**Nostalgia, Ritual Engagement, and Meaning in Life**

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**Abstract**

Rituals are pervasive and beneficial. Little is known, however, about causes or antecedents of ritual engagement. We hypothesized that nostalgia—a sentimental longing for one’s past—promotes ritual engagement, which in turn augments meaning in life. We tested this hypothesis in five methodologically diverse studies. In Study 1 (*N* = 311), nostalgia was positively associated with ritual engagement. In Study 2 (*N* = 188), nostalgia promoted ritual engagement, and, in Study 3 (*N* = 296), it did so over engagement in a neutral task. In Study 4 (*N* = 252), nostalgia predicted later ritual engagement but not vice versa, convergent with Studies 2 and 3. Furthermore, nostalgia prospectively predicted meaning in life through specific ritualistic behaviors during a traditional festival. Finally, in Study 5 (*N* = 166), experimentally manipulated ritual engagement augmented meaning in life. As hypothesized, nostalgia advances ritual engagement, contributing to a meaningful life.

*Keywords:* nostalgia, rituals, meaning in life, emotion, ritual engagement

**Nostalgia, Ritual Engagement, and Meaning in Life**

Rituals are a hallmark of human behavior and help to regulate it. Ritualistic examples include decorating the Christmas tree, exchanging wedding rings, participating in weekly family dinners, and meditating daily. What prompts people to engage in rituals? We hypothesize, and test in five studies, that nostalgia is an antecedent or cause of ritual engagement with downstream consequences for meaning in life.

**Rituals**

We define rituals as non-instrumental symbolic activities aimed at achieving a desired outcome. Let us specify our definition. Rituals are sometimes conceptualized as symbolic activities that include fixed, rigid, and repetitive action sequences lacking a direct or instrumental purpose (Brooks et al., 2016; Hobson et al., 2018). Some studies have indeed operationalized rituals in terms of rigidity and repetitiveness (Lang et al., 2015, 2022). These studies, however, conflate rituals with ritualized (as opposed to ritualistic) behaviors, which refer to action sequences with immutability, standardization, and iteration (Rossano, 2012) commonly observed in obsessive-compulsive disorders (Leonard et al., 1990). Ritualized behaviors do not require symbolic meaning (Rossano, 2012), critical for the understanding of rituals and their benefits (Scott, 2022). As a case in point, action sequences with (vs. without) symbolism improve performance (Brooks, 2016). More generally, an excessive focus on rigidity and repetitiveness might contribute to an overly restrictive definition of rituals, given that they can be symbolic and achieve desired outcomes in the absence of rigidity and repetitiveness (Norton & Gino, 2014). Family rituals, for example, can be highly symbolic but low on rigidity (Hobson et al., 2018).

Rituals benefit individuals and groups. For individuals, rituals help to alleviate grief (Norton & Gino, 2014), relieve anxiety (Brooks et al., 2016), promote self-control (Tian et al., 2018), enhance enjoyment (Sezer et al., 2016; Vohs et al., 2013), and boost wellbeing (Crespo et al., 2011). For groups, rituals help to signal group membership (Liberman et al., 2018) and strengthen group cohesion (Whitehouse & Lanman, 2014; Wlodarczyk et al., 2021). The COVID-19 pandemic underscored the role of rituals in psychological functioning. Lockdowns and social-distancing measures curtailed ritual engagement, given that many rituals entail social contact. Yet, individuals created new rituals suited to their challenging circumstances, such as holding graduation ceremonies via the online video game Minecraft (Imber-Black, 2020) and streaming funerals (Pitsillides & Wallace, 2021), which replenished social connectedness and assisted with navigating life transitions.

Relative to the rich literature on the benefits of rituals, the antecedents or causes of ritual engagement are understudied. What prompts people to enact such consequential behavior? In terms of combating threats and uncertainty, the literature suggests that negative emotions (e.g., anxiety; Brooks et al., 2016; Lang et al., 2015) trigger ritual engagement, which subsequently downregulates these emotions. Viewing rituals from another vantage point, as markers of life events, we propose that nostalgia, a bittersweet yet predominantly positive emotion, also encourages ritual engagement, subsequently leading to enhanced meaning in life.

**Nostalgia and Ritual Engagement**

We define nostalgia as wistful affection or sentimental longing for momentous events, close others, or important objects from one’s past (Batcho, 1995; Wildschut et al., 2006). When nostalgizing, individuals reflect on these key aspects of their past warmly, fondly, and tenderly, while often experiencing yearning for bygone times and a wish to return to them (Sedikides & Wildschut, 2016a; Sedikides et al., 2015). Nostalgia, then, is an ambivalent emotion, albeit more positive than negative, with this positivity offset manifesting in lay views of the emotion (Hepper et al., 2012; Van Tilburg et al., 2019), laboratory experiments (Leunissen, 2023; Leunissen et al., 2021), and daily life (Newman et al., 2020, Study 5, Table 6; Van Dijke et al., 2019, Study 1). Consistent with its predominantly positive character, nostalgia confers a wide array of self-related, social, and existential benefits (Sedikides et al., 2015; Wildschut & Sedikides, 2023). Lastly, the emotion is felt frequently (i.e., several times a week; Hepper et al., 2021; Wildschut et al., 2006) and across ages (Juhl et al., 2020; Turner & Stanley, 2021) or cultures (Hepper et al., in press; Sedikides & Wildschut, 2022).

We propose that nostalgia promotes ritual engagement, driven by the relationship between nostalgia and rituals in terms of content and function. From the perspective of *content*, rituals are a rich source of nostalgic experiences. Nostalgia refers to momentous life events (graduation, anniversary or birthday celebration, birth of a child), intimate others (e.g., partners, friends, colleagues, family), or key objects (e.g., school, family house, childhood toys). These events, persons, and objects are often tied to rituals (e.g., picnics, vacations, Thanksgiving dinners, school assemblies, organizational practices, childhood play days). Hence, chronically or momentarily nostalgic individuals are likely to bring to mind and reflect upon memory content which is, to a considerable degree, ritualistic in character. Additionally, nostalgic reflection, often imbued with sentimental and idealized overtones, may promote preferences for similar content (Shimp, 1981; Youn & Jin, 2017), motivation for similar activities (Sedikides & Wildschut, 2020, 2023), and desire to relive cherished memories (Evans et al., 2021; Hepper et al., 2012). Given that rituals are a rich source of nostalgia and that nostalgia motivates the reenactment of similar experiences, when seeking to recapture nostalgic experiences, people may demonstrate a preference for rituals, exhibit a heightened readiness to partake in them, and engage more frequently in ritualistic activities.

Furthermore, from the perspective of *function*, nostalgia serves as an impetus for one’s future (Sedikides & Wildschut, 2016b, 2020). By bringing to mind nostalgic memories, a person may become increasingly aware of their value (Routledge, 2023; Zauberman et al., 2009) and be more prone to engaging in activities that preserve them. This potential influence of nostalgia aligns with the role of rituals, which mark life events both on an individual and societal level (Kobler et al., 2007; Rook, 1985). For example, travelers send themselves postcards from the city they are visiting to memorialize their trip (individual level), and people set off fireworks to celebrate New Year (societal level). As such, rituals help to engrave meaningful moments on one’s mind rather than let them fade away and be forgotten in time. As mentioned in the novella *The Little Prince* (Saint-Exupéry, 1943), ritual is “what makes one day different from the other days, one hour different from the other hours.” Thus, with the value of nostalgic memories salient, people might be more inclined to ritual engagement to consolidate their meaningful moments, safeguarding them against the inexorable march of time. In conclusion, whether viewed from the perspective of content or function, nostalgia is likely to enhance ritual engagement.

Further, ritual engagement might have implications for meaning in life. Rituals are thought to entail meaning-making potential (Kobler et al., 2007; Michaels, 2021), and people may enact them to enhance meaning in life (Romanoff & Thompson, 2006; Schnell & Pali, 2013). That is, by marking special moments, rituals may accentuate life’ meaningfulness. The scant literature is suggestive of this possibility. Respondents to open-ended questionnaires and semi-structured interviews indicate that religious rituals make life more meaningful (Loewenthal & Dein, 2016), and pilgrims report experiencing higher meaning in life upon their return home (Schnell & Pali, 2013). More the point, engaging in group rituals within one’s organization increases work meaningfulness (Kim et al., 2021).

**Overview**

We hypothesize that nostalgia promotes ritual engagement, which in turn augments meaning in life. We tested this hypothesis in five studies. In Studies 1-3, we addressed the relation between nostalgia and preferences for, or engagement in, rituals. In cross-sectional Study 1, we examined whether nostalgia is positively associated with preferences for, or engagement in, rituals. In experimental Study 2, we tested whether nostalgia directly strengthens preferences for, or engagement in, rituals. In experimental Study 3, we tested whether nostalgia directly promotes actual engagement in a ritual (vs. neutral) task. In Studies 4 and 5, we addressed downstream consequences for meaning in life: In longitudinal Study 4 we examined whether nostalgia-evoked ritual engagement predicts heightened meaning in life, whereas in experimental Study 5 we manipulated ritual engagement and assessed its causal influence on meaning in life. Study 1 included a U.S. sample, whereas the remaining studies included Chinese samples.

**Open Practices Statement**

We have no conflict of interest to disclose. All studies were approved by the Ethics Committee of the corresponding author’s institution and were conducted according to APA ethical standards for participant treatment. We disclose all measures, manipulations, justification of sample size, and exclusions. In all studies, we conducted analyses after completing data collection and followed Journal Article Reporting Standards (Kazak, 2018). We did not preregister the studies. We provide stimulus materials, participant educational status, and ancillary analyses in Online Supplement. We made the data sets and Online Supplement available at <https://osf.io/pxsmc/?view_only=707bbbb00a834af5aea2d25b0613e6da>.

**Study 1**

In cross-sectional Study 1, we examined the association between nostalgia and ritual engagement.

**Method**

***Participants***

Monte Carlo simulations indicate that a sample size approaching 250 stabilizes correlation estimates (Schönbrodt & Perugini, 2013). Given that this was the first study on the topic and hedging against attrition, we conservatively oversampled, recruiting 369 MTurk participants for $0.30 each. We excluded 58 for failing an attention check. The final sample comprised 311 participants (192 men, 119 women; *M*age = 37.91 years, *SD*age = 11.32 years; 71.7% Caucasian, 11.3% African American, 4.5% Hispanic, 7.1% Asian, 3.5% Native American, 1.9% other ethnicities). A sensitivity power analysis indicated that this sample allows the detection of an effect size of *r* = .18 with 90% power (α = .05, two-tailed).

***Materials and Procedure***

**Nostalgia.** We assessed nostalgia with two scales, for convergent validity reasons (Campbell & Fiske, 1959). These were the Southampton Nostalgia Scale (Sedikides et al., 2015; Wildschut & Sedikides, 2022) and the Nostalgia Prototype Scale (Cheung et al., 2017; Kelley et al., 2022).

The Southampton Nostalgia Scale comprises seven items. Three of them refer to whether participants find nostalgia important, valuable, and significant (e.g., “How important is nostalgia for you?”; 1 = *not at all*, 7 = *very much*). The remaining four items refer to the propensity to nostalgize (e.g., How prone are you to feeling nostalgic?”; 1 = *not at all*, 7 = *very much*) or frequency of nostalgizing (e.g., “Generally speaking, how often do you bring to mind nostalgic experiences?”; 1 = *very rarely*, 7 = *very frequently*). We averaged responses to form a nostalgia composite (*M* = 4.85, *SD* = 1.19, α = .92).

The Nostalgia Prototype Scale consists of five items that describe centrally prototypical features of nostalgia (e.g., “I bring to mind rose-tinted memories”); that is, laypersons regard these features as core to the construct “nostalgia” (Hepper et al., 2012, 2014). Participants rated both the frequency of involvement in each feature (1 = *I do this very rarely*, 7 = *I do this very often*) and the personal importance of doing so (1 = *this is not important for me*, 7 = *this is very important for me*). We averaged the 10 responses (5 nostalgia features × 2 ratings) to form a nostalgia index (*M* = 4.98, *SD* = 1.11, α = .93). The two scales were positively correlated, demonstrating convergent validity, *r*(311) = .77, *p* < .001 (see also Wildschut et al., 2023).

**Ritual Engagement.** We assessed ritual engagement with a 14-item scale that we constructed on the basis of the Family Ritual Questionnaire (Fiese & Kline, 1993). Our scale comprised seven situations: dinner time, weekend, vacation, religious holidays, annual celebrations, cultural and ethnic traditions, and special celebrations. For each situation, two items captured ritual engagement. Taking birthdays as an example, the two items were “Birthdays are important milestones to be celebrated in special ways for me; every friend is expected to be there for the celebration” and “I have my own special rituals to celebrate my birthday” (1 = *not at all like me*, 5 = *very much like me*). We averaged responses to form a ritual engagement index (*M* = 3.25, *SD* = 0.88, α = .94).

**Results and Discussion**

As hypothesized, nostalgia was positively associated with ritual engagement: for the Southampton Nostalgia Scale, *r*(311) = .57, 95% CI = [0.49, 0.64], *p* < .001; for the Nostalgia Prototype Scale, *r*(311) = .68, 95% CI = [0.61, 0.73], *p* < .001.[[1]](#footnote-1) The sizeable correlations set the stage for examining the causal relation between the two variables.

**Study 2**

In Study 2, we addressed causality. We experimentally induced nostalgia and assessed ritual engagement in daily contexts.

**Method**

***Participants***

According to a power analysis in G\*Power (Faul et al., 2007), we needed 172 participants to detect a medium effect size (*d* = 0.5) with a power of .90 (two-tailed α = .05).We recruited 190 participants via the online platform Credamo, remunerating them with 1 CNY ($0.15), and excluded two participants for failing the attention check. The final sample comprised 188 participants (123 women, 65 men; *M*age = 30.11 years, *SD*age = 6.09 years), whom we randomly assigned to the nostalgia (*n* = 94) or control (*n* = 94) condition. According to a sensitivity power analysis, this sample size allows detecting an effect size of *d* = 0.48 with 90% power (α = .05, two-tailed).

***Materials and Procedure***

**Nostalgia Manipulation.** We manipulated nostalgia with a slightly modified version of the Event Reflection Task (ERT; Sedikides et al., 2015). The standard ERT asks participants in the control condition to reflect on an ordinary event. Here, we asked them to reflect on an ordinary event from their past Wednesdays. We used a specific yet recurring time and weekday in an effort to prompt recall of regular, repetitive experiences. We instructed participants in the nostalgia condition to reflect on a nostalgic event from their lives, as per the standard ERT. Next, all participants listed four keywords summarizing the event and described it in writing for five minutes.

**Ritual Engagement**. We constructed two measures (presented in a fixed random order) to capture preferences for, and engagement in, daily rituals. The first measure consisted of two consumption-choice scenarios (displayed in a fixed random order). Each scenario described a consumption situation, and participants rated their preferences for a ritualistic versus non-ritualistic option. For example, in one scenario the protagonist, Wong, travelling to a certain province, faced the dilemma of purchasing a heavy drum that reflected local culture either on the spot (ritualistic purchase) or online. We assumed that purchasing the drum in its traditional place of origin (vs. online) would imbue it with symbolic value, rendering this option more ritualistic. Participants indicated their preferences (1 = *locally*, 9 = *online*). After reverse-scoring, we averaged responses to the two scenarios to form a preference index (*M* = 5.20, *SD* = 2.60; *r*[188] = .60, *p* < .001). Higher scores reflected stronger preferences for the ritualistic option.

The second measure pertained to seven daily rituals that had symbolic value but no direct instrumental purpose (e.g., “While traveling, send yourself a postcard from the local post office”). We presented the rituals in a different random order for each participant. Participants indicate the likelihood of enacting them (1 = *very unlikely to do*, 9 = *very likely to do*). We averaged responses to form an index of preferences for daily ritual enactment (*M* = 6.86, *SD* = 1.15, α = .78). Higher scores reflected stronger likelihood to enact the daily rituals.

In a validational exercise, we tested whether the ritualistic options were perceived as such (Online Supplement). Participants (*N* = 78; 50 women, 28 men; *M*age = 29.68 years, *SD*age = 7.93 years), recruited from Credamo, viewed our working definition of rituals and two examples: “Ritual is non-instrumental behavior with symbolic meaning. For example, eating mooncakes in the Mid-Autumn festival symbolizes family reunion, and exchanging wedding rings symbolizes commitment to marriage.” Then, they rated (1 = *strongly disagree*, 9 = *strongly agree*) nine ritualistic options (two from the consumption-choice scenarios, seven from the daily ritual), two non-ritualistic options (two from the consumption-choice scenarios), and two control items (generated for the purpose of the validation exercise). First, we compared participants’ responses against the scale midpoint (= 5). They perceived the two ritualistic options as ritual (i.e., significantly above the midpoint; *M* = 6.61, *SD* = 2.03, *t*[77] = 7.02, *p* < .001, *d*= 0.79, 95% CI = [0.57, 1.02]), and the two non-ritualistic options as non-ritual (i.e., significantly below the midpoint; *M* = 4.01, *SD* = 1.98, *t*[77] = −4.40, *p* < .001, *d*= −0.50, 95% CI = [−0.72, −0.27]). Similarly, they perceived the seven daily rituals as ritual (*M* = 6.78, *SD* = 1.28, *t*[77] = 12.27, *p* < .001, *d*= 1.39, 95% CI = [1.16, 1.61]), and the two control activities as non-ritual (*M* = 4.13, *SD* = 2.65, *t*[77] = −2.91, *p* = .005, *d*= −0.33, 95% CI = [−0.56, −0.10]).

**Nostalgia Manipulation Check.** At the end of the study session, participants completed a 3-item nostalgia manipulation check (e.g., “Right now, I am feeling quite nostalgic”; 1 = *strongly disagree*, 7 = *strongly agree*; Hepper et al., 2012; Wildschut et al., 2006). We averaged responses to create an index (*M* = 5.81, *SD* = 1.05, α = .90).

**Results and Discussion**

Participants in the nostalgia condition (*M* = 6.26, *SD* = 0.57) felt more nostalgic than controls (*M* = 5.35, *SD* = 1.22), *t*(131.47) = 6.54, *p* < .001, *d*= 0.95, 95% CI = [0.67, 1.24]. The manipulation was effective. Further, nostalgic participants (*M* = 5.60, *SD* = 2.71) expressed a stronger preference for the ritualistic consumption options than controls (*M* = 4.80, *SD* = 2.44), *t*(186) = 2.12, *p* = .035, *d* = 0.31, 95% CI = [0.02, 0.60]. Likewise, nostalgic participants (*M* = 7.19, *SD* = 0.92) conveyed a stronger likelihood to enact the daily rituals than controls (*M* = 6.53, *SD* = 1.27), *t*(170.27) = 4.02, *p* < .001, *d* = 0.59, 95% CI = [0.30, 0.87].[[2]](#footnote-2) Nostalgia promoted ritual engagement.[[3]](#footnote-3)

**Study 3**

In experimental Study 3, we directly assessed the impact of nostalgia on actual ritual engagement in daily activities. Following a nostalgia manipulation, participants chose between completing a ritualistic and neutral task.

**Method**

***Participants***

According to a power analysis through the *pwr* package (version 1.3-0; Champely et al., 2020) in R software (version 4.2.1), we needed at least 263 participants to detect a small to medium effect (Cohen’s ω = 0.2) with a power of .90 for a chi-squared test with a 2 × 2 contingency table.We recruited 300 participants via Credamo (for 2 CNY or $0.30), but excluded four for failing the attention check. The final sample comprised 296 participants (210 women, 86 men; *M*age = 28.13 years, *SD*age = 7.23 years), whom we randomly assigned to the nostalgia (*n* = 147) or control (*n* = 149) condition. A sensitivity power analysis suggested that this sample size would allow for the detection of an effect size of Cohen’s ω = 0.19 with 90% power (α = .05).

***Materials and Procedure***

**Nostalgia Manipulation and Manipulation Check.** We manipulated nostalgia and administered a manipulation check (*M* = 5.45, *SD* = 1.43, α = .94), as in Study 2.

**Ritual Engagement and Manipulation Check**. We instructed participants to choose one of two tasks to complete in the next few minutes. One was ritualistic, the other neutral. The ritualistic task involved writing a few words in their phone’s memo as a farewell to the day, symbolizing a sense of closure. The neutral task involved checking the day’s weather on one’s mobile browser. Next, participants took a screenshot of their memo (for the ritualistic task) or mobile browser (for the neutral task), and uploaded it to the questionnaire to confirm adherence to instructions (all adhered). The ritual engagement manipulation check followed. Participants viewed our working definition of rituals and two examples (same as Study 2’s validation exercise), and then proceeded to rate the extent to which they considered each task as ritual (1 = *strongly disagree*, 9 = *strongly agree*).

**Results and Discussion**

The nostalgia manipulation was successful. Participants in the nostalgia condition (*M* = 6.24, *SD* = 0.56) felt more nostalgic than those in the control condition (*M* = 4.67, *SD* = 1.60), *t*(184.88) = 11.28, *p* < .001, *d*= 1.31, 95% CI = [1.08, 1.54]. The ritual engagement manipulation was also successful. Participants considered the ritualistic task (*M* = 5.76, *SD* = 1.16) as ritual (i.e., higher than the scale midpoint of 5; *t*[295] = 11.26, *p* < .001, *d*= 0.65, 95% CI = [0.54, 0.77]), but considered the neutral task (*M* = 3.73, *SD* = 1.72) as non-ritual (i.e., lower than the scale midpoint; *t*[295] = −12.66, *p* < .001, *d*= −0.74, 95% CI = [−0.85, −0.62]).

As hypothesized, nostalgic participants were more likely than control participants to select the ritualistic (than neutral) task. Specifically, 38% of nostalgic participants selected the ritualistic task (56:147), whereas only 21% of control participants selected this task (31:149), 𝜒2(1) = 10.66, *p* = .001, φ = .19. Nostalgia promotes behavioral engagement in rituals.

**Study 4**

In Study 4, we turned to cultural rituals, assessing ritual engagement in a naturalistic setting, the Chinese Spring Festival. We had three objectives. First, we implemented a two-wave cross-lagged design, which enabled us to test the temporal order of nostalgia and ritual engagement. Second, for generalizability purposes, we examined the prospective relation of nostalgia not only with ritual engagement intentions, but also with ritual engagement—both perceived and reported (i.e., self-reported attendance of the Spring Festival). Third, we began testing the relation of nostalgia-related ritual engagement with meaning in life, anticipating that nostalgia would predict greater meaning in life via ritual engagement.

**Method**

***Participants***

We aimed for a minimum *N* = 250, but, hedging against attrition, we recruited 350 participants through Credamo. They completed the first part of the study 10 days before the Spring Festival (Time 1 or T1). They completed the second part of the study two weeks later, on the fifth day of the festival (T2). In all, 285 participants filled out questionnaires at both time points, for 1 CNY ($0.15) at each time point. We excluded 13 for reporting a different gender between time points, 17 for reporting inconsistent age between time points (inconsistent gender and age reporting might suggest that the two waves were not completed by the same participant),[[4]](#footnote-4) and 3 for failing an attention check. The final sample comprised 252 participants (166 women, 86 men; *M*age = 30.56 years, *SD*age = 6.78 years). As per a sensitivity power analysis, this sample allows detection of an effect size of *r* = .20 with 90% power (α = .05, two-tailed).

***Materials and Procedure***

At T1, we assessed nostalgia, ritual engagement intentions, and meaning in life. At T2, we assessed nostalgia, ritual engagement intentions, ritual engagement, and meaning in life (Table 1).

**Nostalgia.** Given that the two nostalgia scales (SNS and NPS) yielded similar results in Study 1, we assessed nostalgia with the SNS only. We averaged responses to form indices at both time points (T1: *M* = 5.13, *SD* = 0.98, α = .91; T2: *M* = 5.17, *SD* = 0.88, α = .88).

**Ritual Engagement Intentions.** We assessed this construct with four items that we constructed: “I am willing to participate in rituals during traditional festivals,” “I will try my best to participate in rituals during traditional festivals,” “Engaging in rituals during traditional festivals is important for me,” “I feel motivated to engage in rituals during traditional festivals” (1 = *strongly disagree*, 9 = *strongly agree*). We averaged responses (T1: *M* = 7.52, *SD* = 1.11, α = .88; T2: *M* = 7.53, *SD* = 1.06, α = .88).

**Ritual Engagement.** We operationalized this construct as perceived ritual engagement and reported ritual engagement during the Spring Festival. We created corresponding measures. Specifically, we assessed *perceived ritual engagement* with two items (e.g., “How often did you engage in rituals during the Spring Festival”; 1 = very *rarely*, 7 = *very frequently*). We averaged responses (*M* = 5.72, *SD* = 0.95; *r*[252] = .64). To assess *reported ritual engagement*, we listed 16 common rituals during the Spring Festival (e.g., pasting couplets) and asked participants to identify the rituals in which they had participated. We computed the total number of such rituals (*M* = 9.91, *SD* = 3.16).

**Meaning in Life.** We assessed meaning in life with the 4-item Meaning in Life subscale of the Nostalgia Functions Scale (Hepper et al., 2012; e.g., “I feel life is meaningful”; 1 = *strongly disagree*, 6 = *strongly agree*). We averaged responses to form a meaning in life index (T1: *M* = 5.20, *SD* = 0.52, α = .64; T2: *M* = 5.21, *SD* = 0.52, α = .63).

**Results and Discussion**

***Nostalgia and Ritual Engagement Intentions***

As hypothesized, nostalgia at T1 was positively related to ritual engagement intentions at T1, *r*(252) = .57, 95% CI = [0.48, 0.65], *p* < .001. Nostalgia at T2 was also positively related to ritual engagement intentions at T2, *r*(252) = .61, 95% CI = [0.53, 0.69], *p* < .001 (Table 1).

Next, we conducted a cross-lagged analysis with lavaan in R (Rosseel, 2012), examining the prospective effect of nostalgia on ritual engagement intentions. We entered T1 and T2 nostalgia and ritual engagement intentions into the cross-lagged model, and regressed each of the T2 measures on T1 nostalgia and ritual engagement intentions.[[5]](#footnote-5) We also incorporated cross-sectional correlations in the model (Figure 1). Given that the model was saturated (i.e., degrees of freedom equaled zero), we do not report standard fit indices used in structural equation modeling. The autoregressions were significant for both nostalgia (*b* = 0.67, *SE* = 0.07, *b\** = 0.74, *p* < .001, 95% CI = [0.54, 0.80]) and ritual engagement intentions (*b* = 0.52, *SE* = 0.09, *b\** = 0.55, *p* < .001, 95% CI = [0.34, 0.71]). Additionally, T1 nostalgia had a lagged effect on T2 ritual engagement intentions, *b* = 0.21 *SE* = 0.08, *b\** = 0.19, *p* = .009, 95% CI = [0.05, 0.37], whereas T1 ritual engagement intentions did not have a lagged effect on T2 nostalgia, *b* = 0.08, *SE* = 0.05, *b\** = 0.10, *p* = .121, 95% CI = [−0.02, 0.19]. Thus, by controlling for autoregressive effects and cross-sectional correlations, the results of the cross-lagged analysis showed that nostalgia prospectively predicted ritual engagement intentions, but not vice-versa.

***Nostalgia and Ritual Engagement***

As hypothesized, nostalgia at T1 prospectively predicted ritual engagement during the Spring Festival at T2: for perceived ritual engagement, *b* = 0.46, *SE* = 0.05, *t* = 8.41, *p* < .001; for reported ritual engagement, *b* = 0.79, *SE* = 0.20, *t* = 3.96, *p* < .001.

***Nostalgia, Perceived and Reported Engagement, and Meaning in Life***

We next examined downstream consequences of nostalgia-related perceived and reported ritual engagement on meaning in life. Nostalgia at T1 was positively associated with meaning in life at T2, *r*(250) = .37, 95% CI = [0.26, 0.47], *p* < .001. In addition, both perceived (*r*[250] = .51, 95% CI = [0.41, 0.59], *p* < .001) and reported (*r*[250] = .32, 95% CI = [0.21, 0.43], *p* < .001) ritual engagement were positively associated with meaning in life. We thus proceeded to test whether ritual engagement mediated the relation between nostalgia and meaning in life.

We focused first on *perceived ritual engagement.*[[6]](#footnote-6) We entered T1 nostalgia as independent variable, T2 perceived ritual engagement as mediator, T2 meaning in life as dependent variable, and T1 meaning in life as covariate (PROCESS Model 4,5000 iterations; Hayes, 2017; Figure 2). The direct effect was not significant, *b* = 0.02, *SE* = 0.03, 95% CI = [–0.04, 0.07]. The indirect effect was significant, *b* = 0.06, *SE* = 0.02, 95% CI = [0.02, 0.11]. Perceived ritual engagement mediated the relation between nostalgia and meaning in life. (We found no support for the reverse mediation model; Online Supplement.)

We then turned to *reported ritual engagement*. We entered T1 nostalgia as independent variable, T2 reported ritual engagement as mediator, T2 meaning in life as dependent variable, and T1 meaning in life as covariate (Figure 3). The direct effect was significant, *b* = 0.07, *SE* = 0.03, 95% CI = [0.01, 0.12]. The indirect effect was also significant, *b* = 0.01, *SE* = 0.01, 95% CI = [0.001, 0.03]. Reported ritual engagement mediated the link between nostalgia and meaning in life. (We obtained no support for the reverse mediation model; Online Supplement.)

***Summary***

Nostalgia prospectively predicted ritual engagement intentions (but not vice versa), providing further support for the direction from nostalgia to ritual engagement. Importantly, nostalgia prospectively predicted specific (both perceived and reported) ritual engagement during the Spring Festival, which in turn predicted meaning in life, supporting the hypothesized downstream consequence on meaning in life.

**Study 5**

In Study 4, ritual engagement mediated the positive association between nostalgia and meaning in life. Following an experimental causal chain approach (Spencer et al., 2005), our next step was to manipulate the mediator (e.g., ritual engagement) and assess its impact on meaning in life. We did so in Study 5.

**Method**

***Participants***

Given that rituals had a medium-to-large effect in previous experiments (Brooks et al., 2016; Vohs et al., 2013), we sought to detect a medium-to-large effect of *d* = 0.55 with 90% power at an .05 two-tailed alpha level.A power analysis (G\*Power v 3.1; Faul et al., 2007) suggested a minimum sample size of 142. We recruited 170 participants via Credamo reimbursing them with 1 CNY ($0.30). We excluded four for failing the attention check. The final sample comprised 166 participants (98 women, 68 men; *M*age = 29.37 years, *SD*age = 8.43 years, 1 undisclosed), whom we randomly assigned to the ritual engagement (*n* = 84) or control (*n* = 82) condition. According to sensitivity power analysis, this sample allows for detection of an effect size of *d* = 0.51 with 90% power (α = .05, two-tailed).

***Materials and Procedure***

**Ritual Engagement Manipulation.** We manipulated ritual engagement in the context of the Chinese National Day Holiday, which commemorates the country’s establishment. The holiday is celebrated from October 1–7. We focused on the first day of the holiday, known as the National Day.

To arrive at the manipulation, we ran a focus group (*N* = 25 university students; 15 women, 10 men; *M*age = 24.28 years, *SD*ag*e* = 3.67 years), which mirrored Credamo’s demographic characteristics in terms of ethnicity distribution, gender distribution, age, and educational background. The interviewees indicated that their rituals included writing a few words at the beginning of a new month, symbolizing a fresh start. These words were wishes, resolutions, and goals for the new month, as well as a goodbye to the old month. We proceeded to design our manipulation.

We carried out the experiment on October 1st, 2022. For participants in the ritual engagement condition, we framed the National Day as the first day of a new month and the first day of the last quarter of the year, thus ascribing it the symbolism of *a new beginning*. We instructed participants in this condition to write a paragraph that would signal the opening of the new month. For participants in the control condition, we framed the National Day in such a way as to cue rest and relaxation, thus weakening its symbolism. We instructed participants in this condition to write a paragraph describing the first day of their holiday. Then, to validate the manipulation, we defined rituals giving an example (as before) and asked participants: “To what extent do you regard your writing task as a ritual?” (1 = *not at all*, 9 = *very much*; *M* = 6.58, *SD* = 1.96).

**Meaning in Life.** We assessed meaning in life in two ways. First, we used the 4-item Meaning in Life subscale of the Nostalgia Functions Scale (Hepper et al., 2012), as in Study 4 (1 = *strongly disagree*, 9 = *strongly agree*; *M* = 7.21, *SD* = 1.26, α = .85). Second, for generalizability, we implemented the 5-item Presence of Meaning subscale of the Meaning in Life Questionnaire (Steger et al., 2006; e.g., “I understand my life’s meaning”; 1 = *strongly disagree*, 9 = *strongly agree*; *M* = 7.03, *SD* = 1.46, α = .90).

**Results and Discussion**

As intended, participants in the ritual engagement condition (*M* = 6.96, *SD* = 1.74) were more likely to consider their writing task as a ritual than those in the control condition (*M* = 6.20, *SD* = 2.10), *t*(157.07) = 2.57, *p* = .011, *d*= 0.40, 95% CI = [0.09, 0.71]. The manipulation was effective.

We focused first on the Meaning in Life subscale of the Nostalgia Functions Scale. Participants in the ritual engagement condition (*M* = 7.49, *SD* = 1.01) reported more meaning in life than controls (*M* = 6.92, *SD* = 1.42), *t*(145.58) = 2.93, *p* = .004, *d* = 0.46, 95% CI = [0.15, 0.76]. The essays of participants in the ritual engagement condition (*M* = 25.01 words, *SD* = 14.21 words) were shorter than those of controls (*M* = 33.23 words, *SD* = 18.70 words), *t*(151.19) = –3.18, *p* = .002, *d* = –0.50, 95% CI = [−0.80, −0.19]. However, controlling for number of words in an ANCOVA, participants in the ritual engagement condition still reported higher meaning in life than controls, *F*(1, 163) = 10.30, *p* = .002, η²*p* = .059, 90% CI = [0.01, 0.13].

We obtained similar results for the Presence of Meaning subscale of the Meaning in Life Questionnaire. Participants in the ritual engagement condition (*M* = 7.29, *SD* = 1.17) reported higher meaning in life relative to those in the control condition (*M* = 6.76, *SD* = 1.66), *t*(145.22) = 2.33, *p* = .021, *d* = 0.36, 95% CI = [0.06, 0.67]. Controlling for number of words in an ANCOVA, ritual engagement participants still reported higher meaning in life than their control counterparts, *F*(1, 163) = 7.59, *p* = .007, η²*p* = .045, 90% CI = [0.01, 0.11]. (Controlling for writing duration did not change the results; Online Supplement.)

**General Discussion**

Rituals help to apply self-regulatory efforts, enhance enjoyment, strengthen relationships, boost group cohesion, and downregulate negative emotions (Brooks et al., 2016; Norton & Gino, 2014; Sezer et al., 2016; Sohi et al., 2017; Tian et al., 2018; Vohs et al., 2013; Watson-Jones & Legare, 2016). But what precipitates or causes ritual engagement and to what effect? Viewing rituals as markers of life events, we hypothesized that nostalgia promotes ritual engagement, which in turn augments meaning in life.

**Summary of Findings**

We tested and supported this hypothesis in five methodologically diverse studies. In Study 1, the more chronically nostalgic participants were, the more willing they were to prefer, or engage in, rituals. In Study 2, nostalgia directly increased preference for, or engagement in, rituals. In Study 3, nostalgia galvanized the choice to engage in a ritual as opposed to a control activity. In Study 4, nostalgia at an earlier time point predicted both perceived and reported ritual engagement at a later time point, which in turn predicted meaning in life. Finally, in Study 5, ritual engagement directly augmented meaning in life, providing causal evidence for the downstream effect.

We also strengthened the generalizability of our findings. We assessed nostalgia and meaning in several ways. We used a broad definition of rituals, assessing a wide spectrum of them—from daily to cultural. We measured and manipulated nostalgia and ritual engagement. Lastly, we showed that the findings are generally applicable to Chinese and U.S. cultures.

**Implications**

Our findings have theoretical implications. To begin, they broaden the scope of the rituals literature by viewing it from the perspective of event markers. Rituals, besides their prominent roles in emotion regulation (Brooks et al., 2016; Norton & Gino, 2014) and social bonding strengthening (Sohi et al., 2017), are pivotal in imbuing meaning in life and protecting prized memories. Societally, traditional rituals serve as pillars of cultural heritage, transmitted intergenerationally, thereby fortifying collective historical consciousness through the commemoration of foundational myths and historical events. Individually, rituals underscore important life transitions, giving substance to intangible concepts of personal progress, love, and accomplishment through tangible celebrations such as weddings or graduations. The symbolic power of these rituals imbues ordinary occurrences with gravitas, accentuating the relevance of certain events and thereby safeguarding specific memories from the attrition typically wrought by time. Viewed through this lens, our research places nostalgia as a key antecedent to ritual engagement, enhancing comprehension of nostalgia-induced memory preservation behaviors and enriching understanding of the motivational dynamics that propel individuals toward ritualistic practices.

Our research also offers a deeper recognition of the dynamic role of nostalgia in boosting meaning in life. The literature indicates that nostalgia is instrumental in promoting meaning in life (Abeyta & Pillarisetty, 2023; Sedikides & Wildschut, 2018, Van Tilburg et al., 2018). However, this literature has predominantly focused on the direct effect of nostalgia on meaning in life, that is, elevating meaning through the process of nostalgizing itself (e.g., reflecting on nostalgic events, listening to nostalgic music). In contrast, we demonstrated that nostalgia also indirectly bolsters meaning in life by promoting meaning-making behaviors, notably rituals. The findings are in accord with characterizing nostalgia as a future-oriented emotion. By nostalgizing, individuals do not merely limit themselves to their past, but are also encouraged to undertake actions fostering a meaningful future (FioRito & Routledge, 2020; Sedikides & Wildschut, 2023).

In addition, the findings are generative. First, nostalgia-related or nostalgia-induced ritual engagement might have other downstream consequences besides meaning in life. One promising candidate is global self-continuity, defined as a sense of connection among one’s past, present, and future selves (Hong et al., 2021; Sedikides et al., 2023). Many rituals (e.g., Christmas tree decorations, Thanksgiving dinners) are repeated throughout one’s life, and, in this way, nostalgizing about them might strengthen the interconnection of past, present, and future selves, fostering global self-continuity. Second, the findings point to the potential of anticipated nostalgia as a promoter of ritual. Anticipated nostalgia refers to looking forward to looking back (Cheung, 2023). It increases savoring of an event, thus prolonging its psychological benefits (Bryant & Veroff, 2007; Cheung et al., 2020). Anticipated nostalgia about an ongoing meaningful life event might increase eagerness to preserve memories of it, intensifying ritual engagement. Third, nostalgia can occur not only at the personal level, but also at a collective level (Wildschut et al., 2014; Wohl et al., 2023). The latter form of nostalgia refers to sentimental remembrances of a group’s past. Collective nostalgia might conduce to, or trigger, group-level rituals (e.g., annual vacations organized by a group of friends), imbuing the group life with meaning. These issues could be addressed in follow-up investigations.

**Limitations**

We found that nostalgia promotes ritual engagement. However, the reverse direction is also possible; that is, ritual engagement might promote nostalgia. Many rituals are aimed at enshrining pivotal moments (e.g., birth or death anniversaries). Thus, engaging in such rituals might remind ritual performers of those moments, engendering nostalgia. Also, many rituals have a repetitive character. When enacting them, the same actions or environmental cues might remind one of prior enactments, kindling nostalgia. For example, when singing birthday songs and blowing out birthday candles, one might recall their last birthday and feel nostalgic. Follow-up research could examine whether rituals or ritual engagement conduces to or increases nostalgia.

At issue is also whether the observed effects of nostalgia were specific to ritual engagement or extended to activities that provide people with a sense of continuity, given that some rituals overlap with such activities. We used one-time rituals that do not inherently confer more continuity than non-ritualistic counterparts. For instance, in Study 2, both the ritualistic consumption choice (purchasing locally and carrying the drum home) and the control choice (online purchase with home delivery) could yield a keepsake for the protagonist, negating a stronger sense of continuity in one scenario over another. Similarly, Study 3's ritual of penning a brief farewell to the day does not inherently foster a sense of continuity. This act serves as a transitional marker, delineating the end of one day and the start of another, suggesting separation rather than connection. Thus, we maintain that our findings specifically underscore nostalgia's link to ritual engagement, not merely to activities promoting continuity. Future research could include a relevant control option (i.e., non-ritual activities that provide sense of continuity) to further address this issue.

We tested the directional relation from nostalgia to ritual engagement and in turn to meaning in life via a two-wave cross-lagged design and a causal chain approach. Future studies could assess nostalgia, ritual engagement, and meaning in life at three or more time points, facilitating a more precise understanding of the lagged interplay among these variables. Also, we tested Chinese participants in four of our studies, and U.S. participants in one. Follow-up investigations would need to redress the imbalance in participant ethnicity, while sampling from an array of cultures. Moreover, future work may expand the current research’s methodological repertoire (e.g., by using ecological momentary assessments) and enlarge the scope of rituals being tested. Finally, in our research, the contexts of rituals were predominantly positive (e.g., traveling, festivals). Future work could explore a wider variety of rituals, including those in somber settings like funerals or disaster memorials, to fully grasp nostalgia's influence across various emotional landscapes.

**Concluding Remarks**

In acknowledging the importance and prevalence of rituals, we asked what precipitates them and to what effect. Five studies identified nostalgia as one source, and pointed to increases in meaning in life as a consequence. The emotion of nostalgia guides ritualistic preferences and behavior with beneficial implications for meaning in life.

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**Table 1**

*Descriptive Statistics and Correlations in Study 4*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. Nostalgia T1 | 5.13 | 0.98 | — |  |  |  |  |  |  |
| 2. Nostalgia T2 | 5.17 | 0.88 | .80 | — |  |  |  |  |  |
| 3. Ritual engagement intentions T1 | 7.52 | 1.11 | .57 | .52 |  |  |  |  |  |
| 4. Ritual engagement intentions T2 | 7.53 | 1.06 | .51 | .61 | .66 |  |  |  |  |
| 5. Perceived ritual engagement T2 | 5.72 | 0.95 | .47 | .59 | .51 | .70 |  |  |  |
| 6. Reported ritual engagement T2 | 9.91 | 3.16 | .24 | .28 | .31 | .40 | .48 |  |  |
| 7. Meaning in Life T1 | 5.20 | 0.52 | .36 | .33 | .50 | .44 | .36 | .28 |  |
| 8. Meaning in Life T2 | 5.21 | 0.52 | .37 | .44 | .47 | .62 | .51 | .32 | .68 |

*Note*: For all correlations, *p* < .001.

**Figure 1**

*Cross-Lagged Model in Study 4*

**

*Note*: Unstandardized coefficients and standard errors (in parentheses) are reported.

\*\**p* < .01. \*\*\**p* < .001.

**Figure 2**

*Perceived Ritual Engagement at T2 Mediates the Association Between Nostalgia at T1 and Meaning in Life at T2 in Study 4*



*Note*. Unstandardized coefficient and (SE) are displayed. \*\**p* < .01. \*\*\**p* < .001. Covariate paths are indicated with a dashed line.

**Figure 3**

*Reported Ritual Engagement at T2 Mediates the Association Between Nostalgia at T1 and Meaning in Life at T2 in Study 4*

 

*Note*. Unstandardized coefficient and (SE) are displayed. \**p* < .05. \*\**p* < .01. Covariate paths are indicated with a dashed line.

**ONLINE SUPPLEMENT**

**Nostalgia, Ritual Engagement, and Meaning in Life**

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# Stimulus Materials

## Study 1

### Nostalgia Measures

***Southampton Nostalgia Scale***

According to the Oxford Dictionary, ‘nostalgia’ is defined as a ‘sentimental longing for the past.’

-How valuable is nostalgia for you? (1 = *not at all*, 7 = *very much*)

-How important is it for you to bring to mind nostalgic experiences? (1 = *not at all*, 7 = *very much*)

-How significant is it for you to feel nostalgic? (1 = *not at all*, 7 = *very much*)

-How prone are you to feeling nostalgic? (1 = *not at all*, 7 = *very much*)

-How often do you experience nostalgia? (1= *very rarely*, 7 = *very frequently*)

-Generally speaking, how often do you bring to mind nostalgic experiences? (1 = *very rarely*, 7 = *very frequently*)

-Specifically, how often do you bring to mind nostalgic experiences? (Please check one.) [Should be reversely coded]

1 = *At least once a day*

2 = *Three to four times a week*

3 = *Approximately twice a week*

4 = *Approximately once a week*

5 = *Once or twice a month*

*6 = Once every couple of months*

7 = *Once or twice a year*

***Nostalgia Prototype Scale***

For each statement below, choose the option that best describes you.

1 = *I do this rarely*, 7 = *I do this very often*

1 = *this is not important to me*, 7 = *this is very important to me*

(Participants rated each of the five statements on both response scales.)

-I bring to mind rose-tinted memories.

-I reflect on keepsakes.

-I long for a time or place from my past.

-I remember shared experiences with my family and friends.

-I remember my childhood.

### Ritual Engagement

Please respond to the following statements as truthfully and accurately as you can. These are subjective questions, and that there are no right or wrong answers.

(1 = *not at all like me*, 5 = *very much like me*)

-Dinner time plays an important role in my family.

-I have my own special ritual at dinner.

-I have special group activities on weekends.

-There are standard meaningful events I have to do on my own on my weekends

-I spend every summer vacation doing collective activities with special meaning and significance.

-I have my own special ritual on summer vacation.

-Christmas has special meaning for my family.

-Christmas is a time of events that have significant personal meaning for myself.

-Birthdays are important milestones to be celebrated in special ways for me; Every friend is expected to be there for the celebration.

-I have my own special rituals to celebrate my birthday.

-Special celebrations in traditional festivals is of great significance for my group.

-There are regular events in traditional festivals which have special meaning for me

-Weddings are of great significance for my group.

-Weddings are times of rituals that have significant personal meaning for myself.

**Attention Check**

Please choose No. 2.

### Demographic Information

What is your age?

What is your gender? 1 = male, 2 = female

What is your race?

1 = White/Caucasian

2 = African American

3 = Hispanic

4 = Asian

5 = Native American

6 = Pacific Islander

7 = Other

What is the highest level of education you have completed?

1 = Less than High School

2 = High School/GED

3 = Some College

4 = 2-year College Degree

5 = 4-year College Degree

6 = Master Degree

7 = Doctoral Degree

8 = Professional Degree (JD, MD)

## Study 2

### Nostalgia Manipulation

***Nostalgia Condition***

According to the Oxford Dictionary, “nostalgia” is defined as a “sentimental longing for the past.”

Please recall a nostalgic event in your life. Specifically, try to think of a past event that makes you feel most nostalgic. Immerse yourself in the nostalgic experience. How does it make you feel? Please spend a couple of minutes thinking about how it makes you feel. Please write down four keywords relevant to this nostalgic event (i.e., words that describe the experience).

 Using the space provided below, for the next five minutes, we would like you to write about the nostalgic event. Immerse yourself in this nostalgic experience. Describe the experience and how it makes you feel.

***Control Condition***

Please recall an ordinary event that happened in the past Wednesdays. Immerse yourself in the experience. How does it make you feel? Please spend a couple of minutes thinking about how it makes you feel. Please write down four keywords relevant to this ordinary event (i.e., words that describe the experience).

 Using the space provided below, for the next five minutes, we would like you to write about the ordinary event. Immerse yourself in this ordinary experience. Describe the experience and how it makes you feel.

### Ritual Engagement

***Consumption Choice Scenarios***

The following are daily choices. Please answer them according to how you feel right now.

 In a visit to Yunnan Province, Wong wanted to buy a drum that reflected faithfully the culture of that province. However, the drum was too heavy. If Wong bought it locally, it would be inconvenient to carry it all the way home. At this time, Wong noticed that a similar drum could be purchased online and mailed home directly. If you were Wong, where would you prefer to buy the drum -- locally or online? (1 = *locally*, 9 = *online*). [Should be reversely coded]

 Lee is traveling in Suzhou, China. In the store of the local museum, he/she found a type of incense, which was made using Suzhou’s traditional craftsmanship. Lee liked it a lot. However, the incense was easy to break. If Lee bought it locally, Lee would have to be very careful carrying it back home. At this time, Lee noticed that a similar incense could be purchased online and mailed home directly. If you were Lee, where would you prefer to buy the incense at the local museum or online? (1 = *at the* *local museum*, 9 = *online*). [Should be reversely coded]

(*Note*: Wong and Lee are last names, and individuals in China are commonly addressed by their last names.)

***Seven Daily Rituals***

How likely do you feel you are to engage in the following activities in the future? (1 = *very unlikely to do*, 9 = *very likely to do*)

-Write an annual personal summary on New Year’s Eve

-Take a family photo with your loved ones every year.

-Write a review after watching a movie.

-While traveling, send yourself a postcard from the local post office.

-Take a photo before enjoying delicious food.

-Record important moments in life with a diary.

-Make the new year resolution on your birthday.

**Attention Check**

Please choose “Very unlikely to do.”

### Nostalgia Manipulation Check

Please indicate your agreement or disagreement on the following statements. (1 = *strongly disagree*, 7 = *strongly agree*)

\_\_\_ Right now, I am feeling quite nostalgic

\_\_\_ Right now, I am having nostalgic feelings

\_\_\_ I feel nostalgic at the moment

### Demographic Information

What is gender? 1 = male, 2 = female

What is your age?

What is the highest degree you have received?

1 = Junior Middle School

2 = Senior High School

3 = College

4 = Bachelor’s

5 = Master’s

6 = PhD

7 = Other

## Study 2 Validation Exercise

### Definition of Rituals

Ritual is non-instrumental behavior with symbolic meaning. For example, eating mooncakes in the Mid-Autumn festival symbolizes family reunion, and exchanging wedding rings symbolizes commitment to marriage.

### Consumption Choice Scenarios

In a visit to Yunnan Province, Wong wanted to buy a drum that reflected faithfully the culture of that province. However, the drum was too heavy. If Wong bought it locally, it would be inconvenient to carry it all the way home. At this time, Wong noticed that a similar drum could be purchased online and mailed home directly. (1 = *strongly disagree*, 9 = *strongly agree*)

-To which extent do you agree that buying the drum online is a ritual?

-To which extent do you agree that buying the drum locally is a ritual?

 Lee is traveling in Suzhou, China. In the store of the local museum, he/she found a type of incense, which was made using Suzhou’s traditional craftsmanship. Lee liked it a lot. However, the incense was easy to break. If Lee bought it locally, Lee would have to be very careful carrying it back home. At this time, Lee noticed that a similar incense could be purchased online and mailed home directly. (1 = *strongly disagree*, 9 = *strongly agree*)

-To which extent do you agree that buying incense online is a ritual?

-To which extent do you agree that buying incense locally is a ritual?

### Attention Check

- Please choose 9 = strongly agree, if you are answering attentively.

### Seven Daily Rituals

Based on the above definition of rituals, to what extent do you agree that the following activities or behaviors are rituals?

(1 = *strongly disagree*, 9 = *strongly agree*)

-Write an annual personal summary on New Year’s Eve

-Take a family photo with your loved ones every year.

-Write a review after watching a movie.

-While traveling, send yourself a postcard from the local post office.

-Take a photo before enjoying delicious food.

-Record important moments in life with a diary.

-Make the new year resolution on your birthday.

-Have lunch after work. (Control item)

-Pick up the package at the door. (Control item)

### Demographic Information

What is gender? 1 = male, 2 = female

What is your age?

What is the highest degree you have received?

1 = Junior Middle School

2 = Senior High School

3 = College

4 = Bachelor’s

5 = Master’s

6 = PhD

7 = Other

## Study 3

### Nostalgia Manipulation

Same as in Study 2.

### Nostalgia Manipulation Check

Same as in Study 2.

### Ritual Engagement

Please choose one task to complete in the next few minutes.

1 = Please write a few words in your phone's memo as a farewell to today, putting a full stop to today. Afterward, take a screenshot and upload it to this questionnaire. [*Note*. Ritualistic task.]

2 = Please check today's weather on your mobile browser. Afterward, take a screenshot and upload it to this questionnaire. [*Note*. Neutral task.]

### Ritual Engagement Manipulation Check

Ritual is non-instrumental behavior with symbolic meaning. For example, eating mooncakes in the Mid-Autumn festival symbolizes family reunion, and exchanging wedding rings symbolizes commitment to marriage.

To what extent do you regard your writing task as a ritual?

-write a few words in your phone's memo as a farewell to today (1 = *not at all*, 9 = *very much*)

-check today's weather on your mobile browser (1 = *not at all*, 9 = *very much*)

### Attention Check

-If you are answering attentively, please choose 2 for this item.

### Demographic Information

What is gender? 1 = male, 2 = female

What is your age?

What is the highest degree you have received?

1 = Junior Middle School

2 = Senior High School

3 = College

4 = Bachelor’s

5 = Master’s

6 = PhD

7 = Other

## Study 4

### Time 1 Questionnaire

### *Nostalgia Measure*

We used the Southampton Nostalgia Scale, as in Study 1. We reversed the order of options in the last item, so that no reverse-coding was need. In particular, the new order was:

1 = *Once or twice a year*

*2 = Once every couple of months*

3 = *Once or twice a month*

4 = *Approximately once a week*

5 = *Approximately twice a week*

6 = *Three to four times a week*

7 = *At least once a day*

### *Ritual Engagement Intentions*

Please indicate your agreement or disagreement with the statements below.

(1 = *strongly disagree*, 9 = *strongly agree*)

-I am willing to participate in rituals during traditional festivals.

-I will try my best to participate in rituals during traditional festivals.

-Engaging in rituals during traditional festivals is important for me.

-I feel motivated to engage in rituals during traditional festivals.

***Attention Check***

Please choose “strongly disagree.”

### *Meaning in Life*

Please indicate your agreement or disagreement with the statements below.

(1 = *strongly disagree*, 6 = *strongly agree*)

-I feel life is meaningful.

-I feel life has a purpose.

-I feel there is a greater purpose to life.

-I feel that life is worth living.

### *Demographic Information*

What is gender? 1 = male, 2 = female

What is your age?

What is the highest degree you have received?

1 = Junior Middle School

2 = Senior High School

3 = College

4 = Bachelor’s

5 = Master’s

6 = PhD

7 = Other

### Time 2 Questionnaire

### *Nostalgia Measures, Ritual Engagement Intentions, and Meaning in Life*

Same as in Time 1.

***Attention Check***

Same as in Time 1.

***Ritual Engagement***

### Perceived Ritual Engagement. Please respond to the following questions:

-How often did you engage in rituals during the Spring Festival? (1 = *very rarely*, 7 = *very frequently*)

-To which extent do you feel your Spring Festival holiday was filled with rituals? (1 = *almost not at all*, 7 = *very much*)

### Reported Ritual Engagement. Please check the activity or activities in which you engaged during this Spring festival.

-Doing the Spring Festival shopping

-Sweeping/cleaning house thoroughly

-Wearing new clothes

-Buying flowers

-Pasting couplets

-Making dumplings/Tangyuan

-Getting your hair cut

-Watching the Spring Festival gala

-Playing mahjong/cards with family

-Having family reunion dinner/New Year's Eve dinner

-Taking a family photo

-Handing out lucky money

-Staying up late

-Visiting friends and relatives

-Burning incense and praying

-Worshiping ancestors

-Other\_\_\_\_\_\_\_\_\_ (please list all other rituals you may have attended during the Spring Festival)

-Did not attend any ritual (Check this option if you did not attend any ritual during the Spring Festival)

[*Note*: No participant checked the last two options.]

### Demographic Information

Same as in Time 1.

## Study 5

### Manipulation

***Rituals Engagement Condition***

It’s October 1st, 2022. This is the first day of October and the first day of the last quarter of the year 2022. Please write a paragraph below, opening up the new month.

***Control Condition***

It’s October 1st, 2022. This is the first day of the National Day Holiday. Please write a paragraph below, describing the first day of your holiday.

### Meaning in Life

***Meaning of Life subscale of the Nostalgia Functions Scale***

Please indicate your agreement or disagreement with the statements below.

(1 = *strongly disagree*, 9 = *strongly agree*)

-I feel life is meaningful.

-I feel life has a purpose.

-I feel there is a greater purpose to life.

-I feel that life is worth living.

***Presence of Meaning subscale of the Meaning in Life Questionnaire***

(1 = *strongly disagree*, 9 = *strongly agree*)

-I understand my life’s meaning.

-My life has a clear sense of purpose.

-I have a good sense of what makes my life meaningful.

-I have discovered a satisfying life purpose.

-My life has no clear purpose. [Should be reversely coded]

**Attention Check**

Please choose 1 (strongly disagree).

**Ritual Manipulation Check**

Ritual is an activity with symbolic value; for example, eating moon cakes at the Mid-Autumn Festival symbolizes reunion.

To what extent do you regard your writing task as a ritual?

(1 = *not at all*, 9 = *very much*)

### Demographic Information

What is gender? 1 = male, 2 = female

What is your age?

What is the highest degree you have received?

1 = Less than High School

2 = Junior Middle School

3 = Senior High School

4 = College

5 = Bachelor’s

6 = Master’s

7 = PhD

# Participants’ Educational Status

## Study 1

The final sample consisted of 311 participants. 1.3% had a degree below High School, 3.9% a High School or GED degree, 10.6% a Some College degree, 6.4% a 2-year College degree, 59.2% a 4-year College degree, 16.7% a Master’s degree, 0.3% a Ph.D. degree, and 1.6% a Professional degree (JD, MD).

## Study 2

The final sample comprised 188 participants. 1.1% had a Junior High School degree, 1.6% a Senior High School or Technical Secondary School degree, 13.8% a 2-year College degree, 76.1% a Bachelor’s degree, and 7.4% a Master’s degree.

## Study 2 Pretest

The final sample comprised 78 participants. 1.3% had a Junior High School degree, 7.7% a Senior High School or Technical Secondary School degree, 12.8% a 2-year College degree, 65.4% a Bachelor’s degree, and 12.8% a Master’s degree.

## Study 3

The final sample consisted of 296 participants. 0.3% of them had a Junior High School degree, 1.7% a Senior High School or Technical Secondary School degree, 10.5% a 2-year College degree, 71.6% a Bachelor’s degree, 14.5% a Master’s degree, and 1.4% a Ph.D. degree.

## Study 4

The final sample consisted of 252 participants. 0.4% of them had a Junior High School degree, 2.0% a Senior High School or Technical Secondary School degree, 7.9% a 2-year College degree, 69.8% a Bachelor’s degree, 19.0% a Master’s degree, and 0.8% a Ph.D. degree.

## Study 5

The final sample consisted of 166 participants. 1.8% of them had a Junior High School degree, 4.8% a Senior High School or Technical Secondary School degree, 12.7% a 2-year College degree, 66.9% a Bachelor’s degree, 12.7% a Master’s degree, and 1.2% a Ph.D. degree.

# Ancillary Analyses I: Exploratory Factor Analysis and Confirmatory Factor Analysis in Studies 1 and 4

We conducted Exploratory Factor Analyses (EFA) and Confirmatory Factor Analyses (CFA) to test whether nostalgia and ritual engagement are two distinct constructs. To account for the different response scales used for nostalgia and ritual engagement items, we standardized all scores and then used these standardized values for the EFA and CFA. The results indicated that nostalgia and ritual engagement are two distinct constructs.

**Study 1**

***Exploratory Factor Analyses***

**Nostalgia (Southampton Nostalgia Scale) and Ritual Engagement.** We started with EFA to assess the underlying factor structure of nostalgia (Southampton Nostalgia Scale or SNS) and ritual engagement items using maximum likelihood estimation and oblique solution. We based the decision of number of factors to extract on parallel analysis (Horn, 1965). EFA results suggested retaining two factors, with SNS nostalgia items and ritual engagement items loading on these factors (Table S1).

**Nostalgia (Nostalgia Prototype Scale) and Ritual Engagement.** We ran a similar EFA to assess the underlying factor structure of nostalgia (Nostalgia Prototype Scale or NPS) and ritual engagement items. The results suggested retaining three factors, with NPS nostalgia items loading on one factor and ritual engagement items loading on the other two factors (Table S2).

***Confirmatory Factor Analyses***

**Nostalgia (Southampton Nostalgia Scale) and Ritual Engagement.** We employed Confirmatory Factor Analysis (CFA) to compare two models: a one-factor model that used seven SNS items and 14 ritual engagement items as indicators of a single common factor, and a two-factor model in which we specified the SNS items to load on a nostalgia factor and the ritual engagement items to load on a ritual engagement factor. We allowed the nostalgia factor and the ritual engagement factor to correlate. We used model fit indices and χ2-difference tests for model comparison. Results revealed that the measures of nostalgia and ritual engagement were better represented by two distinct latent factors than by a single common factor. The one-factor model, which included a common factor for all items, displayed inadequate model fit (CFI = .719, TLI = .688, RMSEA = .145, SRMR = .108, and χ2[189] = 1429.31, *p* < .001). In contrast, the two-factor model, which featured separate latent factors for nostalgia and ritual engagement, demonstrated significantly improved model fit (CFI = .916, TLI = .906, RMSEA = .080, SRMR = .058, and χ2[188] = 560.01, *p* < .001). The χ2-difference test favored the two-factor model, with a χ2-difference of 869.29, *p* < .001.

**Nostalgia (Nostalgia Prototype Scale) and Ritual Engagement.** We ran a similar CFA to compare two models: a one-factor model that used 10 NPS items and 14 ritual engagement items as indicators of a single common factor, and a two-factor model in which we specified the NPS items to load on a nostalgia factor and the ritual engagement items to load on a ritual engagement factor. We allowed the nostalgia factor and the ritual engagement factor to correlate.[[7]](#footnote-7) The results indicated that the measures of nostalgia and ritual engagement were better represented by two distinct latent factors as opposed to a single common factor. The one-factor model, which included a common factor for all items, showed inadequate model fit (CFI = .846, TLI = .828, RMSEA = .103, SRMR = .093, and χ2[247] = 1066.56, *p* < .001). In contrast, the two-factor model, which featured separate latent factors for nostalgia and ritual engagement, displayed significantly improved model fit (CFI = .916, TLI = .906, RMSEA = .076, SRMR = .060, and χ2[246] = 692.78, *p* < .001). The χ2-difference test favored the two-factor model, with a χ2-difference of 373.77, *p* < .001.

**Study 4**

***Exploratory Factor Analyses***

We started with EFA to assess the underlying factor structure of SNS and ritual engagement intentions items using maximum likelihood estimation and oblique solution. We based the decision of number of factors to extract on parallel analysis (Horn, 1965). The EFA results suggested retaining two factors, with nostalgia (SNS) and ritual engagement intentions items loading on different factors (Table S3 and S4).

***Confirmatory Factor Analyses***

We used CFA to compare two models: a one-factor model that used all SNS and ritual engagement intentions items as indicators of a single common factor, and a two-factor model in which we specified all SNS items to load on a nostalgia factor and all ritual engagement intention items to load on a ritual engagement factor. We allowed the two factors to correlate. The results showed that the nostalgia and ritual engagement intentions measures were better represented by two distinct latent factors than by a single common factor at both T1 and T2. The one-factor model, which included a common factor for all items, had inadequate model fit (T1: CFI = .779, TLI = .723, RMSEA = .189, SRMR = .108, and χ2[44] = 441.05, *p* < .001; T2: CFI = .800, TLI = .749, RMSEA = .171, SRMR = .091, and χ2[44] = 366.78, *p* < .001). In contrast, the two-factor model, which featured separate latent factors for nostalgia and ritual engagement, had significantly improved model fit (T1: CFI = .945, TLI = .930, RMSEA = .095, SRMR = .051, and χ2[43] = 140.76, *p* < .001; T2: CFI = .927, TLI = .907, RMSEA = .104, SRMR = .063, and χ2[43] = 160.23, *p* < .001). The χ2-difference test favored the two-factor model, with a χ2-difference of 300.29 (*p* < .001) at T1 and a χ2-difference of 206.55 (*p* < .001) at T2.

# Ancillary Analyses II: Comparing Social and Individual Rituals in Study 2

We conducted a *t*-test for each of the items in Study 2's daily rituals (Table S6). Nostalgia increased participants’ engagement with the six individual rituals (albeit for writing an annual summary and writing a diary, the effect is trending, *p* = .055 and .053, respectively) as well as with the single social ritual. Next, we averaged the scores across the six individual rituals to create an index of individual ritual engagement. We used the single social ritual item as our score of social ritual engagement. We then conducted a 2 (condition: nostalgia vs. control) × 2 (ritual type: social vs. individual) mixed Analysis of Variance. The main effect of condition was significant, *F*(1, 186) = 17.68, *p* < .001, η*p*2 = .09, indicating that nostalgia enhanced the willingness to engage in rituals. The main effect of ritual type was also significant, *F*(1, 186) = 192.02, *p* < .001, η*p*2 = .51, indicating that participants generally preferred social rituals. However, the Condition × Ritual Type interaction was not significant, *F*(1, 186) = 0.47, *p* = .49, η*p*2 = .003, suggesting that nostalgia’s effect on enhancing the willingness to engage in rituals did not differ for social and individual rituals.

# Ancillary Analyses III: Valence of the Memories in Studies 2 and 3

In Studies 2 and 3, we recruited two coders to code the valence on a 3-point scale (−1 = *negative*, 0 = *neutral*, 1 = *positive*) of participants’ writings (Study 2: *r*[186] = .74, *p* < .001; Study 3: *r*[294] = .73, *p* < .001; see Table S5 for frequencies). Disagreements were resolved by consulting a third coder.

**Study 2**

We first examined whether the valence of content moderated the effect of nostalgia on consumption choice. We standardized the valence and consumption choice scores. Then, we entered the condition (0 = *control*, 1 = *nostalgia*) as the independent variable, valence as moderator, and consumption choice as the dependent variable (PROCESS, Model1). The Condition × Valence interaction was not significant, *b* = 0.05, *SE* = 0.15, *t* = 0.33, *p* = .74. We next examined whether valence moderated the effect of nostalgia on daily ritual engagement. We standardized the valence and daily ritual engagement scores. Then, we entered condition as the independent variable, valence as the moderator, and daily ritual engagement as the dependent variable (PROCESS, Model1). The Condition × Valence interaction was significant, *b* = −0.39, *SE* = 0.14, *t* = −2.79, *p* = .006. Specifically, when the content was more negative (−1SD), the nostalgia condition reported a higher preference for daily ritual engagement than the control condition, *b* = 0.93, *SE* = 0.19, *t* = 4.82, *p* < .001 95% CI = [0.55, 1.31], but when the content was more positive (+1SD), the effect of nostalgia became insignificant, *b* = 0.29, *SE* = 0.17, *t* = 1.73, *p* = .09, 95% CI = [−0.04, 0.61].

**Study 3**

We examined whether the valence of content moderated the effect of nostalgia on task choice. We standardized the valence scores. Then, we entered condition as the independent variable, valence as the moderator, and task choice as the dependent variable (PROCESS, Model 1). The Condition × Valence interaction was not significant, *b* = −0.54, *SE* = 0.29, *t* = −1.86, *p* = .06.

# Ancillary Analyses VI: Full Cross-Lagged Model in Study 4

We conducted a cross-lagged analysis with lavaan in R (Rosseel, 2012), examining the proposed relations among nostalgia, ritual engagement intentions, and MIL. We entered T1 and T2 nostalgia, ritual engagement intentions, and MIL into the cross-lagged model, and regressed each of the T2 measures on each of the T1 measures. We also incorporated cross-sectional correlations in the model. Given that the model was saturated, we did not report the standard fit indices used in structural equation modeling. The autoregressions were significant for nostalgia (*b* = 0.66, *SE* = 0.07, *p* < .001, 95% CI = [0.53, 0.80]), ritual engagement intentions (*b* = 0.47, *SE* = 0.10, *p* < .001, 95% CI = [0.27, 0.67]), and MIL (*b* = 0.59, *SE* = 0.11, *p* < .001, 95% CI = [0.37, 0.80]). Additionally, T1 nostalgia had a lagged effect on T2 ritual engagement intentions, *b* = 0.20, *SE* = 0.08, *p* = .016, 95% CI = [0.04, 0.35], whereas T1 ritual engagement intentions did not have a lagged effect on T2 MIL, *b* = 0.06, *SE* = 0.06, *p* = .36, 95% CI = [−0.07, 0.18]. This discrepancy in expectation could stem from the distinction between mere intentions to engage in rituals and actual engagement; certain external factors may have inhibited participants, despite their intentions, from engaging in rituals, subsequently affecting the enhancement of MIL. The half-longitudinal indirect effect (i.e., the products of parallel cross-lagged paths; Cole & Maxwell, 2003) was also not significant, *b* = 0.01, *SE* = 0.01 *p* = .40, 95% CI = [−0.02, 0.04].

# Ancillary Analyses V: Mediations in Study 4

**Reverse Mediation Model Mentioned in the Article**

In terms of *perceived ritual engagement*, we found no support for the reverse mediation model (PROCESS Model 4, 5000 iterations). In particular, we entered T1 nostalgia as independent variable, perceived ritual engagement at T2 as dependent variable, T2 MIL as mediator, and T1 MIL as the covariate. The indirect effect was not significant, *b* = 0.06, *SE* = 0.04, 95% CI = [−0.01, 0.15].

We obtained no support either for the reverse mediation model in regard to *reported ritual engagement*. Specifically, we entered T1 nostalgia as independent variable, reported ritual engagement at T2 as dependent variable, T2 MIL as mediator, and T1 MIL as covariate. The indirect effect was not significant, *b* = 0.10, *SE* = 0.09, 95% CI = [−0.01, 0.31].

**Mediation Analyses with Ritual Engagement Intentions as a Mediator**

We conducted a serial mediation (PROCESS, Model 6, 5000 iterations). We entered T1 nostalgia as independent variable, T1 ritual engagement intentions and T2 perceived ritual engagement sequentially as mediators, T2 MIL as dependent variable, and T1 MIL as covariate. The direct effect was not significant, *b* = 0.01, *SE* = 0.03, 95% CI = [−0.05, 0.07]. The indirect effect via T1 ritual engagement intentions was not significant, *b* = 0.01, *SE* = 0.03, 95% CI = [−0.04, 0.08]. However, the indirect effect via T2 perceived ritual engagement was significant, *b* = 0.04, *SE* = 0.02, 95% CI = [0.01, 0.07], as was the serial mediation effect, *b* = 0.02, *SE* = 0.01, 95% CI = [0.0050, 0.0448].

We also conducted a similar serial mediation with T1 ritual engagement intentions and T2 reported ritual engagement sequentially as mediators. The direct effect was not significant, *b* = 0.04, *SE* = 0.03, 95% CI = [−0.02, 0.10]. The indirect effect via T1 ritual engagement intentions was not significant, *b* = 0.03, *SE* = 0.03, 95% CI = [−0.03, 0.10]. The indirect effect via T2 reported ritual engagement was also not significant, *b* = 0.01, *SE* = 0.01, 95% CI = [−0.0033, 0.0176], as was the serial mediation effect, *b* = 0.0046, *SE* = 0.0036, 95% CI = [−0.0001, 0.0134]. This might potentially because reported ritual engagement reflected the types of rituals participants undertook, not their frequency. Hence, an individual who participates in the same ritual numerous times during the Spring Festival may achieve a high score in perceived ritual engagement while still obtaining a low score in reported ritual engagement.

# Ancillary Analyses VI: Controlling for Writing Duration in Study 5

We recorded writing duration. On average, participants spent 78.63 sec (*SD* = 68.25 sec) composing their essays. Participants in the ritual engagement condition (*M* = 82.68 sec, *SD* = 81.95 sec) did not differ significantly in writing duration from those in the control condition (*M* = 74.68 sec, *SD* = 51.71 sec), *t*(164) = −0.75, *p* = .45, Cohen’s *d* = −0.12, 95% CI = [−0.42, 0.19].

**References (not reported in the article)**

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Horn, J.L. (1965). A rationale and test for the number of factors in factor analysis. *Psychometrika*, *30*(2), 179–185. <https://doi.org/10.1007/BF02289447>

**Table S1**

*Exploratory Factor Analysis Loadings in Study 1*

|  |  |  |
| --- | --- | --- |
|  | Factor 1 | Factor 2 |
| Ritual3 | **0.83** | −0.08 |
| Ritual6 | **0.82** | −0.03 |
| Ritual9 | **0.81** | −0.04 |
| Ritual4 | **0.76** | −0.02 |
| Ritual5 | **0.76** | −0.06 |
| Ritual10 | **0.74** | −0.01 |
| Ritual12 | **0.74** | −0.09 |
| Ritual2 | **0.74** | 0.01 |
| Ritual11 | **0.73** | 0.04 |
| Ritual14 | **0.70** | −0.08 |
| Ritual13 | **0.68** | −0.08 |
| Ritual1 | **0.68** | 0.02 |
| Ritual8 | **0.45** | 0.19 |
| Ritual7 | **0.35** | 0.18 |
| SNS4 | −0.08 | **0.87** |
| SNS5 | 0.00 | **0.86** |
| SNS3 | −0.04 | **0.85** |
| SNS1 | −0.03 | **0.85** |
| SNS2 | 0.09 | **0.76** |
| SNS6 | 0.15 | **0.72** |
| SNS7 | 0.12 | **−0.59** |

*Note*: SNS = Southampton Nostalgia Scale.

**Table S2**

*Exploratory Factor Analysis Loadings in Study 1*

|  |  |  |  |
| --- | --- | --- | --- |
|  | Factor 1 | Factor 2 | Factor 3 |
| Ritual6 | **0.87**  | 0.02  | −0.12  |
| Ritual3 | **0.80**  | 0.01  | −0.03  |
| Ritual10 | **0.78**  | 0.06  | −0.14  |
| Ritual2 | **0.76**  | 0.12  | −0.18  |
| Ritual4 | **0.76**  | 0.04  | −0.07  |
| Ritual9 | **0.76**  | 0.08  | −0.03  |
| Ritual5 | **0.70**  | 0.03  | 0.01  |
| Ritual11 | **0.68**  | 0.00  | 0.17  |
| Ritual13 | **0.63**  | −0.11  | 0.18  |
| Ritual12 | **0.61**  | −0.09  | 0.28  |
| Ritual1 | **0.60**  | −0.07  | 0.29  |
| Ritual14 | **0.56**  | −0.03  | 0.24  |
| NPS8 | 0.00  | **0.86**  | −0.13  |
| NPS3 | 0.01  | **0.79**  | −0.13  |
| NPS6 | 0.14  | **0.79**  | −0.11  |
| NPS1 | 0.14  | **0.78**  | −0.16  |
| NPS4 | −0.19  | **0.72**  | 0.16  |
| NPS9 | −0.27  | **0.69**  | 0.29  |
| NPS2 | 0.15  | **0.69**  | −0.02  |
| NPS7 | 0.12  | **0.67**  | 0.04  |
| NPS5 | −0.03  | **0.62**  | 0.15  |
| NPS10 | −0.12  | **0.58**  | 0.27  |
| Ritual7 | 0.08  | 0.10  | **0.63**  |
| Ritual8 | 0.24  | 0.10  | **0.54**  |

*Note*: NPS = Nostalgia Prototype Scale.

**Table S3**

*Exploratory Factor Analysis Loadings in Study 4 at T1*

|  |  |  |
| --- | --- | --- |
|  | Factor 1 | Factor 2 |
| T1 SNS6 | **0.93**  | −0.13  |
| T1 SNS5 | **0.92**  | −0.11  |
| T1 SNS4 | **0.82**  | −0.09  |
| T1 SNS1 | **0.67**  | 0.11  |
| T1 SNS7 | **0.64**  | −0.11  |
| T1 SNS2 | **0.62**  | 0.15  |
| T1 SNS3 | **0.59**  | 0.17  |
| T1 ritual2 | −0.07  | **0.87**  |
| T1 ritual1 | −0.06  | **0.79**  |
| T1 ritual4 | 0.03  | **0.77**  |
| T1 ritual3 | 0.09  | **0.75**  |

*Note*: SNS = Southampton Nostalgia Scale.

**Table S4**

*Exploratory Factor Analysis Loadings in Study 4 at T2*

|  |  |  |
| --- | --- | --- |
|  | Factor 1 | Factor 2 |
| T2 SNS5 | **0.87**  | −0.10  |
| T2 SNS6 | **0.85**  | −0.07  |
| T2 SNS4 | **0.84**  | −0.10  |
| T2 SNS7 | **0.64**  | −0.14  |
| T2 SNS1 | **0.51**  | 0.26  |
| T2 SNS2 | **0.50**  | 0.25  |
| T2 SNS3 | **0.38**  | 0.36  |
| T2 ritual1 | −0.21  | **0.89**  |
| T2 ritual2 | −0.05  | **0.79**  |
| T2 ritual3 | 0.01  | **0.77**  |
| T2 ritual4 | 0.08  | **0.71**  |

*Note*: SNS = Southampton Nostalgia Scale.

**Table S5**

*Frequency of Different Valences in Study 2 (*N *=* *188) and Study 3 (N = 296)*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Neutral | Positive | Negative |
| Study 2 | Nostalgia | 6 | 68 | 20 |
|  | Control | 27 | 54 | 13 |
| Study 3 | Nostalgia | 8 | 119 | 20 |
|  | Control | 47 | 62 | 40 |

**Table S6**

*Results for Each Daily Ritual in Study 2*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | *M*(*SD*) | *t* | *df* | *p* | *d* | 95% CI |
| Nostalgia | Control |
| Annual Summary  | 6.67(1.84) | 6.11(2.15) | 1.93 | 181.59 | .055 | 0.28 | [−0.01, 0.57] |
| Family Photo | 8.32(0.89) | 7.79(1.41) | 3.08 | 157.22 | .002 | 0.45 | [0.16, 0.74] |
| Movie Review | 6.09(1.82) | 5.26(2.19) | 2.83 | 179.91 | .005 | 0.41 | [0.12, 0.70] |
| Postcards | 6.87(1.78) | 6.00(2.14) | 3.04 | 186 | .003 | 0.44 | [0.16, 0.73] |
| Food Photo | 7.67(1.23) | 7.07(1.63) | 2.83 | 173.10 | .005 | 0.41 | [0.12, 0.70] |
| Diary | 7.40(1.53) | 6.89(2.03) | 1.95 | 172.50 | .053 | 0.28 | [−0.00, 0.57] |
| New Year Resolution | 7.28(1.33) | 6.63(1.83) | 2.78 | 170.10 | .006 | 0.41 | [0.12, 0.69] |

1. In Studies 1 and 4, we established that nostalgia and ritual are two distinct constructs by conducting Exploratory Factor Analyses and Confirmatory Factor Analyses (Online Supplement, Ancillary Analyses I). [↑](#footnote-ref-1)
2. We conducted t-tests for each daily ritual item, finding that nostalgic participants showed higher engagement likelihood compared to the control group, whether for social or individual rituals. The subsequent mixed ANOVA revealed that the effect of nostalgia on enhancing ritual engagement did not significantly differ between social and individual rituals (Online Supplement, Ancillary Analyses II). [↑](#footnote-ref-2)
3. In Studies 2 and 3, we further analyzed the valence (negative, neutral, positive) of participants' written entries, addressing whether it moderated nostalgia's influence. The results were mixed (Online Supplement, Ancillary Analyses III). [↑](#footnote-ref-3)
4. aget2 – aget1 > 2 or aget2 – aget1 < 0. [↑](#footnote-ref-4)
5. We also examined the fully cross-lagged model—including nostalgia, ritual engagement intentions, and meaning in life—and calculated the half-longitudinal indirect effects (i.e., the products of parallel cross-lagged paths). Given that we only had two waves, however, the mediation result might be biased as it assumes stationarity. We reported these results in Online Supplement, Ancillary Analyses IV. [↑](#footnote-ref-5)
6. We also conducted analyses using T1 ritual engagement intentions as mediator. The T1 nostalgia ⇒ T1 ritual engagement intentions ⇒ T2 perceived ritual engagement ⇒ T2 meaning in life serial mediation was significant, whereas the T1 nostalgia ⇒ T1 ritual engagement intentions ⇒ T2 reported ritual engagement ⇒ T2 meaning in life serial mediation was not significant (Online Supplement, Ancillary Analyses V). [↑](#footnote-ref-6)
7. Both the one-factor model and the two-factor model encompassed error structure. Given that in the NPS each statement is rated on frequency and importance, the error structure included the covariance between error terms of frequency and importance ratings of each NPS item. [↑](#footnote-ref-7)