

Nostalgia Promotes Help Seeking by Fostering Social Connectedness

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Individuals are often reluctant to seek help from others. Nostalgia is a highly social emotion that bolsters perceptions of connectedness with others. In 6 studies, we investigated whether nostalgia reduces individuals' general reluctance to reach out to others for help by virtue of its capacity to strengthen social connectedness (i.e., a sense of acceptance and support). In a preliminary study, we measured nostalgia, 6 comparator emotions, and help seeking. Nostalgia predicted help seeking, independently of the comparator emotions. In Experiments 1 through 4, we induced nostalgia (vs. control) and subsequently measured self-reported help seeking (Experiments 1 through 2), help-seeking behavior (Experiments 3 through 4), and social connectedness (Experiments 2 and 4). Nostalgia increased self-reported help seeking (Experiments 1 and 2) and help-seeking behavior (Experiments 3 and 4), and these effects were mediated by social connectedness (Experiments 2 and 4). In Experiment 5, we manipulated the social content of nostalgic reflections and measured help-seeking behavior. Nostalgia pertaining to social (but not to nonsocial) past events increased help seeking. In all, nostalgia is a resource that facilitates help seeking by fostering social connectedness.

Keywords: nostalgia, social connectedness, help seeking, help-seeking behavior

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People are often reluctant to reach out to others for help. Seeking help exposes vulnerabilities or inadequacies, sets the stage for embarrassment, and risks rejection (Bohns & Flynn, 2010; Downey & Feldman, 1996; Shapiro, 1983). Consequently, struggling students go untutored (Newman, 1990), partner abuse is not noticed by friends and family (Ashley & Foshee, 2005), mental illnesses are left untreated (Eisenberg, Downs, Golberstein, & Zivin, 2009), bullied individuals suffer in silence (Cowie, Naylor, Talamelli, Chauhan, & Smith, 2002), and costly organizational mistakes are not prevented (Thacker & Stoner, 2012). It is thus important to identify ways in which individuals can gain the psychological strength to seek help when necessary. In this article,




we examine whether nostalgia, by virtue of its capacity to bolster perceptions of closeness with others, promotes help seeking.

The Social Emotion of Nostalgia

Nostalgia is “a sentimental longing or wistful affection for the past” (*The New Oxford Dictionary of English*, Pearsall, 1998, p. 1266). Prototype and narratives analyses are consistent with this definition (Hepper, Ritchie, Sedikides, & Wildschut, 2012; Hepper et al., 2014). Prototype analyses have revealed that the central features of nostalgia include fond and rose-colored memories, wanting to return to the past, happiness and enjoyment, reminiscence, and longing. Similarly, narrative analyses have illustrated that, when people are nostalgic, they fondly recall meaningful life events or time periods (e.g., childhood, college) and often see these periods in a positive light (Sedikides, Wildschut, Arndt, & Routledge, 2008; Wildschut, Sedikides, Arndt, & Routledge, 2006). Multidimensional scaling analyses have further demonstrated that nostalgia is a positively valenced, approach-oriented, and low-arousal emotion (van Tilburg, Wildschut, & Sedikides, 2018). Yet, despite being largely positive, nostalgic reverie is bittersweet. It also entails sadness, as individuals long for and miss certain aspects of their past (Madoglou, Gkinopoulos, Xanthopoulos, & Kalamaras, 2017; Sedikides & Wildschut, 2016). As Werman (1977) put it, nostalgia is “a joy tinged with sadness” (p. 393).

Most relevant to the present research, nostalgia is highly social. Its social character is illustrated in several empirical strands (Sedikides & Wildschut, 2019). In one strand, researchers ana-

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lyzed the content of nostalgic recollections. Although social content is not a necessary condition for a reflection to be nostalgic, these analyses revealed that nostalgic reflection nearly always involves others. When people are nostalgic, they frequently bring to mind specific time periods (e.g., childhood, high school, college) or momentous events (e.g., family reunions, holidays, weddings), both of which are marked by the presence of close others (Madoglou et al., 2017; Wildschut et al., 2006). Nostalgic times and events, then, place the self within social settings. Further, in nostalgic narratives, the self is typically the protagonist, yet the self is almost always surrounded by others (e.g., friends, romantic partners, family members; Holak & Havlena, 1992; Madoglou et al., 2017; Wildschut et al., 2006). Studies comparing nostalgic narratives to nonnostalgic ones have found that nostalgic narratives focus more on social interactions, relationships, being loved, and being trusted by others (Abeyta, Routledge, Royle, Wildschut, & Sedikides, 2015) and that they contain more social words (e.g., mother, friend) and plural first-person pronouns (e.g., us, ours; Wildschut, Sedikides, & Robertson, 2018). Taken together, this body of work indicates that nostalgia is a self-relevant, but highly social, emotion.

Given that nostalgic reflection is almost always social in content, researchers have investigated, in a second strand of inquiry, whether nostalgia has the capacity to meet the need for social connectedness. This strand has illustrated that individuals use nostalgia as a refuge when they are lonely or are experiencing belonging deficits and that nostalgia, in turn, restores social connectedness (a sense of acceptance and support). Seehusen et al. (2013), for example, found that people become more nostalgic in response to experimentally induced belongingness deficits. Wildschut et al. (2006) similarly showed that people become more nostalgic in response to experimentally induced loneliness. Building on this finding, Zhou, Sedikides, Wildschut, and Gao (2008) measured social support, in addition to nostalgia, after inducing loneliness. Loneliness resulted in weaker perceptions of social support. However, loneliness also intensified nostalgia, which in turn predicted strengthened social support. Stated otherwise, nostalgia restored perceptions of social support that were threatened by loneliness.

The third strand of research more directly established nostalgia's causal role in the provision of social connectedness. Wildschut et al. (2006; see also Cheung et al., 2013; Routledge et al., 2011) experimentally induced nostalgia and subsequently assessed social connectedness (i.e., the extent to which participants felt connected to loved ones, protected, loved, and trusting of others) and attachment avoidance and attachment anxiety (Fraley, Waller, & Brennan, 2000). Wildschut et al. induced nostalgia with the event reflection task (ERT; Sedikides et al., 2015), in which participants spent a few minutes thinking and writing about either a nostalgic or ordinary autobiographical event. Participants in the nostalgia condition evinced stronger social connectedness and lower attachment avoidance and anxiety. Hepper et al. (2012) validated these findings by capitalizing on a variant of the ERT. They presented half of their participants with features that prior studies had established as central to prototypic conceptions of nostalgia (e.g., fond memories, longing, keepsakes) and asked them to write about an autobiographical event using at least five of these central features (nostalgia condition). They presented the other half of participants with features that prior studies had

established as peripheral prototypic conceptions of nostalgia (e.g., wishing, daydreaming, calm) and asked them to write about an autobiographical event using at least five of these peripheral features (control condition). Then, the researchers measured social connectedness. Participants in the nostalgia condition, compared with those in the control condition reported greater social connectedness.

Nostalgia also promotes approach-oriented interpersonal behaviors. Stephan et al. (2014) asked participants to reflect on a nostalgic event or an ordinary autobiographical event (i.e., ERT; Sedikides et al., 2015) and to then set up two chairs for a supposed interaction between themselves and another person. Nostalgic (relative to control) participants placed the chairs closer together. In a separate experiment, Stephan et al. found that nostalgia increased helping behavior. Specifically, nostalgic (compared with control) participants picked up more pencils that were "accidentally" dropped by a confederate. Zhou, Wildschut, Sedikides, Shi, and Feng (2012) similarly reported that nostalgia increased both intentions to make charitable donations and actually making charitable donations.

In summary, the content of nostalgic narratives is predominantly social, and nostalgia imbues individuals with social connectedness. The social character of nostalgia also manifests itself behaviorally, generating more comfort with social interactions (e.g., reduced social distancing) and promoting help-giving behavior.

The Present Research: Nostalgia and Help Seeking

Might nostalgia foster help seeking? Attaining necessary help is beneficial, but people are often disinclined to seek it (Bohns & Flynn, 2010; Downey & Feldman, 1996; Shapiro, 1983). However, nostalgia, given its social character, may increase the likelihood of help seeking. As outlined above, nostalgia fosters social connectedness (Hepper et al., 2012; Wildschut et al., 2006; Zhou et al., 2008), which is defined in terms of sentiments of being accepted and supported. These sentiments are associated with positive representations of others (Baldwin, 1992; Bartholomew & Horowitz, 1991) and with perceiving others as dependable in times of need (Baldwin, Fehr, Keedian, Seidel, & Thomson, 1993; Collins & Read, 1990). If people view others positively and as dependable and supportive, they will be more likely to request help from them. Thus, the social connectedness fostered by nostalgia should promote help seeking. Taken together, we hypothesized that nostalgia, via its social character, promotes help seeking.

We tested this hypothesis in one preliminary study and five experiments using both Western (i.e., British, American) and Eastern (i.e., Chinese) samples, for generalizability purposes. In the preliminary study, we examined the relation between nostalgia, as well as six comparator emotions, with help seeking. In the experiments, we first induced nostalgia. In Experiments 1 and 2 (which relied on Western samples), we subsequently assessed self-reported help seeking. In Experiments 3 through 5 (which relied on Eastern samples), we subsequently assessed help-seeking behavior. We also examined the role of nostalgia's social character. In Experiments 2 and 4, we measured social connectedness and tested whether it mediates the effect of nostalgia on both self-reported help seeking and help-seeking behavior. In Experiment 5, we examined the impact of experimentally induced social nostalgia (vs. nonsocial nostalgia vs. control) on help-seeking behavior.

Preliminary Study

The purpose of the preliminary study was to provide an initial test of whether nostalgia predicts increased help seeking. We thus measured nostalgia and help seeking. We also aimed to examine nostalgia's unique capacity to predict help seeking, above and beyond other emotions. We used only six comparator emotions, for brevity, yet we attempted to sample broadly from both positive and negative emotions. We arrived at three positive and three negative ones. The positive emotions were joy, inspiration, and pride. We used joy, because people are frequently nostalgic about joyous life events (e.g., weddings; Wildschut et al., 2006). We used inspiration, because nostalgia is associated with increased inspiration (Stephan et al., 2015). We used pride, because multidimensional scaling analyses have revealed that nostalgia, compared with other self-relevant emotions, resembles pride most (van Tilburg et al., 2018). Further, like nostalgic experiences, experiences of pride are appraised as unique (van Tilburg, Bruder, Wildschut, Sedikides, & Göritz, 2019). The negative emotions were guilt, shame, and regret. One basis for selecting them was that, like nostalgia, guilt, shame, and regret all contain elements of irretrievable loss (van Tilburg et al., 2019). That is, they entail the desire to reexperience or "re-do" aspects of the past. Additionally, regret, like nostalgia, may contain elements of sadness (van Tilburg & Igou, 2017; Warr, 2016). Finally, guilt and shame, like nostalgia, are social emotions (Hareli & Parkinson, 2008). We hypothesized that nostalgia would predict increased help seeking and would do so even when controlling for a range of positive and negative emotions.

Method

Participants. One hundred ninety-four participants (93 women, 101 men) completed the study online ($M_{\text{age}} = 34.39$, $SD_{\text{age}} = 11.26$, range = 21–76 years).^{1,2} We recruited them from Amazon Mechanical Turk (MTurk).

Materials and procedure. Participants first rated the extent to which they experience, in general, the following emotions: nostalgia, joy, pride, inspiration, shame, regret, and guilt (1 = *not at all*, 6 = *extremely*). Specifically, they were instructed to "indicate to what extent you generally feel these emotions, that is, what is true for you on average." Next, participants completed a self-report measure of help seeking. They rated the extent to which the following four statements described them, in general: "I ask for assistance when I am in trouble," "I ask others for advice," "I ask others for help with my problems," and "I am comfortable asking others for help," (1 = *strongly disagree*, 6 = *strongly agree*). These statements formed a reliable index ($\alpha = .89$), thus we averaged them to compute help-seeking scores.

Results

Zero-order correlations. We present descriptive statistics and zero-order correlations in Table 1. Nostalgia was significantly and positively correlated with help seeking. In addition, nostalgia was significantly and positively correlated with each of the three positive emotions (joy, inspiration, pride). These three emotions, in turn, were also significantly and positively correlated with help seeking, underscoring the importance of controlling for their over-

lap with nostalgia. In addition, nostalgia evinced positive, albeit small and nonsignificant, correlations with the three negative emotions (guilt, shame, regret). Of these three emotions, only regret was significantly correlated with help seeking, and this correlation was negative. Nonetheless, we controlled for these negative emotions as well in subsequent regression analyses. Although nostalgia was more strongly correlated with the positive than negative emotions, nostalgia's correlations with the negative emotions, albeit nonsignificant, were all positive. This attests to nostalgia's bittersweet affective signature.

Multiple regression. To test the unique association between nostalgia and help seeking, we conducted a multiple regression analysis in which we regressed help seeking on nostalgia and the six comparator emotions. We present the results in Table 2. Nostalgia significantly predicted increased help seeking, above and beyond the six comparator emotions. The only other emotion that significantly predicted (increased) help seeking was joy.

Several of the predictors in the regression analysis were highly correlated. This raises the possibility of multicollinearity or near dependencies among two or more predictor variables. To formally diagnose whether multicollinearity was a problem, we examined the condition number of the scaled cross-product matrix (Belsley, 1991). A large condition number indicates ill conditioned data (i.e., a multicollinearity problem). For the set of predictor variables including nostalgia and the six comparator emotions, the condition number was 16, which falls well below the frequently cited threshold of 30. Thus, there was not a serious multicollinearity problem. Nonetheless, we took steps to reduce the correlations between predictor variables by combining predictors into a smaller number of superordinate constructs. We conducted a maximum-likelihood factor analysis of the six comparator emotions, which revealed a two-factor solution with simple structure. The three negative emotions (guilt, shame, regret) loaded on the first (loadings $>.75$), but not the second ($<.15$) factor. The three positive emotions (joy, inspiration, pride) loaded on the second ($>.70$) but not the first

¹ For the preliminary study and Experiments 1 and 2, we aimed to attain enough participants to detect a medium effect size ($r = .3$, $d = .5$) with power = .80 (assuming two-tailed $\alpha = .05$). This yielded a target sample size of 82 for the preliminary study and 128 for Experiments 1 and 2. We exceeded these target sample sizes. Data collection for Experiments 3 and 5 was more time consuming, requiring that we run one participant at a time in the laboratory. We thus adopted the pragmatic strategy of testing as many participants as possible within the period allocated for running each study, under the stipulation of having at least 30 participants per condition in each of the experiments (Leroy, 2011, p. 194). We succeeded in meeting this objective in all experiments but Experiment 3, where one condition included 28 participants.

² In all studies, we additionally tested the effect of gender on all measured variables. In the preliminary study, there was a gender effect on help seeking, $F(1, 192) = 5.37$, $p = .022$, $d = 0.33$, 95% CI [0.046, 0.613], such that women ($M = 4.53$, $SD = 0.95$) reported greater help seeking than men ($M = 4.18$, $SD = 1.16$). In Experiment 4, there was a gender effect on social connectedness, $F(1, 58) = 4.49$, $p = .038$, $d = 0.55$, 95% CI [0.031, 1.062], such that women ($M = 4.48$, $SD = 1.23$) evinced greater social connectedness than men ($M = 3.75$, $SD = 1.41$). In Experiment 5, there was a gender effect on sociality ratings, $F(1, 138) = 6.48$, $p = .012$, $d = 0.46$, 95% CI [0.101, 0.815], such that women's narratives ($M = 1.93$, $SD = 0.97$) involved other people to a greater extent than men's narratives ($M = 1.53$, $SD = 0.97$). No other gender effects emerged (all $ps > .187$). Also, in all experiments, we re-ran analyses controlling for gender, and the results remained virtually identical to those reported.

Table 1
Descriptive Statistics and Zero-Order Correlations Among Emotions and Help Seeking in the Preliminary Study

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Nostalgia	4.15	1.24	—						
2. Joy	4.25	1.27	.32***	—					
3. Inspiration	4.08	1.33	.36***	.54***	—				
4. Pride	4.02	1.42	.32***	.54***	.59***	—			
5. Guilt	2.32	1.41	.11	-.15*	-.14	-.15*	—		
6. Shame	2.23	1.39	.11	-.17*	-.21**	-.16*	.87***	—	
7. Regret	2.47	1.40	.11	-.29***	-.26***	-.24**	.73***	.77***	—
8. Help seeking	4.35	1.08	.27***	.41***	.30***	.32***	-.13	-.10	-.16*

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

(<.05) factor. Accordingly, we averaged the two sets of three emotions to form composite measures of positive and negative emotionality. We then regressed help seeking on nostalgia, positive emotionality, and negative emotionality. For this set of three predictor variables, the condition number was 12, again indicating that multicollinearity was not an issue. Importantly, nostalgia retained its unique positive association with help seeking ($\beta = .15$, 95% CI [.004, .295]), $t(190) = 2.03$, $p = .044$. Positive emotionality also predicted increased help seeking ($\beta = .33$, 95% CI [.179, .478]), $t(190) = 4.35$, $p < .001$, but negative emotionality did not ($\beta = -.08$, 95% CI [-.213, .062]), $t(190) = -1.08$, $p = .282$.

Discussion

The preliminary study showed that nostalgia predicts increased help seeking and does so independently of other positive and negative self-relevant emotions. Of course, the correlational nature of this study means that it suffers from the inherent reverse-causality and third-variable limitations, preventing causal conclusions. Thus, having established nostalgia's association with help seeking at the trait level, we focused our efforts on testing its causal effect on help seeking at the state level.

Experiment 1

In Experiment 1, we set to provide the first test of nostalgia's causal effect on help seeking. To achieve this, we experimentally induced nostalgia (vs. control) and then measured self-reported

help seeking. We hypothesized that nostalgia would increase help seeking.

Method

Participants. One hundred thirty University of Southampton undergraduate students (107 women, 23 men) participated in exchange for course credit ($M_{age} = 19.92$, $SD_{age} = 2.30$, range = 18–34; two participants did not report their age). They completed all materials in private cubicles.

Materials and procedure. We first experimentally induced nostalgia using the ERT. In the nostalgia condition, we gave participants *The New Oxford Dictionary of English* (Pearsall, 1998) definition of nostalgia (see above) and instructed them to bring to mind a nostalgic event from their life. In the control condition, we instructed them to bring to mind an ordinary event from their life. In both conditions, we instructed participants to take a few moments to think about the event and how it made them feel. Additionally, we instructed them to summarize the event with four keywords and to spend a few minutes writing about it (for detailed instructions, see Appendix B of Sedikides et al., 2015).

Next, participants completed a self-report help-seeking measure. They indicated the extent to which they agreed with four statements that followed from the stem "With this event in mind, I feel. . .": "that I can ask for assistance when I am in trouble," "like I can ask others for their advice," "better about asking people to help me with my personal problems," and "comfortable asking others for help" (1 = *strongly disagree*, 6 = *strongly agree*).³ These statements formed a reliable index ($\alpha = .91$), and we averaged them to compute help-seeking scores ($M = 4.41$, $SD = 1.05$).

Finally, participants completed a manipulation check (Hepper et al., 2012; Wildschut et al., 2006). We instructed them to think back to the reflection task (i.e., the nostalgic or ordinary event) and indicate the extent to which they agreed with three statements (e.g.,

Table 2
Multiple Regression Analysis of Help Seeking as a Function of Nostalgia and Six Comparator Emotions in the Preliminary Study

Predictor	β	95% CI	$t(186)$	p
Nostalgia	.15	[.002, .294]	2.00	.047
Joy	.28	[.109, .441]	3.27	.001
Inspiration	.05	[-.130, .220]	0.50	.616
Pride	.08	[-.087, .254]	0.97	.334
Guilt	-.17	[-.437, .096]	-1.26	.209
Shame	.14	[-.144, .422]	0.97	.333
Regret	-.05	[-.263, .166]	-0.45	.655

Note. β values are standardized regression coefficients.

³ In Experiment 1, three participants did not complete one of the help-seeking items and one participant did not complete one of the manipulation-check items. In Experiment 2, three participants did not complete one of the manipulation-check items, three participants did not complete one of the social connectedness items, and four participants did not complete one of the help-seeking items. In Experiment 3, two participants did not complete one of the manipulation-check items. In these cases, participants' scores for the respective variables were computed by averaging the items they completed.

“During the task, I was feeling quite nostalgic”; 1 = *strongly disagree*, 6 = *strongly agree*). These statements formed a reliable index ($\alpha = .98$), and we averaged them to compute manipulation-check scores ($M = 4.27$, $SD = 1.37$).⁴

Results

Manipulation check. To test whether the ERT increased nostalgia, we submitted manipulation-check scores to a one-way (nostalgia vs. control) analysis of variance (ANOVA). Participants in the nostalgia condition ($M = 4.94$, $SD = 0.90$) reported being more nostalgic than those in the control condition ($M = 3.80$, $SD = 1.46$), $F(1, 128) = 26.26$, $p < .001$, $d = 0.91$, 95% CI [0.546, 1.278], demonstrating that the manipulation was effective.

Help seeking. To test whether nostalgia increased help seeking, we submitted help-seeking scores to a one-way (nostalgia vs. control) ANOVA. Participants in the nostalgia condition ($M = 4.63$, $SD = 1.04$) evinced higher levels of help seeking than those in the control condition ($M = 4.26$, $SD = 1.04$), $F(1, 128) = 3.95$, $p = .049$, $d = 0.35$, 95% CI [0.002, 0.705].

Discussion

Experiment 1 demonstrated that nostalgia promotes help seeking. Specifically, participants in the nostalgia condition indicated greater help seeking than those in the control condition. Next, we attempted to understand why nostalgia promotes help seeking. Experiment 2 tested whether nostalgia promotes help seeking by fostering social connectedness.

Experiment 2

One objective of Experiment 2 was to test the replicability of Experiment 1 findings. The primary objective, however, was to examine whether nostalgia-induced social connectedness accounts for the effect on help seeking. Thus, following the nostalgia manipulation, we assessed social connectedness prior to assessing help seeking. We hypothesized that nostalgia would increase social connectedness and help seeking, and that social connectedness would mediate nostalgia's effect on help seeking.

Method

Participants. One hundred ninety-five participants (115 women, 80 men) completed the study online ($M_{\text{age}} = 36.66$, $SD_{\text{age}} = 12.97$, range = 18–79). We recruited them from MTurk.

Materials and procedure. As in Experiment 1, we first experimentally induced nostalgia with the ERT (Sedikides et al., 2015). Next, participants completed a manipulation check (Hepper et al., 2012; Wildschut et al., 2006), indicating the extent to which they agreed with three statements (e.g., “I feel nostalgic at the moment;” 1 = *strongly disagree*, 6 = *strongly agree*). Responses to these statements formed a reliable index ($\alpha = .99$), and so we averaged them to compute manipulation-check scores ($M = 3.87$, $SD = 1.73$).

Subsequently, participants indicated the extent to which they agreed with eight statements that followed from the stem “With this event in mind, I feel. . .” (1 = *strongly disagree*, 6 = *strongly agree*). The first set of four statements measured social connectedness (“connected to loved ones,” “protected,” “loved,” and “I

can trust others”; Cheung et al., 2013; Hepper et al., 2012). Responses to these statements formed a reliable index ($\alpha = .95$), and so we averaged them to compute social connectedness scores ($M = 3.93$, $SD = 1.64$). The second set of four statements measured help seeking (see Experiment 1). Responses to these statements formed a reliable index ($\alpha = .95$), and so we averaged them to compute help-seeking scores ($M = 3.93$, $SD = 1.38$).⁵

Results

Manipulation check. To test if the ERT increased nostalgia, we submitted manipulation-check scores to a one-way (nostalgia vs. control) ANOVA. Participants in the nostalgia condition ($M = 4.72$, $SD = 1.25$) reported being more nostalgic than those in the control condition ($M = 2.93$, $SD = 1.71$), $F(1, 193) = 70.52$, $p < .001$, $d = 1.20$, 95% CI [0.899, 1.509], demonstrating that the manipulation was effective.

Social connectedness and help seeking. To test whether nostalgia increased social connectedness and help seeking, we submitted social connectedness and help-seeking scores to separate one-way (nostalgia vs. control) ANOVAs. Regarding social connectedness, participants in the nostalgia condition ($M = 4.44$, $SD = 1.32$) manifested greater social connectedness than those in the control condition ($M = 3.38$, $SD = 1.78$), $F(1, 193) = 22.52$, $p < .001$, $d = 0.68$, 95% CI [0.392, 0.970], replicating past research (Cheung et al., 2013; Hepper et al., 2012; Wildschut et al., 2006). Regarding help seeking, participants in the nostalgia condition ($M = 4.15$, $SD = 1.29$) evinced greater levels of help seeking than those in the control condition ($M = 3.68$, $SD = 1.45$), $F(1, 193) = 5.57$, $p = .019$, $d = 0.34$, 95% CI [0.055, 0.622], replicating Experiment 1.

Mediation analyses. To test whether the effect of nostalgia (vs. control) on increased help seeking is mediated by social connectedness, we conducted a bootstrapped mediation analysis (5,000 resamples using PROCESS; Hayes, 2018). The indirect effect of nostalgia (dummy coded: nostalgia = 1, control = 0) on help seeking via social connectedness was significant ($ab = 0.46$, $SE = 0.12$, 95% CI [0.255, 0.735]; see Figure 1). As hypothesized, social connectedness mediated the effect of nostalgia on help seeking.

Given that social connectedness and help seeking were both measured variables, it is possible that an alternative causal model can explain the results. That is, help seeking may have mediated the effect of nostalgia on social connectedness. To contrast our original model with this alternative one, we compared the Akaike information criterion (AIC; Akaike, 1974) of each. A lower AIC indicates better model fit. We trimmed the direct effect path from both models, because any two models with the same paths between

⁴ We administered the manipulation check after the help seeking measure in this “proof of concept” experiment to avoid impeding the potential effect of nostalgia on help seeking by measuring the manipulation check beforehand. Having established the effect of nostalgia on help seeking in Experiment 1, we proceeded to administer the manipulation check directly following the nostalgia induction in all remaining experiments.

⁵ At the end of Experiments 2, 4, and 5, participants also responded to the question, “Irrespective of what you know about biology, which body part do you more closely associate with yourself?” (Fetterman & Robinson, 2013). There were two response options: heart and brain. This measure was included for exploratory purposes only and for reasons unrelated to the present article.

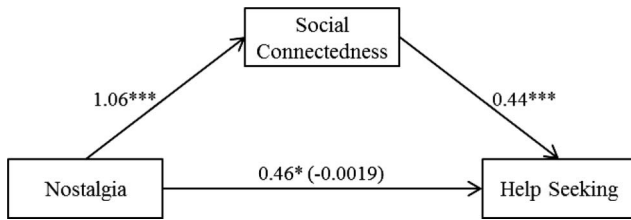


Figure 1. Mediation of the effect of nostalgia on help seeking by social connectedness in Experiment 2. All coefficients are unstandardized. For the path from nostalgia to help seeking, the coefficient outside of parentheses is the total effect and the coefficient inside parentheses is the direct effect. * $p < .05$. *** $p < .001$.

the same variables will produce identical AIC values, even if some paths are in a different direction. The original model (nostalgia \Rightarrow social connectedness \Rightarrow help seeking) yielded a smaller AIC than the alternative model (nostalgia \Rightarrow help seeking \Rightarrow social connectedness), indicating that the original model fits the data better ($AIC_{\text{original}} = 10.00$ vs. $AIC_{\text{alternative}} = 25.89$).

Discussion

Experiment 2 replicated and extended the results of Experiment 1, illustrating that the effect of nostalgia on elevated help seeking is mediated by social connectedness. In the first two experiments, we relied on self-report to assess help seeking. In Experiments 3 through 5, we moved to assessing help-seeking behavior, and expanded the scope of our research to Eastern samples.

Experiment 3

In Experiment 3, our central objective was to carry out an initial test of nostalgia's influence on help-seeking behavior. After inducing nostalgia (vs. control), we asked participants to solve an unsolvable problem. We informed them that they could contact the experimenter, if they needed help solving the problem. We then timed how long they took to seek help. We hypothesized that nostalgia would reduce the amount of time it took participants to seek help.

In this experiment, the first one in which we measured help-seeking behaviorally, we did not assess social connectedness as a mediator. Given that the procedure for measuring help seeking was intricate, we aimed to minimize the time interval between the manipulation and problem-solving task. We returned to testing mediation in Experiment 4.

Method

Participants. Fifty-nine Sun Yat-Sen University undergraduate students (38 women, 21 men) participated ($M_{\text{age}} = 22.12$, $SD_{\text{age}} = 2.04$, range = 19–31). They completed all materials in private cubicles.

Materials and procedure. As before, we first experimentally induced nostalgia with the ERT. Participants then completed a manipulation check for which they indicated their level of agreement with two statements ("Right now, I am feeling quite nostalgic" and "Right now, I am having nostalgic feelings;" 1 = *strongly disagree*, 7 = *strongly agree*). Responses to the two statements

were highly correlated, $r(55) = .82$, $p < .001$, CI 95% [.720, .892], and we averaged them to compute manipulation-check scores ($M = 4.56$, $SD = 1.62$).⁶

We measured help-seeking behavior next by instructing participants to solve an insight problem. To solve the problem, participants needed to trace all the lines of a geometric figure. In particular, they had to trace each line of the geometric figure only once, without lifting the pencil and without retracing any existing lines. To ensure task comprehension, participants first completed a solvable and easy practice problem. After this practice problem, they attempted to complete a second problem that was unsolvable. We instructed participants to contact the experimenter by pushing a red button on an intercom system if they wanted assistance solving the problem. We gave them unlimited time, and all participants eventually pressed the button to seek help. A computer recorded the length of time, in seconds, it took participants to call for assistance. Similar to previous research (Williams & Williams, 1983), this served as our measure of help seeking ($M = 25.93$, $SD = 13.65$). We searched for the presence of outliers by converting participants' help-seeking scores to z scores. One participant had a z score of 4.67, falling above the cut off of 3.29 (Field, 2013). We thus winsorized this participant's help-seeking score, replacing his or her original score (89.62) with the next highest score in the data set that was not an outlier (58.62). After winsorizing, $M = 25.41$, $SD = 11.59$.⁷

Results

Manipulation check. To test whether the ERT increased nostalgia, we submitted manipulation-check scores to a one-way (nostalgia vs. control) ANOVA. Participants in the nostalgia condition ($M = 5.00$, $SD = 1.47$) reported higher levels of nostalgia than those in the control condition ($M = 4.07$, $SD = 1.65$), $F(1, 57) = 5.21$, $p = .020$, $d = 0.60$, 95% CI [0.073, 1.117], demonstrating that the manipulation was effective.

Help seeking. To test whether nostalgia increased help seeking, we submitted help-seeking scores to a one-way (nostalgia vs. control) ANOVA. Nostalgic participants ($M = 22.40$, $SD = 8.53$) took a shorter amount of time to ask for help than controls ($M = 28.73$, $SD = 13.64$), $F(1, 57) = 4.66$, $p = .035$, $d = -0.56$, 95% CI [-1.084, -0.042].

Discussion

In replication of our prior findings, Experiment 3 showed that nostalgia promotes help seeking. More important, however, Experiment 3 extended our prior findings by illustrating that nostalgia facilitates help-seeking behavior. Nostalgia reduces the amount of time it takes to ask another person for help in problem solving.

⁶ Degrees of freedom are reduced, because two participants did not respond to the second manipulation-check item.

⁷ We used a similar procedure for identifying outliers and reducing their influence in Experiments 4 and 5. For each Experiment 3, 4, and 5, we additionally ran analyses on the raw (nonwinsorized) help-seeking scores. The results for these scores were essentially the same as those for the winsorized ones. We report all results involving help seeking for the raw scores in [online supplemental material](#).

Experiment 4

Although Experiment 3 supported nostalgia's influence on help-seeking behavior, it did not examine whether this influence is due to nostalgia's social character. In the present experiment, we therefore measured social connectedness prior to administering the behavioral help-seeking measure used in Experiment 3. We hypothesized that nostalgia would bolster social connectedness and help seeking, and that social connectedness would mediate the effect of nostalgia on help seeking.

Method

Participants. Sixty Sun Yat-Sen University undergraduate students (30 women, 30 men) participated ($M_{\text{age}} = 21.73$, $SD_{\text{age}} = 2.07$, range = 19–26). They completed all materials in private cubicles.

Materials and procedure. We first experimentally induced nostalgia with the ERT. Participants then filled out the 3-item manipulation check ($\alpha = .94$, $M = 3.44$, $SD = 1.62$) described in Experiment 2. Next, they completed the social connectedness scale ($\alpha = .88$, $M = 4.11$, $SD = 1.36$) described in Experiment 2. Finally, they completed the behavioral measure of help seeking ($M = 30.29$, $SD = 14.20$) described in Experiment 3. As in Experiment 3, all participants eventually sought help. One participant with a z score of 4.42 fell above the cut off of 3.29 (Field, 2013). We thus winsorized this participant's help-seeking score, replacing their original score (93.06) with the next highest score in the data set that was not an outlier (62.94). After winsorizing, $M = 29.79$, $SD = 12.36$.

Results

Manipulation check. We submitted manipulation-check scores to a one-way (nostalgia vs. control) ANOVA. Participants in the nostalgia condition ($M = 4.49$, $SD = 1.16$) reported being more nostalgic than those in the control condition ($M = 2.39$, $SD = 1.31$), $F(1, 58) = 43.08$, $p < .001$, $d = 1.70$, 95% CI [1.105, 2.285], demonstrating that the manipulation was effective.

Social connectedness and help seeking. To test whether nostalgia bolstered social connectedness and help seeking, we submitted social connectedness scores and help-seeking scores to separate one-way (nostalgia vs. control) ANOVAs. Regarding social connectedness, participants in the nostalgia condition ($M = 4.95$, $SD = .83$) manifested higher levels of social connectedness than those in the control condition ($M = 3.28$, $SD = 1.28$), $F(1, 58) = 36.05$, $p < .001$, $d = 1.55$, 95% CI [0.973, 2.127]. This result replicates Experiment 2 and similar findings in the literature (Cheung et al., 2013; Hepper et al., 2012; Wildschut et al., 2006). Regarding help seeking, participants in the nostalgia condition ($M = 24.65$, $SD = 9.12$) took less time to ask for help than those in the control condition ($M = 34.92$, $SD = 13.16$), $F(1, 58) = 12.36$, $p = .001$, $d = -0.908$, 95% CI [-1.439, -0.376], replicating Experiment 3 results.

Mediation analyses. To test whether the effect of nostalgia (vs. control) on increased help seeking was mediated by social connectedness, we conducted a bootstrapped mediation analysis (5,000 resamples using PROCESS; Hayes, 2018). The indirect effect of nostalgia (dummy coded: nostalgia = 1, control = 0) on help seeking

via social connectedness was significant ($ab = -6.06$, $SE = 3.03$, 95% CI [-12.906, -0.774]; see Figure 2). Thus, as hypothesized, social connectedness mediated the effect of nostalgia on help seeking. We again compared this mediational model to the alternative (in which help-seeking behavior was the mediator and social connectedness was the dependent variable) by computing AIC values for each model. The original model yielded a smaller AIC value (11.46) than the alternative (28.58), indicating that the original model fits the data better.

Discussion

In direct replication of Experiment 3, nostalgia bolstered help-seeking behavior. Extending upon Experiment 3, nostalgia's effect on help-seeking behavior was mediated by social connectedness. Nostalgia promotes help-seeking behavior, and it does so by fostering social connectedness.

Experiment 5

In Experiments 2 and 4, we measured social connectedness after manipulating nostalgia. Mediation analyses supported our hypothesis that nostalgia increases help seeking by virtue of its capacity to foster social connectedness. However, measuring (rather than manipulating) the mediating variable limits causal claims regarding its influence on help seeking (Spencer, Zanna, & Fong, 2005). Thus, in Experiment 5, we manipulated (rather than measured) the social character of nostalgia to ascertain its causal role. In particular, we compared the effects of a social nostalgic memory (social nostalgia condition) to a nonsocial nostalgic memory (nonsocial nostalgia condition) and an ordinary autobiographical memory (control condition) on help-seeking behavior.

We made three additional methodological improvements. First, in Experiments 2 and 4, when we measured social connectedness as the mediator, each item was preceded by the stem: "With this event in mind, I feel. . .". We included this stem, because our objective was to assess in-the-moment, or state-level, social connectedness (rather than trait-level social connectedness). We cannot rule out the possibility, however, that the stem's inclusion created demand characteristics. Manipulating, rather than measuring, the social character of nostalgia circumvents this potential problem. Second, in Experiments 3 and 4, some participants may have been aware that the problem was unsolvable. Thus, in Experiment 5, we asked participants if they realized that the problem was unsolvable and removed those who did. Third, in Experiments

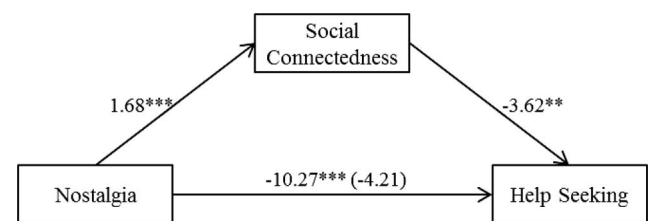


Figure 2. Mediation of the effect of nostalgia on help seeking by social connectedness in Experiment 4. All coefficients are unstandardized. For the path from nostalgia to help seeking, the coefficient outside of parentheses is the total effect and the coefficient inside parentheses is the direct effect. ** $p < .01$. *** $p < .001$.

3–4, nostalgia may have improved participants' mood. Perhaps, then, participants in the nostalgia condition quickly sought help in order to avoid a cognitively demanding task that could spoil their good mood (Sedikides, 1992). Some findings regarding the effects of mood on problem solving are consistent with this interpretation (Kaufmann & Vosburg, 1997). We addressed this issue by measuring mood and by adding instructions to reinforce the perception that the task was important and thus worthy of participants' effort.

Method

Participants. One hundred sixty-nine Sun Yat-Sen University undergraduate students (114 women, 55 men) participated ($M_{\text{age}} = 18.82$, $SD_{\text{age}} = 1.17$, range = 16–24). They completed all materials in private cubicles. We removed 29 participants because they were aware that there was no solution to the problem in the help-seeking task or failed to follow instructions for the task (e.g., pressed the wrong button on the intercom). The final sample consisted of 140 participants (94 women, 46 men; $M_{\text{age}} = 18.81$, $SD_{\text{age}} = 1.13$, range = 16–22).

Materials and procedure. We first randomly assigned participants to the social nostalgia condition, nonsocial nostalgia condition, or control condition. The conditions were based on the ERT (Sedikides et al., 2015). In the social nostalgia condition, we provided participants with the definition of nostalgia from *The New Oxford Dictionary of English* (Pearsall, 1998) and informed them that “people are often nostalgic about times with other people, such as family, friends, partner, or generally close others.” We then instructed them to “think of a nostalgic event in your life that involves close others. Specifically, try to think of a past event (involving close others) that makes you feel most nostalgic. Bring this nostalgic experience to mind. Immerse yourself in the nostalgic experience and think about how it makes you feel?” Following this, we asked participants to “write down four keywords relevant to this nostalgic event that involves close others (i.e., words that describe the experience).” Finally, we gave them a space to write and instructed them, “for the next five minutes, we would like you to write about the nostalgic event. Immerse yourself into this nostalgic experience. Describe the experience and how it makes you feel.”

In the nonsocial nostalgia condition, we provided participants with the definition of nostalgia from *The New Oxford Dictionary of English* (Pearsall, 1998) and informed them, “People are often nostalgic about things, such as childhood toys, songs, TV shows, landscapes, and films.” We then instructed them to “think of a nostalgic event in your life that involves some (i.e., one or more) of these things. Specifically, try to think of a past event (involving some of these things) that makes you feel most nostalgic. Bring this nostalgic experience to mind. Immerse yourself in the nostalgic experience and think about how it makes you feel?” Following this, we asked participants to “write down four keywords relevant to this nostalgic event that involves some of these things (i.e., words that describe the experience).” Finally, we gave them a space to write and instructed them, “for the next five minutes, we would like you to write about the nostalgic event. Immerse yourself into this nostalgic experience. Describe the experience and how it makes you feel.” In the *control condition*, participants responded to the instructions about an ordinary autobiographical event as in all prior experiments.⁸

Subsequently, participants completed the manipulation check described in Experiment 2 ($\alpha = .90$, $M = 4.62$, $SD = 1.22$). Next, they completed a brief measure of mood (Hepper et al., 2012; Leunissen, Sedikides, Wildschut, & Cohen, 2018; Wildschut et al., 2006) indicating their agreement with four statements (1 = *strongly disagree*, 6 = *strongly agree*). Two statements assessed positive mood (“I feel happy,” “I feel in a good mood”). Responses to them were highly correlated, $r(138) = .89$, $p < .001$, 95% CI [.846, .918], and we averaged them to compute positive mood scores ($M = 4.47$, $SD = 1.37$). The remaining two statements assessed negative mood (“I feel unhappy,” “I feel sad”). Responses to them were also highly correlated, $r(138) = .78$, $p < .001$, 95% CI [.711, .841], and we averaged them to compute negative mood scores ($M = 2.35$, $SD = 1.40$).

Finally, participants completed the same behavioral measure of help seeking as in Experiments 3 and 4. To communicate that it was an important task and encourage effort, we stated that the task is used “to evaluate your cognitive abilities” and to “take as much time as you need.” Participants did show evidence of strong engagement in the task, as it took them notably longer to seek help ($M = 162.96$, $SD = 129.68$) than in Experiments 3 and 4. All participants eventually sought help. Two participants had z scores of 4.72, above the 3.29 threshold (Field, 2013). We thus winsorized their help-seeking score, replacing their original score (775.52 and 775.50, respectively) with the next highest score in the data set that was not an outlier (548.29). After winsorizing, $M = 159.71$, $SD = 116.38$.

Results

We display means and standard deviations for the outcome variables within each experimental condition in Table 3.

Nostalgia manipulation check. To test whether the social nostalgia and nonsocial nostalgia conditions increased nostalgia relative to the control condition, we submitted manipulation-check scores to a one-way (social nostalgia vs. nonsocial nostalgia vs.

⁸ To check whether the narratives written for the manipulation contained more social experiences in the social nostalgia condition than in the nonsocial nostalgia and control conditions, two independent coders read each participants' responses and rated, “To what extent does this participant's narrative involve other people?” (0 = *not at all*, 3 = *a lot*). The coders were unaware of the conditions. We examined consistency across coders by computing a two-way random-effects intraclass correlation (ICC; Shrout & Fleiss, 1979) between the coders' ratings (ICC = .79, $p < .001$, 95% CI [.708, .850]). Given the good reliability (Koo & Li, 2016), we averaged coder responses to compute sociality ratings ($M = 1.83$, $SD = 0.98$). We submitted sociality ratings to a one-way (social nostalgia vs. nonsocial nostalgia vs. control) ANOVA to test whether participants' narratives in the social nostalgia condition ($M = 2.71$, $SD = 0.41$) contained more social experiences than in the nonsocial nostalgia condition ($M = 1.52$, $SD = 0.88$) and the control condition ($M = 1.24$, $SD = 0.86$). This revealed a main effect, $F(2, 137) = 50.94$, $p < .001$, $\eta_p^2 = .43$, 90% CI [.319, .505]. (We report 90% CIs for η_p^2 , because the F test is one-sided [Steiger, 2004].) Planned orthogonal contrasts revealed that, as intended, the narratives in the social nostalgia condition involved other people more than the narratives in the nonsocial nostalgia and control conditions (pooled), $F(1, 137) = 98.47$, $p < .001$, $\eta_p^2 = .42$, 90% CI = [.315, .501]. The narratives for participants in the nonsocial nostalgia condition and control condition did not differ significantly, $F(1, 137) = 3.18$, $p = .077$, $\eta_p^2 = .02$, 90% CI [.000, .078], although there was a trend for narratives in the nonsocial nostalgia condition to involve other people more than narratives in the control condition.

Table 3
Means and Standard Deviations for Experimental Conditions in Experiment 5

	Social nostalgia	Nonsocial nostalgia	Control
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)
Nostalgia check	4.73 (1.00)	5.06 (0.94)	4.10 (1.46)
Help seeking	123.54 (72.63)	186.95 (149.15)	178.89 (146.14)
Positive mood	4.41 (1.34)	4.40 (1.53)	4.59 (1.25)
Negative mood	2.57 (1.38)	2.58 (1.61)	1.89 (1.10)

Note. Numbers outside parentheses are means. Numbers inside parentheses are standard deviations.

control) ANOVA. This revealed a significant main effect, $F(2, 136) = 8.21, p < .001, \eta_p^2 = .11, 90\% \text{ CI } [.002, .108]$ (degrees of freedom for analyses on the manipulation check are reduced because one person did not complete the manipulation check). (We report 90% CIs for η_p^2 , because the F test is one-sided [Steiger, 2004].) We proceeded with planned orthogonal contrasts to localize it. (We used similar planned contrasts for all our analyses.) First, we compared the two nostalgia conditions (pooled) to the control condition. As intended, participants in the nostalgia conditions reported greater nostalgia than those in the control condition, $F(1, 136) = 14.70, p < .001, \eta_p^2 = .09, 90\% \text{ CI } [.032, .181]$. Second, we compared the two nostalgia conditions to each other, which did not significantly differ, $F(1, 136) = 1.86, p = .175, \eta_p^2 = .01, 90\% \text{ CI } [.000, .062]$. The manipulation was effective.

Help seeking. To test whether the experimental conditions had an effect on help seeking, we submitted help-seeking scores to a one-way (social nostalgia vs. nonsocial nostalgia vs. control) ANOVA. This revealed a significant main effect, $F(2, 137) = 3.60, p = .030, \eta_p^2 = .05, 90\% \text{ CI } [.003, .112]$. Participants in the social nostalgia condition took a shorter amount of time to ask for help than those in the nonsocial nostalgia and control conditions (pooled), $F(1, 137) = 7.10, p = .009, \eta_p^2 = .05, 90\% \text{ CI } [.007, .119]$. The difference between the nonsocial nostalgia and control conditions was not significant, $F(1, 137) = 0.11, p = .737, \eta_p^2 = .001, 90\% \text{ CI } [.000, .024]$.

The role of mood. To examine whether mood played a role in nostalgia's effect on help seeking, we first submitted positive and negative mood scores to separate one-way (social nostalgia vs. nonsocial nostalgia vs. control) ANOVAs. The main effect of the experimental conditions on positive mood was not significant, $F(2, 137) = 0.26, p = .774, \eta_p^2 = .004, 90\% \text{ CI } [.000, .024]$. Additionally, positive mood was not associated with help seeking, $r(138) = .02, p = .801, 95\% \text{ CI } [-.145, .186]$. These findings rule out the possibility that the effect of social nostalgia (vs. nonsocial nostalgia and control) on help seeking was due to positive mood.

The main effect of experimental conditions on negative mood was significant, $F(2, 137) = 3.85, p = .024, \eta_p^2 = .053, 90\% \text{ CI } [.004, .116]$. The contrasts revealed that participants in the social nostalgia condition did not significantly differ from those in the nonsocial nostalgia and control conditions (pooled), $F(1, 137) = 1.91, p = .169, \eta_p^2 = .01, 90\% \text{ CI } [.000, .062]$. However, those in the nonsocial nostalgia condition reported significantly higher levels of negative mood than those in the control condition, $F(1, 137) = 5.74, p = .018, \eta_p^2 = .04, 90\% \text{ CI } [.004, .106]$. Additionally, the association between negative mood and help seeking was

not significant, $r(138) = .01, p = .906, 95\% \text{ CI } [-.156, .176]$. This suggests that negative mood did not play a role in the effect of social nostalgia (vs. nonsocial nostalgia and control) on help seeking.

As a cautionary measure, we reran all the analyses on help seeking while controlling for positive and negative mood. The results were essentially the same. In particular, the main effect of the experimental conditions remained significant, $F(2, 135) = 3.83, p = .024, \eta_p^2 = .05, 90\% \text{ CI } [.004, .117]$. The contrast comparing the social nostalgia condition to the nonsocial nostalgia and control conditions (pooled) remained significant, $F(1, 135) = 7.62, p = .007, \eta_p^2 = .05, 90\% \text{ CI } [.009, .125]$. Finally, the contrast comparing the nonsocial nostalgia and control conditions was not significant, $F(1, 135) = 0.008, p = .927, \eta_p^2 < .001, 90\% \text{ CI } [.000, .005]$.⁹

Discussion

Consistent with the previous experiments, Experiment 5 revealed that nostalgia promotes help seeking due to its social character. Specifically, reflecting nostalgically on a social (but not a nonsocial) experience increased help seeking. By manipulating the putative active ingredient of nostalgia (i.e., its social character), we were able to ascertain its causal effect on help seeking and circumvent potential demand characteristics. We also showed that nostalgia's influence on help seeking is not due to mood or, relatedly, a lack of engagement with the problem as a way of preserving one's good mood.

General Discussion

Nostalgia fosters social connectedness (Sedikides & Wildschut, 2019; Wildschut et al., 2006; Wildschut, Sedikides, Routledge, Arndt, & Cordaro, 2010). As such, we hypothesized that it would increase the likelihood of seeking help from others (Bohns & Flynn, 2010; Downey & Feldman, 1996; Shapiro, 1983). We obtained strong support for this hypothesis.

In the preliminary study, nostalgia predicted increased help seeking, and did so above and beyond other emotions, be it positive or negative. In Experiments 1 and 2, nostalgia augmented self-reported help seeking. Further, in Experiment 2, the effect of nostalgia on self-reported help seeking was transmitted by social connectedness. We then moved from measuring self-reported help-seeking to measuring help-seeking behavior. In Experiments 3 and 4, nostalgia increased help-seeking behavior. Further, in Experiment 4, the effect of nostalgia on help-seeking behavior was transmitted by social connectedness. In Experiment 5, we replicated these findings by manipulating (rather than measuring) the

⁹ Nostalgia inductions typically, but not always, increase positive mood (Sedikides et al., 2015). Thus, the present null effect on positive mood is surprising, but not unprecedented. It is noteworthy that some previous studies reporting null effects on positive mood also involved Chinese samples (Zhou et al., 2012, Studies 2 through 4). Although nostalgia inductions rarely influence negative mood in individual studies, a recent integrative data analysis (Leunissen, Wildschut, Sedikides, & Routledge, 2019) revealed a small but significant effect of nostalgia on (increased) negative mood. The present results for negative mood are consistent with this pattern. Nonetheless, positive mood significantly exceeded negative mood in all three conditions of the experiment ($p < .001$).

social character of nostalgia. Across experiments, nostalgia increased help seeking in both Western (Experiments 1 and 2) and Eastern (Experiments 3 through 5) samples, as well as in samples of young adults (Experiments 1, 3, 4, and 5) and in samples with a wider age range (preliminary study, Experiment 2). Additionally, both measured (preliminary study) and manipulated (Experiments 1 through 5) nostalgia predicted greater help seeking. Taken together, nostalgia promotes help seeking due to its social character.

The Role of Social Connectedness and the Relevance of Nostalgia

Our research indicates that nostalgia's capacity to foster social connectedness is a reason why it promotes help seeking. Social connectedness, thus, plays a key role in the effect of nostalgia on help seeking. Given this, how necessary is nostalgia for promoting help seeking? We argue that, although nostalgia is not the only way to foster social connectedness, it is nevertheless a useful and convenient means to do so in times of need.

One can engage in nostalgic reverie in the absence of other persons. Gardner, Pickett, and Knowles (2005) outlined two strategies for meeting interpersonal needs: direct and indirect. Direct strategies are implemented when suitable interaction partners are available, and they are geared toward connecting with these potential interaction partners. Indirect strategies, on the other hand, are implemented when suitable interaction partners are unavailable, and they rely on mental representations of interpersonal relationships in an attempt to nurture social connectedness. Nostalgia is an effective indirect strategy. It can be harnessed to cultivate social connectedness in the absence of others.

We found in Experiment 5 that only social nostalgia and not nonsocial nostalgia strengthened help seeking. This similarly raises concerns about the relevance of nostalgia, broadly conceived. That is, if nonsocial nostalgia fails to increase help seeking, then perhaps nostalgia in and of itself does not lead to help seeking. However, the purpose of Experiment 5 was to experimentally isolate the active ingredient in nostalgia that is responsible for its influence on help seeking. We accomplished this purpose by deliberately stripping nostalgia of its typical social content in the nonsocial nostalgia condition, and consistent with our hypothesis, this condition did not strengthen help seeking (compared with control). We were thus able to create a situation in which nostalgia was not social and did not increase help seeking. However, in its natural and unconstrained form, nostalgia is nearly always social (Sedikides & Wildschut, 2019), and it is thus highly likely to strengthen help seeking.

The Practical Utility of Nostalgia's Social Character

Our research is congruent with, and builds upon, previous work illustrating the social character of nostalgia. First, our research replicates nostalgia's positive influence on social connectedness (Cheung et al., 2013; Hepper et al., 2012; Wildschut et al., 2006). Second, in showing that nostalgia reduces the reluctance to seek help, our research aligns with findings that the emotion decreases social distancing and fortifies approach-oriented social behavior (Stephan et al., 2014; Zhou, Wildschut, Sedikides, Chen, & Vingerhoets, 2012; see also Abeyta et al., 2015). The approach-oriented property of nostalgia has practical utility. For example,

Zhou et al. (2012) demonstrated that imbuing a charity's appeal for donations with nostalgic sentiment boosts monetary donations to the charity (see also Marchegiani & Phau, 2010; Schindler & Holbrook, 2003). That is, nostalgia can promote real-world help giving behavior. Our research suggests it could also be used to promote real-world help seeking. Various charities and support groups offer help to users. Such organizations could similarly infuse their advertisements with nostalgic content to raise the likelihood that people will make use of their supportive services and receive the help they need.

Another practical utility of our findings stems from our above discussion of nostalgia as an indirect strategy for garnering social connectedness, and thus, building the courage to seek help. Because nostalgia can be used to bolster social connectedness in the absence of close others (Gardner et al., 2005), it may be useful in challenging circumstances where help from others is beneficial. Life transitions (e.g., going to college, relocating, moving to a nursing facility) often entail leaving one's existing support network and, at the same time, necessitate help from others. For example, recently relocated individuals do not enjoy the direct and accustomed social support from friends and family, yet could benefit from others' help (e.g., finding a new doctor's office, setting up utilities, locating a suitable preschool). Poor health or bereavement similarly disrupt social support networks, while also requiring assistance from others. Moreover, in some instances, lonely individuals (e.g., widowed or older persons) may be the ones who are particularly in need of more help. Under these challenging circumstances, nostalgia, as an indirect source of social connectedness, can provide the psychological impetus to soliciting needed help.

Social Connectedness and Help Seeking

We found that nostalgia reduced the reluctance to seek help because it fosters social connectedness. An important follow-up question for future investigations is why social connectedness is implemented in greater help seeking. We propose that social connectedness is linked with greater help seeking because it helps overcome some common barriers to help seeking. One reason people avoid seeking help is because they perceive that the quality of help or the effort of the helper will be insufficient (Newark, Bohns, & Flynn, 2017). However, having strong perception of social support entails a positive view of others as supportive and dependable (Baldwin, 1992; Baldwin, Fehr, Keedian, Seidel, & Thomson, 1993; Bartholomew & Horowitz, 1991; Collins & Read, 1990). Such positive views of others could increase the perception that others will put forth the effort needed to provide satisfactory help.

People can also be deterred from seeking help because doing so risks rejection (Flynn & Lake, 2008). That is, the potential feeling of social rejection if one's request for help is denied can prevent people from seeking help. A stronger sense of connectedness, however, may insulate individuals from the effects of this potential rejection. This could happen in two possible ways. First, a broad sense of connectedness and acceptance may make individuals feel like they are less likely to have their request for help rejected. Second, social connectedness may make individuals feel like they are able to psychologically withstand rejection because their need for connectedness is generally fulfilled.

Impression management can also prevent people from seeking help. Seeking help can expose one's inadequacies and lead to embarrassment (Bohns & Flynn, 2010; Gulliver, Griffiths, & Christensen, 2010; Lee, 2002). However, social connectedness can help affirm the self (Kumashiro & Sedikides, 2005) and bolster self-esteem (Cheung et al., 2013; Stephan et al., 2015), and as such, may attenuate such concerns. Finally, people fail to seek help if they do not foresee the opportunity to reciprocate (Morris & Rosen, 1973). The norm to reciprocate a favor, however, weakens as relationship closeness increases (Clark & Mills, 2012). Social connectedness, which entails the perception of stronger relational bonds, may weaken that norm, thus encouraging help seeking.

Factors Influencing Help Seeking and Future Directions

Our findings additionally contribute to the understanding of factors that affect help-seeking behavior. Prior work has identified several such factors, including the nature of the task at hand or cultural values (Nadler, 1986). Moreover, characteristics of potential helpers, such as attractiveness (Nadler, Shapira, & Ben-Itzhak, 1982), social group (Bogart, 1998), or status (Halabi, Dovidio, & Nadler, 2014), and individual differences, such as achievement motivation (Tessler & Schwartz, 1972), can influence help-seeking behavior. Our findings bring to the fore nostalgic reverie as a determinant of help seeking and offer avenues for future research to integrate nostalgia with other factors that determine help seeking. In particular, nostalgia may play a role in how the status, attractiveness, and ethnicity of the helper influences help seeking.

Regarding status, individuals with higher status are generally reluctant to seek help from lower status individuals, because doing so may compromise their status (Halabi et al., 2014). Individuals with low status are conversely reluctant to seek help from someone of higher status, because doing so would illustrate their dependence and affirm their lack of power (Lee, 1997). Our research suggests that nostalgic reverie might break this dynamic. In Experiments 3 through 5, when participants sought help, they did so from the experimenter, who had higher status in this context. Nostalgia may similarly overcome the hesitance of higher status individuals to seek help from lower status ones.

Regarding attractiveness, Nadler et al. (1982) found that people are particularly reluctant to seek help from an attractive individual. They suggested these findings are due to people's fear of exposing inadequacies to an attractive individual. Similarly, people may be more sensitive to having their request for help rejected by an attractive individual. As discussed in the previous section, the sense of connectedness conferred by nostalgia may buffer the threat of rejection and circumvent self-presentational concerns. Nostalgizing may thus thwart the tentativeness to request help from attractive others.

Regarding ethnicity, when deciding whether to seek help, individuals rely on available stereotypes of the potential helper's social group. Specifically, believing the stereotype that Asians are good at math is associated with increased help seeking from an Asian on a math task (Bogart, 1998). Dispositional nostalgia is associated with the motivation to reduce prejudice (Cheung, Sedikides, & Wildschut, 2017). Yet, the impact of experimentally induced nostalgia on stereotype use is unknown. However, nostalgia reduces stigmas associated with certain groups of individuals, such as older

persons (Turner, Wildschut, & Sedikides, 2018), overweight persons (Turner, Wildschut, & Sedikides, 2012), and persons with mental illness (Turner, Wildschut, Sedikides, & Gheorghiu, 2013). Perhaps, then, nostalgia may reduce the proclivity to use stereotypes when deciding to solicit help.

Conclusion

Although individuals are generally hesitant to ask others for help, nostalgia attenuates this reticence. By fostering social connectedness, nostalgia promotes help-seeking behavior. These findings pave the way for exciting lines of inquiry into the role of nostalgic reverie in help seeking.

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