confidence intervals estimated using Monte Carlo method with 20,000 parameter draws. Bolded intervals are significant at 95% level. $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.*

2.3.1 Long-Term Effect Analysis

Study 1 found that for highly extraverted leaders, negative family events positively affected leader identity and effective leadership behaviors at the within-person level. Does this imply that highly extraverted leaders should or could create more negative family events to enhance leader identity and effective leadership? A common approach in the literature to address this concern is to examine differences between short-term and long-term effects (Ju et al., 2019; Qin et al., 2018). It is therefore necessary to explore whether the positive effect of negative family events on effective leadership exists only in the short term (i.e., daily, as in our study) or also in the long term. If our findings exist only in the short term, we cannot conclude that highly extraverted leaders should create more negative family events.

We focused on the effect of previous-day negative family events on same-day effective leadership behaviors, with both trapped-by-family/compensation ef-

fects and extraversion moderation representing short-term dynamic effects. We hypothesized that long-term exposure to high levels of negative family events would continuously deplete leaders' personal resources, leaving them in a state of chronic resource depletion (Courtright et al., 2016; ten Brummelhuis et al., 2014), such that even highly extraverted leaders would lack sufficient resources for leader identity. Therefore, we expected extraversion's moderating effect to be non-significant in the long term.

We employed three analytical approaches to examine this issue. First, we averaged daily negative family events and leader identity across days and conducted between-person regression. Results showed non-significant effects of negative family events on leader identity ($\beta = 0.19$, ns) and non-significant moderation by extraversion ($\beta = 0.01$, ns). Second, we averaged negative family events and examined their effect on the final day's leader identity. Results again showed non-significant main ($\beta = 0.21$, ns) and interaction ($\beta = 0.03$, ns) effects. Third, following Xu et al. (2022), we averaged daily negative family events and leader identity as between-person long-term data while simultaneously analyzing within-person short-term effects and between-person long-term effects, plus extraversion's cross-level moderation. Results showed that within-person effects and extraversion's cross-level moderation remained consistent with our main analyses. At the between-person level, average negative family events did not significantly affect long-term leader identity ($\beta = -0.12$, ns), nor did the interaction between average negative family events and extraversion ($\beta = -0.08$, ns). However, long-term leader identity significantly predicted long-term initial structure ($\beta = 0.35$, $p < 0.001$) and long-term transformational leadership ($\beta = 0.35$, $p < 0.001$). All three approaches supported our hypothesis that extraversion does not moderate the relationship between negative family events and leader identity in the long term. Therefore, we cannot conclude that "highly extraverted leaders should or could create more negative family events to enhance leader identity and effective leadership."

2.3.2 Analysis Without Control Variables

Following best practices for control variable usage (Bernerth & Aguinis, 2016), we conducted multilevel path analysis without control variables. Results showed that extraversion's moderation of the negative family events–leader identity relationship ($\beta = 0.24$, $p < 0.001$) and leader identity's positive effects on initial structure ($\beta = 0.17$, $p < 0.01$) and transformational leadership ($\beta = 0.20$, $p < 0.05$) remained significant and consistent with our hypotheses, supporting the robustness of our findings.

3 Study 2

Study 2 aimed to test the trapped-by-family and compensation mechanisms through which negative family events affect leader identity, providing a foundation for our introduction of moderating variables. Based on cross-domain leader identity theory and work-family interaction theory, we selected ego depletion

to reflect the trapped-by-family effect. Ego depletion refers to a state where individuals have expended limited self-control resources in previous activities or experiences, leaving insufficient resources for subsequent self-control demands (Baumeister et al., 2007; Hagger et al., 2010). Following Rodell (2013), we used compensation to reflect the compensation effect. Originally developed to measure how people compensate through volunteering when lacking meaning at work, we adapted this measure to reflect leaders' desire to compensate for family deficiencies through work after experiencing negative family events.

3.1.1 Sample and Procedure

We contacted middle and senior managers from multiple companies who invited their middle and lower-level managers to participate. The sample comprised managers from various companies across East and Southwest China, with 72 managers agreeing to participate. Participants completed daily surveys twice per workday for two consecutive weeks. All surveys were distributed via Wenjuanxing, with participants clicking links to respond. Each workday, surveys were administered at two time points: Time 1 measured negative family events from the previous evening after work, plus current ego depletion, compensation, and leader identity, sent at 7:00 AM and remaining open until 12:30 PM; Time 2 measured leader identity, initial structure, and transformational leadership, sent at 8:00 PM and remaining open until midnight. Average completion times were 9:07 AM for morning surveys and 22:42 PM for evening surveys.

To control for autoregressive effects, we controlled for the previous evening's leader identity, initial structure, and transformational leadership. Therefore, if day t-1 data were missing, day t data were excluded. We retained only participants completing three or more full days of surveys, resulting in a final sample of 307 observations from 42 managers.

3.1.2 Measures

All English scales were translated following Brislin's (1986) translation-back-translation procedure. All scales used 7-point Likert formats. Negative family events, leader identity, initial structure, and transformational leadership used the same scales as Study 1, with within-person α values of 0.84, 0.92, 0.94, and 0.89, respectively.

Ego depletion was measured using Twenge et al.'s (2004) 5-item scale, adapted for within-person research. Items included "Right now, I feel mentally exhausted" and "Right now, I need great effort to concentrate on one thing." Within-person $\alpha = 0.94$.

Compensation was measured using Rodell's (2013) scale, adapted for our research context. The 5-item scale included "Right now, I want to explore what is missing in my family by taking on my leader identity" and "Right now, I want to compensate for deficiencies in my family through my leader identity." Within-person $\alpha = 0.98$.

Control variables. Following ESM best practices, we controlled for the previous evening's leader identity, initial structure, and transformational leadership to address autoregressive and baseline effects, plus day of week, sine, and cosine to control for trends and cycles.

3.1.3 Analysis Strategy

We conducted multilevel CFA using Mplus 8.3. Table 6 shows that the six-factor model fit best: ^{2} = 1797.64, df = 915, ^{2}/df = 1.96, RMSEA = 0.06, CFI = 0.91, TLI = 0.89, within-person SRMR = 0.04, between-person SRMR = 0.09.

Table 6. Multilevel Confirmatory Factor Analysis (Study 2)

Model	^{2}	df	^{2}/df	Δ ^{2}(Δdf)	RMSEA	CFI	TLI	SRMR (within)	SRMR (between)
1. Six-factor: NFE, ED, C, LI, IS, TFL	1797.64	915	1.96	—	0.06	0.91	0.89	0.04	0.09
2. Five-factor: NFE+ED, C, LI, IS, TFL	2768.65	925	2.99	971.01(10)***	0.08	0.82	0.80	0.08	0.13
3. Four-factor: NFE+ED+C, LI, IS, TFL	4037.12	933	4.33	1268.47(8)***	0.10	0.70	0.68	0.11	0.15
4. Three-factor: NFE+ED+C+LI, IS, TFL	4453.85	939	4.74	416.73(2)***	0.11	0.65	0.63	0.13	0.16

Model	^{2}	df	^{2}/df	Δ ^{2}(Δdf)	RMSEA	CFI	TLI	SRMR (within)	SRMR (between)
5. Two-factor: NFE+ED+C, LI+IS+TFL	4474.197	943	4.74	20.32(2)***	0.11	0.65	0.63	0.13	0.16

Note: N_{within} = 307, N_{between} = 42. NFE = negative family events, ED = ego depletion, C = compensation, LI = leader identity, IS = initial structure, TFL = transformational leadership. $\Delta^2(\Delta df)$ compares each model to the previous model, all $p < 0.001$.

As Table 7 shows, negative family events, ego depletion, compensation, leader identity, initial structure, and transformational leadership exhibited within-person variance proportions of 31.36%, 43.41%, 30.20%, 36.99%, 24.50%, and 30.99%, respectively—sufficient for multilevel path analysis.

Table 7. Within-Person Variance Proportions (Study 2)

Variable	Within-person variance (σ^2)	Between-person variance (τ_{00})	Within-person variance proportion [$\sigma^2/(\sigma^2+\tau_{00})$]
1. Negative family events	0.48	1.05	31.36%
2. Ego depletion	0.76	0.99	43.41%
3. Compensation	0.43	1.00	30.20%
4. Leader identity	0.58	0.99	36.99%

Variable	Within-person variance (σ^2)	Between-person variance (τ_{00})	Within-person variance proportion [$\sigma^2/(\sigma^2+\tau_{00})$]
5. Initial structure	0.38	1.17	24.50%
6. Transformational leadership	0.48	1.07	30.99%

Note: N_{within} = 307, N_{between} = 42.

3.2 Results

Descriptive statistics and correlations for Study 2 appear in Table 8 . At the within-person level, negative family events showed significant positive correlations with ego depletion (r = 0.38, p < 0.001) and compensation (r = 0.31, p < 0.001). Compensation showed a significant positive correlation with leader identity (r = 0.60, p < 0.001). Leader identity showed significant positive correlations with initial structure (r = 0.26, p < 0.001) and transformational leadership (r = 0.25, p < 0.001).

Table 8. Means, Standard Deviations, and Correlations (Study 2)

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Within-person level																
1. Negative family events	2.67	1.22	—	0.38***	0.31***	0.21***	0.19***	0.50***	0.27***	0.28***	0.25***	0.22***	0.29***	0.25***	0.16**	0.18**
2. Ego depletion	2.97	1.31	0.58***	—	0.52***	0.10*	0.09*	0.44***	0.56***	0.52***	0.98***	0.48***	0.41***	0.52***	0.28***	0.71***

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
3. Compensation	2.75	1.36	0.44***	0.56***		0.49***	0.18**	0.09*	0.60***	0.30***	0.29***	0.33***	0.92***	0.25***	0.20***	0.21***
4. Leader identity	3.01	1.25	0.21***	0.12*	0.60***		0.26***	0.25***	0.21***	0.23***	0.19***	0.29***	0.25***	0.16**	0.18**	0.29***
5. Initial structure	3.87	1.20	0.19***	0.09*	0.18**	0.26***		0.50***	0.21***	0.23***	0.19***	0.29***	0.25***	0.16**	0.18**	0.29***
6. Transformational leadership	4.72	1.01	0.18***	0.08	0.17**	0.25***	0.50***		0.21***	0.23***	0.19***	0.29***	0.25***	0.16**	0.18**	0.29***
7. Ego depletion (previous day)	2.97	1.31	0.27***	0.44***	0.09*	0.12*	0.09*	0.08	—	0.52***	0.98***	0.48***	0.41***	0.52***	0.28***	0.71***
8. Compensation (previous day)	2.75	1.36	0.21***	0.09*	0.44***	0.23***	0.09*	0.08	0.52***		0.48***	0.41***	0.52***	0.28***	0.71***	0.98***
9. Leader identity (previous day)	3.01	1.25	0.21***	0.23***	0.33***	0.48***	0.21***	0.20***	0.48***	0.41***		0.17***	0.21***	0.23***	0.19***	0.29***

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
10. Initial structure (previous day)	3.87	1.20	0.19***	0.09*	0.18***	0.26***	0.99***	0.50***	0.09*	0.09*	0.21***		0.50***	0.21***	0.23***	0.19***
11. Transformational leadership (previous day)	4.72	1.01	0.18***	0.08	0.17***	0.25***	0.50***	0.91***	0.08	0.08	0.20***	0.50***		0.21***	0.23***	0.19***
12. Day of week	3.01	1.41	0.12*	—	0.12*	—	–	–	–	–	–	–	–	—	–	–
				0.12*		0.14*	0.12*	0.12*	0.12*	0.12*	0.14*	0.12*	0.12*		0.58***	0.95***
13. Sine	0.00	0.71	–	0.12*	0.12*	–	–	–	–	–	–	–	–	0.69***		0.27***
			0.12*			0.14*	0.12*	0.12*	0.12*	0.12*	0.14*	0.12*	0.12*			
14. Cosine	– 0.07	0.71	– 0.12*	0.13*	0.13*	– 0.14*	– 0.12*	– 0.12*	– 0.12*	– 0.12*	– 0.14*	– 0.12*	– 0.12*	0.27***	0.99***	

Note: N_{within} = 307, N_{between} = 42. Within-person correlations reflect within-person variables after group-mean centering. Between-person correlations reflect within-person variables aggregated to the between-person level correlated with other between-person variables. Correlations above the diagonal are between-person; below the diagonal are within-person. p < 0.05, ** p < 0.01, *** p < 0.001.*

We conducted multilevel path analysis using Mplus 8.3 (Preacher et al., 2010). Results in Table 9 show that negative family events increased ego depletion (β = 0.30, p = 0.02) and compensation (β = 0.39, p = 0.04). Ego depletion decreased leader identity (β = –0.10, p = 0.04), while compensation increased leader identity (β = 0.49, p < 0.001). These two mechanisms mediated the relationship between negative family events and leader identity in opposite directions, with the direct effect non-significant (β = 0.21, ns), supporting the existence of both trapped-by-family and compensation effects. Leader identity positively affected initial structure (β = 0.18, p = 0.04) and transformational leadership (β = 0.17, p = 0.05), replicating Study 1's findings.

Table 9. Multilevel Path Analysis Results (Study 2)

Predictor	Leader Identity	Initial Structure	Transformational Leadership
Within-person level			
Day of week	0.07 (0.12)	0.09 (0.10)	0.07 (0.11)
Negative family events	0.21 (0.18)	—	—
Ego depletion	–0.10* (0.05)	—	—
Compensation	0.49*** (0.09)	—	—
Leader identity	—	0.18* (0.09)	0.17* (0.09)
Between-person level			
Intercept	2.67*** (0.17)	3.01** (1.10)	2.75** (1.04)
Residual variances			
Within-person residual	0.74	1.27	1.19
Between-person residual	1.27	3.01	2.75
Pseudo R^2	0.11	0.36	0.45

Note: Unstandardized coefficients reported, standard errors in parentheses. N_{within} = 307, N_{between} = 42. $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.*

We further tested the mediating effects of ego depletion and compensation using R 4.0.3. Table 10 shows that the indirect effect through ego depletion was negative [–0.08, –0.0002], while the indirect effect through compensation was positive [0.01, 0.39], both excluding zero. These results provide empirical support for integrating trapped-by-family and compensation effects.

Table 10. Mediation Analysis Results for Ego Depletion and Compensation (Study 2)

Path	Indirect Effect	95% CI
Negative family events → Ego depletion → Leader identity	–0.03 (0.02)	[–0.08, –0.0002]
Negative family events → Compensation → Leader identity	0.18 (0.09)	[0.01, 0.39]

Note: Confidence intervals estimated using Monte Carlo method with 20,000 parameter draws. Bolded intervals are significant at 95% level.

4 Discussion and Conclusion

How do leaders' negative family events influence their work-domain leadership behaviors? Existing literature proposes two contradictory perspectives: the trapped-by-family effect and the compensation effect. Drawing on cross-domain leader identity theory and introducing extraversion as a moderator, our two experience sampling studies of middle managers from diverse regions and industries reveal that at the within-person level, negative family events simultaneously produce both trapped-by-family and compensation effects, influencing leader identity and effective leadership behaviors through distinct mechanisms. When leaders are highly extraverted, negative family events produce a compensation effect, enhancing effective leadership behaviors (including both initial structure and transformational leadership) by increasing leader identity. When leaders are low in extraversion, negative family events produce a trapped-by-family effect, suppressing both initial structure and transformational leadership by decreasing leader identity.

4.1 Theoretical Contributions

First, our most important theoretical contribution is integrating inconsistent perspectives in the literature by identifying leaders' extraversion as a crucial boundary condition, thereby advancing understanding of how negative family events affect effective leadership behaviors. Existing literature presents contradictory views on the within-person effect of negative family events on effective leadership (Courtright et al., 2016; Edwards & Rothbard, 2000). By introducing cross-domain leader identity theory, we identify extraversion as a key boundary condition. We find that the trapped-by-family effect is more likely among low extraversion leaders, while the compensation effect is more likely among high extraversion leaders. Furthermore, we demonstrate that although negative family events can have positive effects on effective leadership for highly extraverted leaders, these effects exist only in the short term, not long term.

Second, we extend research on how personality traits influence leadership behaviors. Previous research has found that among the Big Five, extraversion most strongly predicts effective leadership, suggesting that extraverted leaders better handle work challenges (Judge et al., 2002; 2009). Our study provides a new explanation: extraversion also helps leaders respond to family problems in more constructive ways at work. At least in the short term, highly extraverted leaders can transform "family grief" into "work strength."

Third, we contribute to research on within-person variation in effective leadership behaviors and its antecedents. Since McClean et al. (2019) called for greater attention to temporal dynamics in leadership, increasing research has examined dynamic changes in effective leadership and work-external factors, particularly family events, that enhance or impair it (Lin et al., 2021; McClean et al., 2021). These studies generally conclude that effective leadership is driven by positive family events while negative family events only reduce it. Our find-

ings reveal that for highly extraverted leaders, negative family events can also serve as a short-term driver of effective leadership, enriching understanding of the relationship between family experiences and effective leadership.

Fourth, we extend research on antecedents of leader identity. Existing empirical studies have focused on work-domain situational factors (Zhang et al., 2020) and leader personal factors (Lanaj et al., 2022). We extend this research in two ways. First, we shift antecedents from work-domain to non-work-domain situational factors (negative family events). Second, rather than examining personal or situational factors separately, we introduce extraversion as a moderator to examine the interactive effect of personal and situational factors on leader identity.

4.2 Practical Implications

Our findings offer important guidance for organizational family support policies and practices. First, organizations should prioritize implementing family support policies for leaders. Second, rather than uniformly managing all leaders who have experienced negative family events, organizations should adopt differentiated approaches. They need only pay special attention to low extraversion leaders, implementing measures to help them reduce negative family events or mitigate resource depletion from such events. This enhances management specificity and reduces costs. Third, organizational family support policies should emphasize timeliness to be more effective and avoid long-term negative effects, imposing higher demands on implementation. Additionally, our findings suggest that highly extraverted leaders need not over-worry about short-term negative impacts of negative family events on effective leadership, while low extraversion leaders should strive for work-family balance, improve family communication and emotional connections to reduce negative family events, and when such events occur, actively employ cognitive and behavioral strategies to reduce resource depletion and trapped-by-family effects.

4.3 Limitations and Future Directions

Our study has several limitations. First, although the time-lagged ESM design reduces common method variance, it cannot eliminate it completely (Gabriel et al., 2019; Podsakoff et al., 2003). Future research could follow McClean et al. (2021) by collecting subordinate ratings of leaders' effective leadership behaviors in addition to time-separated leader self-reports. Second, while our final samples of 67 and 42 managers are not large, this is common in leadership ESM research given the difficulty of collecting leadership data in real organizations. However, as noted, the smaller sample did affect extraversion reliability. We recommend future research recruit more diverse leaders through platforms like MTurk or Wenjuanxing to test our conclusions with larger samples. Third, because we focused on the effect of previous-day negative family events on same-day leader identity and effective leadership, following methodological recommendations (Gabriel et al., 2019) we did not control for morning

baseline values of leader identity, initial structure, and transformational leadership, consistent with many ESM studies (e.g., Ganster et al., 2023; Yu & Duffy, 2021). Moreover, Study 2 showed that morning leader identity was already affected by negative family events, making control of morning values inappropriate. Nevertheless, we recommend future research examine changes in mediators and outcomes by controlling for same-day baseline values to leverage ESM's advantage in capturing within-day fluctuations. Fourth, due to practical constraints, we selected survey times based on participants' work schedules, which, while common in ESM research (Foulk & Lanaj, 2022; Sherf et al., 2019), could be improved. Future research should ideally measure negative family events before work and leader identity within one hour after starting work.

We addressed inconsistent literature by introducing a moderator. Researchers could also resolve inconsistencies by examining sub-dimensions of core variables, testing curvilinear relationships, or conducting multi-level studies (Lin, 2019). Future research could examine whether different types of negative family events have different effects, test for curvilinear effects of negative family events on effective leadership, or simultaneously employ within-person and between-person designs to examine whether different mechanisms operate at different levels.

We examined leader identity as the mechanism explaining how negative family events affect effective leadership from a cross-domain perspective. Future research could explore other mechanisms to enrich our understanding. For example, negative family events may reflect leaders' inadequate abilities to handle certain situations, create ego depletion that reduces perceived work competence, or decrease self-efficacy through negative experiences and signals, thereby reducing effective leadership. We recommend future research examine mechanisms from the perspective of work competence or perceived competence.

Our study found short-term positive effects of negative family events for highly extraverted leaders. Future research could further explore other individual and situational factors that differentiate or integrate trapped-by-family and compensation effects, and identify other conditions under which negative family events produce positive outcomes. We suspect that timing of negative events may be a critical situational factor. For instance, negative family events may be influenced by previous events. When someone experiences an extremely negative family event one evening followed by a moderately negative event the next, the relative reduction in negativity may trigger positive responses.

Finally, while we propose that extraversion moderates by influencing leaders' interpretations of the relationship between negative family events and leader identity, it is unlikely the only moderator. Future research could examine other variables affecting this interpretation process or identify moderators affecting other stages of how non-work domain events influence leader identity.

References

Ashford, S. J., & DeRue, D. S. (2012). Developing as a leader: The power of mindful engagement. *Organizational Dynamics, 41*, 146–154.

Ashton, M. C., Lee, K., & Paunonen, S. V. (2002). What is the central feature of extraversion? Social attention versus reward sensitivity. *Journal of Personality & Social Psychology, 83*(1), 245–252.

Barnes, C. M., Lucianetti, L., Bhave, D. P., & Christian, M. S. (2015). "You wouldn't like me when I'm sleepy": Leaders' sleep, daily abusive supervision, and work unit engagement. *Academy of Management Journal, 58*(5), 1419–1437.

Bass, B. M. (1985). *Leadership and performance beyond expectations.* New York, NY: Free Press.

Bataille, C. D., & Vough, H. C. (2022). More than the sum of my parts: An intrapersonal network approach to identity work in response to identity opportunities and threats. *Academy of Management Review, 47*(1), 93–115.

Baumeister, R., Vohs, K., & Tice, D. (2007). The strength model of self-control. *Current Directions in Psychological Science, 16*(6), 351–355.

Beckman, C., & Mazmanian, M. (2020). *Dreams of the Overworked: Living, Working, and Parenting in the Digital Age.* Redwood City: Stanford University Press.

Bernerth, J. B., & Aguinis, H. (2016). A critical review and best-practice recommendations for control variable usage. *Personnel Psychology, 69*(1), 229–283.

Blanchard, K. (1999). *The heart of a leader: Insights on the art of influence.* Colorado Springs, CO: David C. Cook.

Brislin, R. W. (1986). The wording and translation of research instrument. In W. Lonner & J. Berry (Eds.), *Field methods in cross-cultural research* (pp. 137–164). Beverly Hills: Sage.

Campbell, M., Baltes, J. E., Martin, A., & Meddings, K. (2006). *The stress of leadership.* A CCL research white paper. Center for Creative Leadership.

Carlson, D., Kacmar, K. M., Zivnuska, S., Ferguson, M., & Whitten, D. (2011). Work–family enrichment and job performance: A constructive replication of affective events theory. *Journal of Occupational Health Psychology, 16*(3), 341–355.

Costa, P. T., Jr., & McCrae, R. R. (1992). *The NEOPI-R: Revised NEO personality inventory and NEO five-factor inventory.* Lutz, FL: Psychological Assessment Resources.

Courtright, S. H., Gardner, R. G., Smith, T. A., McCormick, B. W., & Colbert, A. E. (2016). My family made me do it: A cross–domain, self–regulatory perspective on antecedents to abusive supervision. *Academy of Management Journal, 59*(5), 1630–1652.

Crawford, W. S., Thompson, M. J., & Ashforth, B. E. (2019). Work-life events theory: Making sense of shock events in dual-earner couples. *Academy of Management Review, 44*(1), 194–212.

Cunningham, J. L., Sonday, L., & Ashford, S. J. (2023). Do I dare? The psychodynamics of anticipated image risk, leader identity endorsement, and leader emergence. *Academy of Management Journal, 66*(2), 374–401.

Dahm, P. C., Glomb, T. M., Manchester, C. F., & Leroy, S. (2015). Work–family conflict and self–discrepant time allocation at work. *Journal of Applied Psychology, 100*(3), 767–792.

Day, D. V., Harrison, M. M., & Halpin, S. M. (2009). *An integrative approach to leader development: Connecting adult development, identity and expertise.* Routledge/Taylor & Francis Group.

DeRue, D. S., & Ashford, S. J. (2010). Who will lead and who will follow? A social process of leadership identity construction in organizations. *Academy of Management Review, 35*(4), 627–647.

DeRue, D. S., Nahrgang, J. D., Wellman, N., & Humphrey, S. E. (2011). Trait and behavioral theories of leadership: An integration and meta-analytic test of their relative validity. *Personnel Psychology, 64*(1), 7–52.

Donnellan, M. B., Oswald, F. L., Baird, B. M., & Lucas, R. E. (2006). The Mini–IPIP scales: Tiny–yet–effective measures of the big five factors of personality. *Psychological Assessment, 18*(2), 192–203.

Dutton, J. E., Roberts, L. M., & Bednar, J. (2010). Pathways for positive identity construction at work: Four types of positive identity and the building of social resources. *Academy of Management Review, 35*(2), 265–293.

Edwards, J. R. (1992). A cybernetic theory of stress, coping, and well–being in organizations. *Academy of Management Review, 17*(2), 238–274.

Edwards, J. R., & Rothbard, N. P. (2000). Mechanisms linking work and family: Clarifying the relationship between work and family constructs. *Academy of Management Review, 25*(1), 178–199.

Fast, N. J., Burris, E. R., & Bartel, C. A. (2014). Managing to stay in the dark: Managerial self–efficacy, ego defensiveness, and the aversion to employee voice. *Academy of Management Journal, 57*(4), 1013–1034.

Foulk, T. A., & Lanaj, K. (2022). With great power comes more job demands: The dynamic effects of experienced power on perceived job demands and their discordant effects on employee outcomes. *Journal of Applied Psychology, 107*(2), 263–278.

Gabriel, A. S., Podsakoff, N. P., Beal, D. J., Scott, B. A., Sonnentag, S., Trougakos, J. P., & Butts, M. M. (2019). Experience sampling methods: A discussion of critical trends and considerations for scholarly advancement. *Organizational Research Methods, 22*(4), 969–1006.

Ganster, M. L., Gabriel, A. S., Rosen, C. C., Simon, L. S., Butts, M. M., & Boswell, W. R. (2023). Retreating or repairing? Examining the alternate linkages between daily partner-instigated incivility at home and helping at work. *Journal of Applied Psychology, 108*(5), 826–849.

Grant, A. M. (2013). Rethinking the extraverted sales ideal: The ambivert advantage. *Psychological Science, 24*(6), 1024–1030.

Greenhaus, J. H., & Powell, G. N. (2006). When work and family are allies: A theory of work–family enrichment. *Academy of Management Review, 31*(1), 72–92.

Hagger, M., Wood, C., Stiff, C., & Chatzisarantis, N. L. D. (2010). Ego depletion and the strength model of self-control: A meta-analysis. *Psychological Bulletin, 136*(4), 495–525.

Halbesleben, J. R. B., Neveu, J.-P., Paustian-Underdahl, S. C., & Westman, M. (2014). Getting to the "COR": Understanding the role of resources in conservation of resources theory. *Journal of Management, 40*(5), 1334–1364.

Hammond, M., Clapp-Smith, R., & Palanski, M. (2017). Beyond (just) the workplace: A theory of leader development across multiple domains. *Academy of Management Review, 42*(3): 481–498.

Hollenbeck, J. R. (2008). The role of editing in knowledge development: Consensus shifting and consensus creation. In Y. Baruch, A.M. Konrad, H. Aguinis, & W.H. Starbuck (Eds.), *Opening the Black Box of Editorship* (pp. 1-15). Palgrave Macmillan, London.

Humberd, B., Ladge, J. J., & Harrington, B. (2015). The "New" dad: Navigating fathering identity within organizational contexts. *Journal of Business and Psychology, 30*(2), 249–266.

Ju, D., Huang, M., Liu, D., Qin, X., Hu, Q., & Chen, C. (2019). Supervisory consequences of abusive supervision: An investigation of sense of power, managerial self-efficacy, and task-oriented leadership behavior. *Organizational Behavior and Human Decision Processes, 154*(8), 80–95.

Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology, 87*(4), 765–780.

Judge, T. A., Piccolo, R. F., & Kosalka, T. (2009). The bright and dark sides of leader traits: A review and theoretical extension of the leader trait paradigm. *The Leadership Quarterly, 20*(6), 855–875.

Judge, T. A., & Zapata, C. P. (2015). The person–situation debate revisited: Effect of situation strength and trait activation on the validity of the big five personality traits in predicting job performance. *Academy of Management Journal, 58*(4), 1149–1179.

Kercher, K. (1992). Assessing subjective well–being in the old–old: The PANAS as a measure of orthogonal dimensions of positive and negative affect. *Research on Aging, 14*(2), 131–168.

Kotter, J. P. (2001). What leaders really do. *Harvard Business Review, 68*(3), 1–12.

Lanaj, K., Foulk, T. A., & Erez, A. (2019). Energizing leaders via self–reflection: A within–person field experiment. *Journal of Applied Psychology, 104*(1), 1–18.

Lanaj, K., Gabriel, A. S., & Chawla, N. (2021). The self–sacrificial nature of leader identity: Understanding the costs and benefits at work and home. *Journal of Applied Psychology, 106*(3), 345–363.

Lanaj, K., Jennings, R. E., Ashford, S. J., & Krishnan, S. (2022). When leader self–care begets other care: Leader role self–compassion and helping at work. *Journal of Applied Psychology, 107*(9), 1543–1560.

Lee, J. S. Y., Sonday, L., & Ashford, S. J. (2016). It's a matter of identity: The dynamics of leader identity and leadership behavior in organizations. Paper presented at the 76th Annual Meeting of the Academy of Management, Anaheim, CA.

Leroy, S., Schmidt, A. M., & Madjar, N. (2021). Working from home during COVID–19: A study of the interruption landscape. *Journal of Applied Psychology, 106*(10), 1448–1465.

Lilius, J. M. (2012). Recovery at Work: Understanding the Restorative Side of "Depleting" Client Interactions. *Academy of Management Review, 37*(4), 569–588.

Lin, S.-H. (J.), Chang, C.-H. (D.), Lee, H. W., & Johnson, R. E. (2021). Positive family events facilitate effective leader behaviors at work: A within–individual investigation of family–work enrichment. *Journal of Applied Psychology, 106*(9), 1412–1434.

Lin, W. (2019). Fundamentals of Management Research: What is Research and How to Conduct a Good Empirical Research. *Human Resource Management Review, 1*, 1-10. [林伟鹏. (2019). 管理学研究基础：什么是研究？如何做一个好的实证研究. 人力资源管理评论, 1, 1-10.]

Liu, Y., & West, S. G. (2016). Weekly cycles in daily report data: An overlooked issue. *Journal of Personality, 84*(5), 560–570.

Lord, R. G., Diefendorff, J. M., Schmidt, A. M., & Hall, R. J. (2010). Self-regulation at work. *Annual Review of Psychology, 61*, 543–568.

Ma, M. Y. (2020). Research on the influence mechanism of event intensity on work performance in work and family fields (Master's thesis). Yanshan University. [马梦媛. (2020). 工作家庭事件强度对工作绩效的影响机制研究 (硕士学位论文), 燕山大学.]

Markus, H., & Wurf, E. (1987). The dynamic self-concept: A social psychological perspective. *Annual Review of Psychology, 38*, 299-337.

McClean, S. T., Barnes, C. M., Courtright, S. H., & Johnson, R. E. (2019). Resetting the clock on dynamic leader behaviors: A conceptual integration and agenda for future research. *Academy of Management Annals, 13*(2), 479–508.

McClean, S. T., Yim, J., Courtright, S. H., & Dunford, B. B. (2021). Transformed by the family: An episodic, attachment theory perspective on family–work enrichment and transformational leadership. *Journal of Applied Psychology, 106*(12), 1831–1848.

Muthén, L. K., & Muthén, B. O. (2010). *Mplus User's Guide*. Los Angeles, CA: Muthén & Muthén.

Parker, S. K., Johnson, A., Collins, C., & Nguyen, H. (2013). Making the most of structural support: Moderating influence of employees' clarity and negative affect. *Academy of Management Journal, 56*(3), 867–892.

Paustian-Underdahl, S. C., Halbesleben, J. R. B., Carlson, D. S., & Kacmar, K. M. (2013). The work-family interface and promotability: Boundary integration as a double-edged sword. *Journal of Management, 42*(4), 960–981.

Podsakoff, N. P., Spoelma, T. M., Chawla, N., & Gabriel, A. S. (2019). What predicts within–person variance in applied psychology constructs? An empirical examination. *Journal of Applied Psychology, 104*(6), 727–754.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903.

Preacher, K. J., Zyphur, M. J., & Zhang, Z. (2010). A general multilevel SEM framework for assessing multilevel mediation. *Psychological Methods, 15*(3), 209–233.

Prime, H., Wade, M., & Browne, D. T. (2020). Risk and resilience in family well–being during the COVID–19 pandemic. *American Psychologist, 75*(5), 631–643.

Probst, T. M., Lee, H. J., & Bazzoli, A. (2020). Economic stressors and the enactment of CDC–recommended COVID–19 prevention behaviors: The impact of state–level context. *Journal of Applied Psychology, 105*(12), 1397–1407.

Qin, X., Huang, M. P., Johnson, R. E., Hu, Q. J., & Ju, D. (2018). The short-lived benefits of abusive supervisory behavior for actors: An investigation of recovery and work engagement. *Academy of Management Journal, 61*(5), 1951–1975.

Quinn, R. W., Spreitzer, G. M., & Lam, C. F. (2012). Building a sustainable model of human energy in organizations: Exploring the critical role of resources. *Academy of Management Annals, 6*(1), 337–396.

Raykov, T. (2007). Reliability if deleted, not 'alpha if deleted': Evaluation of scale reliability following component deletion. *British Journal of Mathematical and Statistical Psychology, 60*(2), 201–216.

Rodell, J. B. (2013). Finding meaning through volunteering: Why do employees volunteer and what does it mean for their jobs?. *Academy of Management Journal, 56*(5), 1274–1294.

Rosen, C. C., Simon, L. S., Gajendran, R. S., Johnson, R. E., Lee, H. W., & Lin, S. J. (2019). Boxed in by your inbox: Implications of daily e–mail demands for managers' leadership behaviors. *Journal of Applied Psychology, 104*(1), 19–33.

Sandberg, J. & Tsoukas, H. (2015). Making sense of the sense-making perspective: Its constituents, limitations, and opportunities for further development. *Journal of Organizational Behavior, 36*(S1): S6–S32.

Sherf, E. N., Venkataramani, V., & Gajendran, R. S. (2019). Too busy to be fair? The effect of workload and rewards on managers' justice rule adherence. *Academy of Management Journal, 62*(2), 469–502.

Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and Family, 38*(1), 15–28.

Stogdill, R. M. (1963). *Manual for the leader behavior description questionnaire – Form XII.* Bureau of Business Research, College of Commerce and Administration, Ohio State University.

Stogdill, R. M., Goode, O. S., & Day, D. R. (1962). New leader–behavior description subscales. *Journal of Psychology, 54*(2), 259–269.

ten Brummelhuis, L. L., Haar, J. M., & Roche, M. (2014). Does family life help to be a better leader? A closer look at crossover processes from leaders to followers. *Personnel Psychology, 67*(4), 917–949.

Tepper, B. J., Dimotakis, N., Lambert, L. S., Koopman, J., Matta, F. K., Park, H. M., & Goo, W. (2018). Examining follower responses to transformational leadership from a dynamic, person–environment fit perspective. *Academy of Management Journal, 61*(4), 1343–1368.

Twenge, J., Muraven, M., & Tice, D. (2004). Measuring state self-control: Reliability, validity, and correlations with physical and psychological stress. Unpublished manuscript, San Diego State University.

Uy, M. A., Lin, K. J., & Ilies, R. (2016). Is it better to give or receive? The role of help in buffering the depleting effects of surface acting. *Academy of Management Journal, 60*(4), 1442–1461.

Watkins, T. (2021). Workplace interpersonal capitalization: Employee reactions to coworker positive event disclosures. *Academy of Management Journal, 64*(2), 537–561.

Weiss, H. M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, cause and consequences of affective experiences at work. *Research in Organizational Behavior, 18*(3), 1–74.

Xu, S., Zhang, Y. C., Zhang, B. R., Shi, J. Q., Yuan, M. S., & Ren, Y. W. (2022). Gain or Loss? Examining the double–edged sword effect of challenge demand on work–family enrichment. *Acta Psychologica Sinica, 54*(10), 1234—1247. [徐姗, 张昱城, 张冰然, 施俊琦, 袁梦莎, 任迎伟. (2022). “增益”还是“损耗”? 挑战性工作要求对工作 — 家庭增益的“双刃剑”影响. 心理学报, 54(10), 1234—1247.]

Yu, L., & Duffy, M. K. (2021). The whiplash effect: The (moderating) role of attributed motives in emotional and behavioral reactions to abusive supervision. *Journal of Applied Psychology, 106*(5), 754–773.

Yukl, G. (2012). Effective Leadership Behavior: What We Know and What Questions Need More Attention. *Academy of Management Perspectives, 26*(4), 66–85.

Zedeck, S. (Ed). (1992). *Work, families, and organizations.* San Francisco: Jossey–Bass.

Zhang, C. C., Nahrgang, J. D., Ashford, S. J., & DeRue, D. S. (2020). The risky side of leadership: Conceptualizing risk perceptions in informal leadership and investigating the effects of their over time changes in teams. *Organization Science, 31*(5), 1138–1158.

Note: Figure translations are in progress. See original paper for figures.