Daily Cognition in the Family Context: The Complex Associations Between Memory Lapses, Family Relationships, and Affect in Middle-Aged and Older Adults

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Abstract

Background and Objectives: The analysis of daily memory lapses is an underutilized approach to understanding daily experiences of cognitive functioning. The present study adopts this approach, with the goals of exploring how the quality of family relationships predicts the frequency of daily memory lapses and moderates the link between daily memory lapses and daily affect.

Research Design and Methods: We used longitudinal data from the third wave of Midlife in the United States and the National Study of Daily Experiences to assess our research goals. Participants ($N = 1,236$; $M_{age} = 62.48$ years, $SD = 10.21$, range 43–91; 57% female) completed 8 nightly telephone interviews that included reports of prospective and retrospective memory lapses as well as daily positive and negative affect.

Results: During a separate baseline interview, participants reported the emotional support they received from their family. Latent profile analysis models identified 4 family relationship types: pleasant, ambivalent, neutral, and unpleasant. Compared with pleasant relationships, ambivalent ($b = .23$, $p < .05$) and neutral ($b = .35$, $p < .01$) relationships significantly predicted a higher frequency of prospective memory lapses; this effect was not found among retrospective lapses. In addition, relative to pleasant relationships, ambivalent ($b = .02$, $p < .05$), neutral ($b = .02$, $p < .05$), and unpleasant ($b = .07$, $p < .001$) relationships were associated with increased negative affect on days with a retrospective lapse, but not prospective lapse.

Discussion and Implications: This study contributes to the literature by revealing that family relationships are related to the memory lapses individuals experience in their daily lives, and identifies how lapses might contribute to affective symptom load over time.

Keywords: Ambivalence, Emotional closeness, Memory lapses, Positive and negative affect

Daily memory functioning is a fundamental cognitive ability that supports daily activities (Jones et al., 2021; Schmitter et al., 2020). Daily memory lapses may disrupt routines that are critical to an individual maintaining their social, physical, and psychological health. Although daily memory lapses can relate to many types of memory, the most commonly assessed lapses are those pertaining to prospective and retrospective memory (Cohen, 2008; Kvavilashvili & Rummel, 2020; Mogle et al., 2023). Prospective memory (PM) refers to an individual's memory for future actions or events (e.g., not taking medication on time), whereas retrospective memory (RM) is memory for past events or information (e.g., forgetting the meaning of certain words). Conflict and tension in interpersonal relationships have been known to lead to daily memory lapses (Cerino et al., 2024). Since family relationships are fundamental to interpersonal interactions in daily life, the present study extends the literature by describing the associations between types of family relationship quality, and the frequency and appraisals of daily memory lapses; further, while the extant micro-level research focuses primarily on the predictors of daily memory lapses (Neupert et al., 2006; Whitbourne et al., 2008), the current study examines the impact of such lapses on daily experiences, in the form of daily affective responsivity, in a sample of middle-aged and older adults.

Relationships in the Context of Family: Family Solidarity and Attachment

In later life, individuals' social networks narrow, and relationships with close friends and family become some of older adults' most important social connections (Thomas et al., 2017). Family cohesion is an important component of family relationships that enhances psychological well-being

(Silverstein & Bengtson, 1997). Researchers have studied family cohesion by examining parents' relationship with their adult children through the lens of intergenerational solidarity theory (Bengtson & Roberts, 1991). In particular, affectual solidarity, which refers to emotional closeness and affection between family members, has attracted scholarly interest, because an individual's emotions (e.g., admiration, love, hate) toward a relationship partner provide relevant and specific information about family relationship quality (Ferring et al., 2009).

Attachment theory is a helpful framework for investigating the emotional/affectional dimension of solidarity in the family context. This perspective suggests that the affective characteristics of relationships between (primarily) children and their parents, such as strong connectedness and attachment, are linked to overall well-being (Merz et al., 2009). Individuals in positive relationships with parents and peers tend to express more positive emotional regard toward others and place a higher value on their relationships, whereas those in negative relationships with parents and peers are more negatively biased toward others and place a lower value on their relationships. These distinctions are important for cognition as prior studies have identified specific relationships between attachment and memory including information recognition and retrieval (Collins & Feeney, 2004; Dykas & Cassidy, 2011; Feeney & Cassidy, 2003). Feeney and Cassidy (2003) emphasized the importance of attachment-related constraints on information processing, noting that attachment representations—internalized mental models shaped by attachment experiences—can influence an individual's willingness or capacity to engage with and process information.

Adult Family Relationships, Memory, and Affect

Social relationships, including family relationships, can be classified as one of four types. Some relationships are characterized by either positivity or negativity, whereas others are indifferent or neutral, meaning they have low levels of both positivity and negativity, and still others are ambivalent, meaning they entail high levels of both positivity and negativity (Fingerman et al., 2004). Prior studies have found that positive relationships are linked to better memory for attachment-relevant social information (Dykas & Cassidy, 2011). Attachment theory posits that an individual's experience with close relationships is particularly influential for organizing memory (Bowlby, 1982). In particular, the theory asserts that individual differences in parents' attachment-related insecurities may influence the information children acquire and the extent to which they encode, elaborate on, and later retrieve and report information (Melinder et al., 2013). Further, studies of how people store emotionally relevant information (information related to stressful or emotionally intense life events) in memory and how they recall such information have found that attachment security is an important factor for emotional memory (Alexander et al., 2010). More broadly, prior social contextual factors, such as parent–child relationships are influential and contributes to children's memory about emotional experiences (Vannucci et al., 2024).

Fraley et al. (2000) highlighted the role that defensive processes play for those with avoidant attachment, who are uncomfortable being close to and dependent on others; these individuals may encode less information about attachment-related experiences and have fewer memories of emotional experiences. In addition, prior research found a link between better cognitive functioning and positive emotion. The presence of even mild cognitive problems is frequently associated with emotional distress (Apostolova & Cummings, 2008). Similarly, perceptions of memory lapses are often a source of worry and may interfere with daily routines, especially among older adults (Reese & Cherry, 2004).

Each day family members participate in semi-regular patterns of interaction with each other and with people and systems outside the family. In these interchanges, family members are affected by and affect others, sometimes in repeated ways (Larson & Almeida, 1999). Emotions are an important factor in these interchanges because they influence and can limit individuals' perceptions, thought process, and behavior, as well as affect health via emotional physiology (Larson & Almeida, 1999; Lazarus, 1999). Given that insecure family attachment is linked to a higher likelihood of memory lapses, which, in turn, can disrupt emotional processing (Cassidy & Shaver, 2016), it is important to explore how daily levels of forgetting in relationships with family members relates to dysfunctional emotional processing and dysfunctional regulation of negative affective responsivity.

Daily Memory Lapses

Prior work has found that PM places higher demands on attention and planning capacities than RM among adults of all ages (Jones et al., 2021; Loft & Yeo, 2007). Although both types of memory are considered critical for adequate everyday functioning in naturalistic environments, researchers have hypothesized that due to the number of tasks individuals need to accomplish in daily life, problems with PM will be more common and have a greater impact on everyday functioning than problems with RM (McDaniel & Einstein, 2007; Mogle et al., 2017). Because of the significant negative consequences of certain types of PM lapses, and their frequent occurrence in the healthy population, there is growing interest in the systematic study of PM (Crawford et al., 2003). Given the important implications of memory and recall failures, further investigation into the social-cognitive processes that bias and shape individuals' memory for emotional events and information is warranted (Dykas et al., 2014).

Current Study

To understand cognitive failures in daily life in the context of family, the current study examines the impact of attachment-related aspects of family relationships on the frequency and appraisals of memory lapses, and the consequences of these combined events. Most research in this area has focused on young children and childhood experiences, while few studies have explored these patterns among adults. Thus, the current study extends the literature by analyzing how attachment-related family relationships influence daily memory lapses as well as their appraisals and consequences among middle-aged and older adults. Specifically, we tested following hypotheses:

1. Individuals in insecure family relationships (ambivalent, neutral, and unpleasant) will report more daily memory lapses than those in secure family relationships (pleasant), and this difference will be larger for PM lapses than for RM lapses.

2. Individuals in insecure family relationships will report more irritation and interference in response to daily memory lapses.
3. Past experiences with close ones are related to emotions. Hence, RM lapses will be related to daily affective responsivity, such that on days RM lapses are reported, being in an insecure family relationship is associated with negative affective responsivity.

Methods

Participants and Procedure

Midlife in the United States (MIDUS; Radler & Ryff, 2010) is a longitudinal survey collected approximately every 10 years. Using a large representative sample, the survey examines the lives of Americans living in the United States and measures their physical, psychological, and social well-being. MIDUS I was conducted in 1995–1996 with 7,108 adults aged 25–74 and follow-up surveys were conducted in 2004–2006 (MIDUS II) and 2013–2014 (MIDUS III), with high retention rates (70% and 77% of living respondents, respectively). In 2005–2006, MIDUS added 592 African Americans from Milwaukee to the original samples to enable the analysis of psychosocial determinants of health among this underrepresented group. MIDUS studies recruited non-institutionalized English-speaking adults through random-digit sampling across the United States.

Within the MIDUS study, the National Study of Daily Experiences (NSDE; Almeida, 2005) known as the daily diary project examines the day-to-day lives, particularly the daily stressful experiences, of a subsample of MIDUS respondents. Compared with global reports, daily reports may be more accurate measures of the frequency, type, and severity of memory lapses because these measures reflect whether specific forgetting experiences occurred on a given day (Mogle et al., 2023; Smyth & Stone, 2003). Daily surveys allow detailed reporting on the characteristics of memory lapses such as what was forgotten (e.g., medication, someone's name) and the severity of the incident (an individual's appraisal of the impact of the memory lapses, such as how irritating it was or how much it interfered with the day's activities; Scott et al., 2020) as well as how this specific forgetting incident impacted other domains (daily affect) of functioning (Scott et al., 2020).

To leverage the enhanced daily assessments, we drew on the third wave of each survey. The NSDE consists of a subsample of 1,236 MIDUS respondents (including the Milwaukee sample) who participated in eight consecutive days of telephone interviews between 2017 and 2019. The mean age of sample members was 62.48 (SD = 10.21) and 57% of participants were women. In the full sample, there were 9,888 possible daily assessments (1,236 × 8 days of assessments) and 9,301 were successfully completed, leading to an overall compliance rate of 94%. The average number of surveys completed by participants was 7.53 (SD = 2.27; range 1–8), suggesting a generally high level of compliance. Participants were included in the present study if they completed at least one daily diary survey.

Measures

NSDE Data Collection

Daily memory lapses.

Participants reported memory lapses via the daily memory lapses checklist (DMLC; Mogle et al., 2019, 2023). The MIDUS form of this checklist contains five items that pertain PM lapses (i.e., memory for future behaviors and activities) and four items that pertain to RM lapses (i.e., memory for previously learned information). Items on the prospective subscale included forgetting to complete an errand or chore, to take a medication, why you entered a room, to finish a task, or to attend a meeting or appointment. Items on the retrospective subscale included forgetting someone's name, where something was placed, a word during a conversation, and important information. For each subscale, the reports of lapses were summed to create a composite number of prospective (range 0–5) and retrospective (range 0–4) daily memory lapses. Daily reliability was 0.77 for prospective lapses and 0.85 for retrospective lapses.

Appraisals of memory lapses.

When participants reported experiencing a memory lapse, they were prompted to indicate the level of perceived negative impact in two domains: irritation (How much did forgetting these things bother you?) and interference (How much did forgetting these things interfere with your routine today?). Both measures of perceived consequences were reported on a scale ranging from 0 (not at all) to 10 (very much). These questions were asked for both prospective and retrospective items, leading to four outcome measures: prospective irritation ($M_{\text{reliability}}$ = 0.85) and prospective interference ($M_{\text{reliability}}$ = 0.77), retrospective irritation ($M_{\text{reliability}}$ = 0.88), and retrospective interference ($M_{\text{reliability}}$ = 0.82).

Daily positive and negative affect.

Daily affect was based on the reported frequency of 13 positive emotions (in good spirits, cheerful, extremely happy, calm and peaceful, satisfied, full of life, close to others, like you belong, enthusiastic, attentive, proud, active, and confident) and 14 negative emotions (restless or fidgety, nervous, worthless, so sad nothing could cheer you up, everything was an effort, hopeless, lonely, afraid, jittery, irritable, ashamed, upset, angry, and frustrated), each measured on a 5-point Likert scale (0 = none of the time to 4 = all the time) (Kessler et al., 2006). The emotion item ratings were averaged to obtain daily positive and negative affect scores, which were aggregated for the eight interview days. Reliability was 0.96 for the positive affect items and 0.91 for the negative affect items.

MIDUS Data Collection

Emotion-based types of family relationships.

The focal variables included responses to seven questions about emotional relationships with family members. Participants rated positive and negative emotional aspects of their relationships with family members (except spouse/partner) on 4-point scale from never (not at all) to often (a lot). Three of the focal items asked about positive emotions in these relationships: "Thinking about the members of your family, can you talk to family about worries/ do they understand the way you feel about things/ can you rely on them for help if you have a serious problem?" Four items asked about negative emotions in these relationships: "How often do they make too many demands on you/ criticize you/ let you down when you are counting on them/ get on your nerves?" Latent profile analysis (LPA) was used to identify homogeneous groups in the study sample after iterative updating.

Covariates

All models included age, gender (1 = women; 0 = men), race (1 = non-Hispanic white; 0 = other), marital status (1 = married; 0 = not married), income (1= $30,000 or greater; 0 = less than $30,000), education (1 = some college or greater; 0 = high school graduate or less), and employment (1 = employed; 0 = not employed). Following previous literature (Stawski et al., 2023), all models included a dichotomous variable of depressive symptoms (participants had felt depressed for two weeks or longer) and the total number of daily stress exposures based on the Daily Inventory of Stressful Events (Almeida et al., 2002; range 0–5).

Analytic Strategy

We conducted the analysis in several steps. First, we ran LPA models to identify distinct types of family relationships based on the seven indicators. LPA uses a person-centered approach based on the generation of posterior probabilities to classify individuals into latent classes (Muthén, 2008). Next, we calculated descriptive statistics and summary scores by family relationship type and day. We then moved to our primary analyses; because all daily diary data were nested (days at level 1 nested in persons at level 2), multilevel modeling was used for all analyses (Hox et al., 2017). Multilevel Poisson models examined how family type predicts the frequency of each type of memory lapse. Linear multilevel mixed-effects models with a restricted maximum likelihood estimator (REML) analyzed the impact of family relationship type on appraisals of daily memory lapses (PM/RM irritation and interference). Finally, a second set of linear multilevel mixed-effects models examined how family relationship type and daily memory lapses were related to daily positive and negative affect. We added a two-way interaction term for family relationship type by daily memory lapses to test their combined influence on affective responsivity. All model estimates reported are unstandardized. All multilevel analyses were performed with Stata 14.2 (Stata Corporation, College Station, TX, USA) and LPA was conducted using Mplus (version 8.8).

Results

Using LPA, we compared solutions ranging from a 2-cluster model to a 6-cluster model to identify the optimal number of clusters (see Supplementary Table 1). Optimal cluster selection is based on a low BIC (Bayesian information criterion) and high entropy (index of the classification quality), as well as two likelihood ratio tests (LMR-LRT [Lo Mendell-Rubin likelihood ratio test] and BLRT [bootstrap likelihood test]) (Lanza et al., 2013). LMR-LRT indicated that the 4-cluster solution improved over the 3-cluster solution ($p < .001$) based on a higher entropy value. Further, the 4-cluster solution was optimal and parsimonious, providing a logical substantive interpretation based on the theoretical framework (Silverstein et al., 2010). As shown in Supplementary Table 1, we labeled the family relationship types as follows: pleasant, ambivalent, neutral, and unpleasant (Jang et al., 2022, 2024; Zhaoyang et al., 2021). Pleasant relationships (57%) had a high level of emotional closeness and a low level of conflict. Unpleasant relationships (4%) were characterized by a low level of emotional closeness and a high level of conflict. Ambivalent relationships (27%) had a high level of emotional closeness and a high level of conflict while neutral relationships (13%)

had low levels of both emotional closeness and conflict (see Supplementary Table 2).

Table 1 summarizes the descriptive characteristics of key variables. The average age of sample members was 62.48 (SD = 10.21) and 81% of respondents ($n = 983$) were non-Hispanic whites. More than half of the respondents were married or had a partner ($n = 798$), and more than two-thirds had an education level of "some college" or higher ($n = 924$). The mean number of total daily stress exposures was 0.48 (SD = .70). Table 2 presents the linear multilevel model results for the associations between family relationship type and each type of memory lapses. Pleasant relationships, the most cohesive family relationship type, was used as the reference group in the analyses. Compared with respondents in pleasant relationships with family members, those in ambivalent ($b = 0.30$, $p < .01$) and neutral relationships ($b = 0.34$, $p < .01$) reported significantly more PM lapses. After controlling for covariates, there were still significant positive associations between ambivalent ($b = 0.23$, $p < .05$) and neutral ($b = 0.35$, $p < .01$) relationships and frequency of PM lapses.

Table 3 presents the results for the prediction of family relationship types on appraisals of PM/RM lapses. Compared with pleasant relationships, unpleasant relationships were significantly associated with higher levels of PM irritation ($b = 0.90$, $p < .05$), PM interference ($b = 0.81$, $p < .001$), and RM interference ($b = 0.49$, $p < .05$); no other relationship types had statistically significant results. Table 4 displays the multilevel results for the influence of family relationship types and daily memory lapses on daily affective responsivity. Insecure family relationships (relative to pleasant relationships) were strongly associated with decreased positive affect and increased negative affect; PM lapses ($b = 0.04$, $p < .001$) and RM lapses ($b = 0.03$, $p < .001$) were significantly associated with increased negative affect.

Table 4 also presents the combined effects of family relationships and each type of daily memory lapse on daily affective responsivity. Although there were no statistically significant results related to positive affect, on days an RM lapse was reported, insecure family relationships were significantly associated with increased negative affect. Specifically, those in ambivalent ($b = 0.02$, $p < .05$), neutral ($b = 0.02$, $p < .05$), and unpleasant ($b = 0.07$, $p < .001$) family relationships (relative to pleasant relationships) reported significantly higher negative affect on days RM lapses were reported.

Discussion

The current study examined how types of relationships with family members (except spouse or partner) are related to types of daily memory lapses and appraisals (i.e., irritation and interference) of these lapses. Further, we examined whether family relationship type moderated the association between each type of daily memory lapse and daily affective responsivity. Although an impressive set of prior studies has found that parents' attachment tendencies are predictive of children's memory (Alexander et al., 2010; Melinder et al., 2013), this study extends the literature by exploring family relationship attachment and subjective cognitive functioning among middle-aged and older adults. The analysis also offers insight into the role family relationships play in the experience of daily memory lapses, showing that insecure family relationships heighten vulnerability to daily memory lapses in a naturalistic setting.

Table 1. Descriptive Statistics by Family Relationship Types (*N* = 1,236)

	Pleasant (*n* = 704)		Ambivalent (*n* = 326)		Neutral (*n* = 163)		Unpleasant (*n* = 43)		F/χ2
	n/mean (*SD*)	%/range	n/mean (*SD*)	%/range	n/mean (*SD*)	%/range	n/mean (*SD*)	%/range	
Age	63.44 (10.31)	43–91	61.16 (10.00)	43–89	61.16 (9.36)	43–88	61.74 (11.43)	43–89	$F = 37.12$***
Female	394	55.97	213	65.34	77	47.24	23	53.49	$\chi^2 = 122.53$***
Race									$\chi^2 = 209.28$***
Non-Hispanic White	579	82.60	252	77.78	125	77.16	27	62.79	
Non-Hispanic Black	62	8.84	38	11.73	25	15.43	11	25.58	
Hispanic	26	3.71	8	2.47	3	1.85	3	6.98	
Other	34	4.85	26	8.02	9	5.56	2	4.65	
Married	461	65.48	209	64.11	108	66.26	20	46.51	$\chi^2 = 56.28$**
$30,000 or greater	541	81.23	279	85.58	129	79.14	26	60.47	$\chi^2 = 156.60$***
Some college or greater	531	75.43	244	74.85	125	77.16	24	55.81	$\chi^2 = 88.91$***
Employed	297	49.58	157	55.67	83	59.29	19	52.78	$\chi^2 = 30.58$***
Depressed	92	13.09	79	24.31	42	25.77	15	35.71	$\chi^2 = 242.54$***
Between person summaries of daily variables used in the current analyses									
Stress exposure	0.44 (.68)	0–5	.53 (.72)	0–4	.51 (.73)	0–4	0.58 (0.73)	0–3	
Prospective memory (PM) lapses	0.23 (.52)	0-4	.30 (.61)	0-5	.31 (.64)	0-4	0.32 (0.64)	0–4	
Retrospective memory (RM) lapses	0.39 (0.69)	0-4	.44 (.78)	0-4	.42 (.69)	0-4	0.52 (0.79)	0–3	
PM irritation	2.69 (2.19)	1–10	2.91 (2.37)	1–10	2.72 (2.24)	1–10	3.68 (2.79)	1–10	
RM irritation	2.86 (2.30)	1-10	2.92 (2.29)	1–10	2.95 (2.36)	1-10	3.75 (3.02)	1–10	
PM interference	1.58 (1.43)	1–10	1.81 (1.71)	1–10	1.78 (1.76)	1–10	2.57 (2.51)	1–10	
RM interference	1.56 (1.41)	1–10	1.62 (1.47)	1–10	1.76 (1.68)	1–10	2.33 (2.36)	1–10	
Positive affect	2.84 (0.72)	1–4	2.55 (.73)	1–4	2.38 (.85)	1–4	2.25 (.91)	1–4	
Negative affect	0.14 (.24)	0–2.79	.20 (.27)	0–2.14	.25 (.41)	0–3.43	0.32 (0.48)	0–2.79	

Notes: *SD* = standard deviation; *N* = total sample size; *n* = sample size of a subgroup. Total number of daily assessments = 9,301.
*$p < .05$. **$p < .01$. ***$p < .001$.

The results demonstrate that insecure family relationships, specifically ambivalent and neutral relationships, are strongly associated with a higher likelihood of experiencing PM lapses. While prior studies have reported that PM lapses are more common and have a greater impact on everyday functioning than RM lapses, little is known about the associations between daily memory lapses and family relationships. Min and Song (2023) found that those who were widowed and had a pre-loss ambivalent relationship with their spouses had significantly worse overall cognitive functioning. In alignment with those findings, our results show that ambivalent family relationships may increase daily PM lapses. Because PM is related to completing an intended action, Sparks et al.'s (2001) findings, which show that high levels of ambivalence reduce attitude-intention and attitude-behavior consistency because this relationship is in conflict, leading to less stable attitudes that are poor predictor of intentions/behaviors, support our results.

In addition, those in insecure family relationships may be more vulnerable in stressful situations. As the current results show, respondents in insecure family relationships reported more daily stress than those in secure family relationships. Ambivalent relationships entail more negative behaviors

(e.g., criticism, argument) and fewer emotionally supportive behaviors and thus increase stress (Reblin et al., 2010). In addition, neutral relationships occur when individuals distance themselves psychologically from disliked individuals with whom they have a nonvoluntary relationship by reducing their involvement, detaching themselves emotionally, or avoiding them (Hess, 2000). This type of relationship may develop because individuals do not have the cognitive resources to cope effectively with these family relationships, especially during stressful situations. Studies exploring how parental attachment influences children's memory may shed some light on this pattern. Insecure parents often minimize discussions of emotional experiences or adopt a low elaborative conversation style; hence, their children likely learn to avoid talking and possibly thinking about such experiences, leading to a reduction in how organized and detailed they are in their reports and later in the extent and possibly accuracy of their memories (Milojevich & Quas, 2017).

The findings also revealed that those with unpleasant family relationships reported increased irritation and interference related to memory lapses. One possible explanation is that having strong negative feelings for others may exacerbate difficulty when an individual is exposed to daily stressors, which

Table 2. Multilevel Poisson Models

	Prospective memory lapse		Retrospective memory lapse	
	b (SE)	*b (SE)*	*b (SE)*	*b (SE)*
Relationship Types				
Ambivalent	0.30 (0.10)**	0.23 (0.10)*	0.13 (0.09)	0.10 (0.09)
Neutral	0.34 (0.12)**	0.35 (0.12)**	0.16 (0.11)	0.14 (0.11)
Unpleasant	0.35 (0.23)	0.30 (0.22)	0.33 (0.20)	0.31 (0.20)
Age		0.01 (0.004)		0.02 (0.004)
Female		0.21 (0.09)*		–0.01 (0.08)
Non-Hispanic White		–0.13 (0.11)		-0.06 (0.10)
Married		0.01 (0.09)		0.02 (0.08)
$30,000 or greater		0.19 (0.12)		0.23 (0.11)*
Some college or greater		–0.03 (0.10)		0.09 (0.09)
Depressed		0.36 (0.10)**		0.36 (0.09)***
Stress exposure		0.22 (0.03)***		0.23 (0.23)***

Notes: *b* = unstandardized coefficient; *SE* = standard error. Relationship types = pleasant (ref); race/ethnicity = other than non-Hispanic White (ref).
*$p < .05$.**$p < .01$.***$p < .001$.

Table 3. Multilevel Mixed Models Examining Direct Impact of Memory Lapse

	PM irritation	PM interference	RM irritation	RM interference
	b (SE)	*b (SE)*	*b (SE)*	*b (SE)*
Relationship types				
Ambivalent	0.07 (0.16)	0.12 (0.11)	–0.15 (0.16)	–0.06 (0.10)
Neutral	0.04 (0.21)	0.11 (0.14)	0.07 (0.20)	0.15 (0.12)
Unpleasant	0.90 (0.38)*	0.81 (0.26)**	0.49 (0.35)	0.49 (0.21)*

Notes: *b* = unstandardized coefficient; *SE* = standard error. Relationship types = pleasant (ref); covariates (age, gender, race/ethnicity, marital status, income, education, depressive symptom, stress exposure) were included in all models.
*$p < .05$.**$p < .01$.

affect well-being not only by having separate, immediate, and direct effects on emotional and physical functioning, but also by accumulating over multiple days to create persistent irritation, frustration, and overload that may result in more serious stress reactions such as anxiety and depression (Lazarus, 1999; Zautra, 2003).

Further, we found that daily memory lapses and insecure family relationships had a greater impact on daily affective responsivity throughout the day. These findings extend previous studies of daily memory lapses found that RM lapses were related to increased daily negative affect even after accounting for other daily stressors (Mogle et al., 2019). These findings suggest that memory lapses represent a unique source of daily hassle that contribute to variations in daily affect (Mogle et al., 2019), and RM lapses have a strong association with insecure family relationships. As people age, they become increasingly skilled at regulating their emotions by proactively avoiding stressors (Charles, 2010). Prior studies have found that memory lapses represent normative events for older adults, so they do not hold the same significance as they do for young adults (Diehl et al., 2014). However, our results show that adults may not be better at regulating the high levels of distress elicited by the combination of insecure family relationships and RM lapses.

As Fingerman et al. (2012) suggested, for some grown children and their parents, negative feelings in their daily lives may reflect communication and interaction styles, setting a tone of ambivalence. Given that RM lapses are related to past experiences (e.g., recalling emotional events from early childhood), avoidant individuals may be more prone to these lapses (Fraley et al., 2000) because they have blocked anxious feelings and thoughts by using defensive strategies to successfully disengage their awareness of the need that is not being met (Fraley et al., 2000). Future research would benefit by examining potential behavioral mechanisms in the context of relationships related to which memory lapses impair daily affect in understanding how subjective cognitive decline (SCD; perceptions of worsening cognition in the absence of performance deficits) precedes serious impairments in affect, such as clinical depression and anxiety (Hill et al., 2016). At the micro-level timescale (i.e., daily), SCD is conceptualized as self-reported instances of forgetfulness during the day, or memory lapses (Mogle et al., 2019). As people age, they may experience SCD, which is associated with an increased daily forgetting. SCD may be an initial sign of mild cognitive impairment and dementia, particularly Alzheimer's disease (Earl Robertson & Jacova, 2023), and thus should alert clinicians to potential concerns.

Limitations

The current study highlights the importance of the quality of family relationships and daily memory lapses and their impact on affective responsivity; however, there are several limitations that should be noted. First, attachment in childhood may influence an individual's affectional bonds within the family system throughout the life span. Future research should explore childhood attachment style with specific relationship partners (i.e., parent–child relationship). Second, although the current study explored the complicated associations between family relationships and memory lapses, there are other important predictors of memory problems. For

Table 4. Multilevel Models Examining Daily Affect

	Positive affect		Negative affect	
	b (SE)	*b (SE)*	*b (SE)*	*b (SE)*
PM lapse	−0.01 (0.01)	−0.01 (0.01)	0.04 (0.004)***	0.04 (0.01)***
RM lapse	0.004 (0.01)	0.01 (0.01)	0.03 (0.004)***	0.02 (0.01)**
Relationship types				
Ambivalent	−0.26 (0.05)***	−0.26 (0.05)***	0.04 (0.01)**	0.04 (0.01)**
Neutral	−0.44 (0.06)***	−0.44 (0.06)***	0.10 (0.02)***	0.10 (0.02)***
Unpleasant	−0.52 (0.11)***	−0.52 (0.11)***	0.11 (0.03)**	0.10 (0.03)**
PM lapse × Ambivalent		0.003 (0.02)		−0.01 (0.01)
PM lapse × Neutral		−0.02 (0.03)		−0.01 (0.01)
PM lapse × Unpleasant		0.04 (0.05)		0.01 (0.02)
RM lapse × Ambivalent		−0.02 (0.02)		0.02 (0.01)*
RM lapse × Neutral		0.02 (0.02)		0.02 (0.01)*
RM lapse × Unpleasant		−0.05 (0.04)		0.07 (0.02)***
Age	0.01 (0.002)**	0.01 (0.002)**	−0.001 (0.001)*	−0.001 (0.001)*
Female	0.01 (0.04)	0.01 (0.04)	−0.01 (0.01)	−0.01 (0.01)
Non-Hispanic White	−0.03 (0.05)	−0.03 (0.05)	−0.05 (0.02)**	−0.05 (0.02)**
Married	−0.11 (0.04)*	0.11 (0.04)*	−0.02 (0.01)	−0.02 (0.01)
$30,000 or greater	−0.02 (0.06)	−0.02 (0.06)	−0.06 (0.02)***	−0.06 (0.02)***
Some college or greater	−0.05 (0.05)	−0.05 (0.05)	−0.01 (0.01)	−0.01 (0.01)
Depressed	−0.31 (0.05)***	−0.31 (0.05)***	0.13 (0.02)***	0.13 (0.02)***
Stress exposure	−0.07 (0.01)***	−0.08 (0.01)***	0.10 (0.004)***	0.10 (0.003)***
Intercept	2.91 (0.11)***	2.91 (0.11)***	0.32 (0.04)***	0.32 (0.04)***

Notes: *b* = unstandardized coefficient; PM = prospective memory; RM = retrospective memory; *SE* = standard error. Relationship types = pleasant (ref).
*p < .05. **p < .01. ***p < .001.

example, people's personality characteristics greatly influence subjective memory. A third limitation is related to the frequency of assessment of the daily memory lapses. The design of the daily assessment in NSDE allowed us to capture the relative frequency of memory lapses and provided evidence of the type of these experiences, however, assessing memory lapses at only one time point per day leaves room for reporting errors.

In addition, the measures are based on self-reports, which can introduce bias. For example, women may be more willing than men to admit when they are experiencing strong emotions (Brody & Hall, 2008). Further, the dataset includes a limited number of minority participants (including racial, sexual, and gender minorities), which makes it difficult to capture within-person variability effectively. Expanding the sample to include more individuals from these minority groups would lead to a better understanding of the experiences of those at greatest risk. Finally, because this study is based on intergenerational solidarity theory, emphasizing affectional solidarity as it relates to attachment, we focused on family relationships excluding spouse/partner relationships. Since MIDUS provides data on spouse/partner relationships, future studies could explore family dynamics to gain a more comprehensive understanding.

Conclusion

Despite these limitations, the study results provide valuable information about memory lapses, family relationship types, and the impact of these combined events on affective responsivity. The findings indicate that those in insecure family relationships, specifically ambivalent and neutral relationships, may experience more PM lapses. Such lapses likely have a negative influence on individuals' daily lives given the role of PM in completing everyday tasks. In addition, the findings highlight the need to direct more resources toward supporting family relationships because individuals in insecure family relationships are more vulnerable in their appraisals of memory lapses and experience increased negative daily affective responsivity. Future research should examine other family relationship mechanisms that may increase memory lapses with the goal of generating findings that can be used to support middle-aged and older adults' cognitive functioning.

Supplementary Material

Supplementary data are available at *The Gerontologist* online.

Funding

Conflict of Interest

None.

Data Availability

This study used publicly available data from the Midlife in the US (MIDUS). The MIDUS data are publicly accessible through the MIDUS website at https://www.midus.wisc.edu/data/index.php. No additional data were collected for this study. The analytic code and materials used in this study are not public. The analyses conducted in this study were not pre-registered.

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