

# A meta-analysis on the psychological and behavioral consequences of nostalgia: The moderating roles of nostalgia activators, culture, and individual characteristics

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## Abstract

While previous research suggests that nostalgia can stimulate future-oriented motivation and goal pursuit, the presence of conflicting findings complicate our understanding of the psychological and behavioral consequences of nostalgia. This study introduces and empirically validates a theoretical framework for nostalgia through a meta-analysis of 90 effect sizes and 9757 aggregate samples from 22 experimental studies. Our findings enrich understanding of the effects of nostalgia, showing that compared to a control, nostalgia enhances consumers' sense of pleasantness, self-continuity, attitudes, and behavioral intentions. We also identify several moderators that shape the effects of nostalgia, namely nostalgia activators, culture, and individual characteristics. Intriguingly, stronger behavioral intentions manifest in response to nostalgic events (rather than objects), realistic (over nonrealistic) scenarios, visual (as opposed to textual) priming, and female-majority (vs. male-majority) samples. However, we observe that long-term (vs. short-term) oriented cultures exhibit diminished nostalgia effects. Furthermore, we find no significant variations in responses based on age (older vs. younger), type of nostalgic experience (personal vs. collective), and sample type (students vs. nonstudents). Collectively, our meta-analysis reveals the intricate dynamics of nostalgia, emphasizing its profound impact on consumer behavior as shaped by moderators such as nostalgia activators, culture, and individual characteristics, thereby providing a multifaceted and nuanced understanding of nostalgia.

## KEYWORDS

attitudes, behavioral intentions, meta-analysis, nostalgia, nostalgia appraisals, pleasantness, self-continuity

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## 1 | INTRODUCTION

Nostalgia, an affective connection with the past, significantly impacts consumer responses in the present (Huang et al., 2016; Kessous et al., 2015; Muehling & Pascal, 2011; Park et al., 2010; Routledge et al., 2011). In recent years, there has been a notable surge in nostalgia research within the field of marketing (e.g., Fan et al., 2020; Gong et al., 2023; Spielmann et al., 2018). These studies underscore the significant impact of nostalgia on consumer outcomes and its strategic utility in informing managerial decisions (e.g. Lasaleta et al., 2014; Muehling et al., 2014; Sierra & McQuitty, 2007). With nostalgia representing a US\$7.6 trillion market in the United States (Euro-monitor, 2017), businesses continue to leverage it as a strategic tool to drive sales, increase revenue, and strengthen branding, as demonstrated by Nike's nostalgic advertising for its 50th anniversary (Nike, 2022).

Despite the undeniable theoretical and practical significance of nostalgia, the current body of knowledge presents inconsistent results concerning its consequences on consumer behavior. While many studies report positive effects (e.g., Gong et al., 2023), others indicate neutral (e.g., Lasaleta & Loveland, 2019) or even negative effects (e.g., Wang & Chao, 2020). Recent research also reveals that the broader impact of nostalgia on affect and behavior remains largely unexplored, limiting our understanding of its unique outcomes (Van Tilburg et al., 2019). This fragmentation and conflicting findings challenge both researchers and practitioners (Hunter & Schmidt, 1991), calling for systematic and generalizable empirical testing (Borenstein et al., 2009).

To address this gap, our research proposes and tests a theoretical framework for nostalgia through a meta-analysis of 90 effect sizes and 9757 cumulative samples across Asia, Europe, and North America. Specifically, we aim to (1) systematize the body of knowledge of nostalgia and its psychological and behavioral consequences (i.e., pleasantness, self-continuity, attitudes, and behavioral intentions) and (2) examine the moderators that influence the effects of nostalgia. Building on Van Tilburg et al.'s (2019) appraisal theory of nostalgia, which positions nostalgia as future-oriented and fostering approach motivation and goal pursuit, we explore various nostalgia activators (e.g., recall, intensity, concept, priming, and type), cultures (e.g., long-term vs. short-term cultural orientation), and individual characteristics (e.g., sample type, gender ratio, and mean age).

By conducting a systematic meta-analytic review of nostalgia and its consequences and moderators, we reconcile prior research findings and contribute to the existing literature. Additionally, we offer a meta-analytical theoretical framework for nostalgia that addresses fragmentation in the field across nostalgia activators, cultures, and individual characteristics. Our research thus provides comprehensive insights into the moderators of nostalgia effects based on studies conducted in diverse contexts, offering a breadth and depth unattainable in primary studies (Hulland & Houston, 2020). Finally, we discuss the theoretical and practical implications of our findings, paving the way for future research in the realm of nostalgia.

## 2 | NOSTALGIA AND ITS CONSEQUENCES

Nostalgia serves as a powerful marketing tool due to its positive impact on consumer behavior (Gong et al., 2023; Huang et al., 2016). For example, nostalgic cues (e.g., perfume scents) can elicit pleasant experiences (Orth & Bourrain, 2008) and cultivate meaning in consumers' lives, leading to increased customer loyalty (Hwang & Hyun, 2013). In this research, we leverage nostalgia approach-oriented property to develop an empirical generalization of the growing literature on nostalgia and its psychological and behavioral consequences, including pleasantness, self-continuity, attitudes, and behavioral intentions. Specifically, we propose a meta-analytical theoretical framework to assess the effects of experimentally manipulated nostalgia appraisals and their consequences (Figure 1), addressing inconsistencies in previous research findings. We also examine theoretical and contextual moderators of nostalgia, such as nostalgia activators, culture, and individual characteristics.

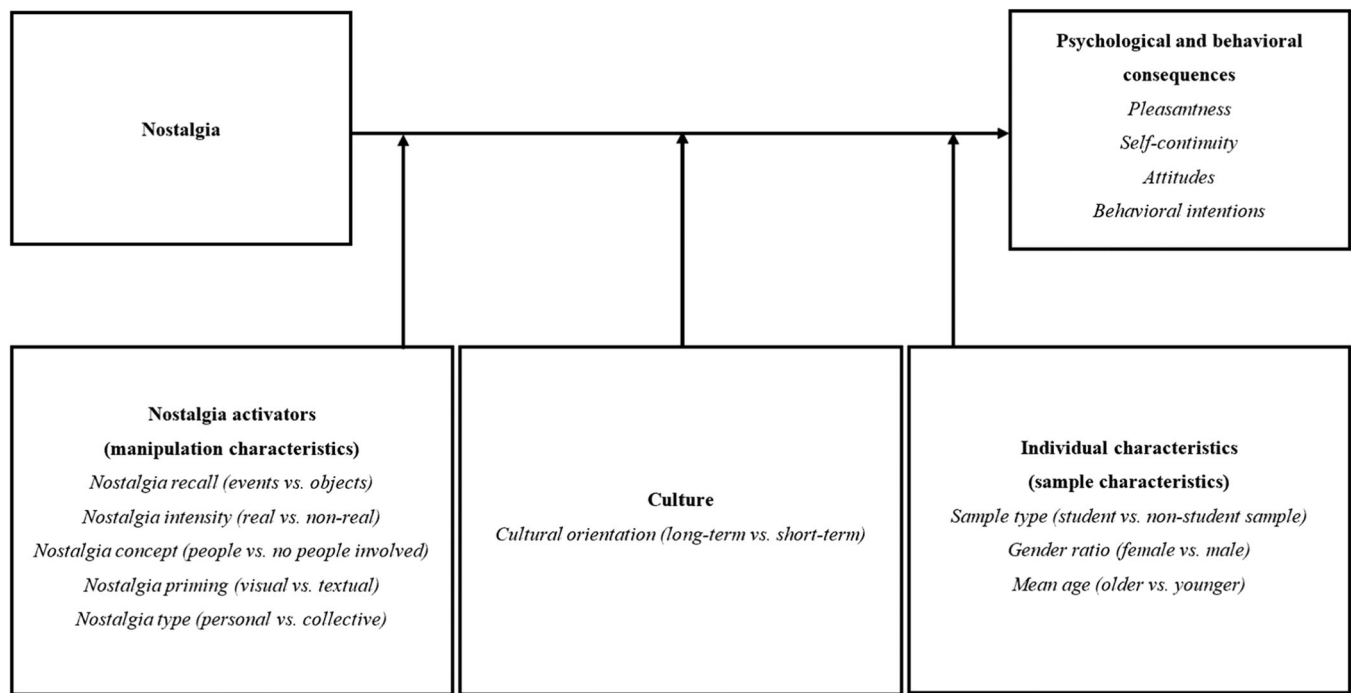
### 2.1 | Nostalgia and pleasantness

Nostalgia represents a sentimental longing for past experiences, evoking reminiscences of positive events (Huang et al., 2016). Nostalgic emotions facilitate connections with positive feelings from the past, imbuing consumers' lives with meaning (Routledge et al., 2011), as nostalgia recalls special occasions personally experienced by the consumer (Muehling & Pascal, 2011). Consumers often recall people, objects, and events more positively than they actually occurred (Merchant et al., 2011). Prototypical conceptions of nostalgia (Hepper et al., 2012) suggest that the emotion comprises fond, self-relevant, and social recollections primarily characterized by positive features (e.g., happiness, warmth, and pleasantness). Most nostalgic reflections induce positive emotions (Leunissen et al., 2021; Sedikides et al., 2016) as consumers feel warm and content (Hepper et al., 2012). Consequently, we propose the following hypothesis:

**H1.** Nostalgia positively influences consumers' sense of pleasantness.

### 2.2 | Nostalgia and self-continuity

Nostalgia is a self-relevant emotion frequently originating from consumers' involvement in past social events (Sedikides & Wildschut, 2019; Wildschut et al., 2006), influencing their experiences by transforming lived experiences into an idealized past (Holbrook & Schindler, 1994). As a result, nostalgia affects how consumers regulate and bolster their current and future self-esteem (Wildschut et al., 2006) and increases the accessibility of their intrinsic self-concept (Baldwin et al., 2015) and sense of meaning in life (Routledge et al., 2011; Sedikides & Wildschut, 2018). This assumption is grounded in existing literature that



**FIGURE 1** A meta-analytical theoretical framework of nostalgia.

found positive effects of nostalgia in promoting self-indulgence and fostering self-continuity (Wang et al., 2018). Special occasions and events (e.g., a child's birthday, family gathering, or holidays) can trigger nostalgic feelings that shape consumers' self-conception and emotions (Holbrook, 1993; Lasaleta et al., 2014) and inform their appraisal of life experiences (Holak & Havlena, 1998). Therefore, we posit that:

**H2.** Nostalgia positively influences consumers' sense of self-continuity.

### 2.3 | Nostalgia, attitudes, and behavioral intentions

Although prior research presents mixed findings regarding the consequences of nostalgia, the majority of findings report positive and significant effects (e.g., Chung, 2019; Gong et al., 2023). As such, we posit that nostalgia will enhance consumer attitudes and behavioral intentions. These positive effects can be attributed to the tendency for nostalgia to evoke sweeter feelings (e.g., happiness or warmth) rather than bitter ones (e.g., loss or sadness) (Zhou et al., 2008), leading to positive outcomes arising from nostalgic emotions (Wildschut et al., 2006). Given that nostalgia approach-oriented potential is likely to extend to attitudes and behavioral intentions, we propose the following hypotheses:

**H3.** Nostalgia positively influences consumers' attitudes.

**H4.** Nostalgia positively influences consumers' behavioral intentions.

### 2.4 | Moderators shaping the effects of nostalgia

Various manipulation strategies have been employed in marketing studies to evoke nostalgia, including brands (e.g., Nam et al., 2016) and products (e.g., Gong et al., 2023; Langaro et al., 2020), such as food (e.g., Quach et al., 2022; Wang & Chao, 2020; Zhou et al., 2019), events (e.g., Hallegatte et al., 2018), places (e.g., Ma et al., 2021), photos (e.g., Chang & Feng, 2016), and songs (e.g., Hallegatte et al., 2018). Nostalgia can also be activated by objects (e.g., incidentally through tastes or songs) or people (e.g., conversations with close friends or family) (Wildschut et al., 2006). We examine the following theoretical and contextual moderators related to nostalgia appraisals: (1) theoretical moderators—nostalgia activators (e.g., nostalgia recall, nostalgia intensity, nostalgia concept, nostalgia priming, and nostalgia type) and (2) contextual moderators—culture (long-term vs. short-term cultural orientation) and individual characteristics (e.g., sample type, gender ratio, and mean age).

#### 2.4.1 | Nostalgia activators

We evaluate the five following nostalgia manipulation methods: nostalgia recall (events vs. objects), nostalgia intensity (realistic vs. nonrealistic), nostalgia concept (people vs. no people involved), nostalgia priming (visual vs. textual), and nostalgia type (personal vs. collective).

Regarding *nostalgia recall*, we investigate whether nostalgia manipulation using events (compared to objects) would enhance the strength of the direct effect of nostalgia on consumers' behavioral

intentions. Nostalgia studies often employ this strategy to evoke memories and elicit nostalgic feelings (e.g., event reflection task) (Wildschut et al., 2006). Other nostalgia research opts to use objects to evoke nostalgia (e.g., vintage products) (Schibik et al., 2022). We hypothesize that events (compared to objects) will exert a stronger effect on the main direct effects because they are more personal and, therefore, more connected to the individual. More formally, we propose that:

**H5.** The effects of nostalgia are stronger when recalled through events than objects.

Regarding *nostalgia intensity*, we examine whether the manipulation evoked by realistic situations (e.g., listing five common food items most likely to make you feel nostalgic) (Gong et al., 2023) differed from nonrealistic ones (e.g., cartoon characters) (Zhou et al., 2019). We posited that nostalgia consequences would be stronger in realistic situations than nonrealistic ones, based on the notion that realistic situations are more tangible than nonrealistic ones and nostalgia is more present during experiments. Therefore, we hypothesize that:

**H6.** The effects of nostalgia are more intense in realistic than nonrealistic scenarios.

Regarding *nostalgia concept*, we investigate the possible difference between studies using people (e.g., friends and families exposed to ads) (Chang & Feng, 2016) versus those that did not (e.g., a Led Zeppelin song) (Hallegatte et al., 2018). Studies employing people (e.g., Chang & Feng, 2016; Lasaleta et al., 2014) project nostalgia through a third party, as it is not directly linked to the individual. As a result, this type of manipulation is more indirect. We suspect that nostalgia outcomes will be stronger when the activation does not involve people. Therefore, we propose the following hypothesis:

**H7.** The effects of nostalgia are stronger when evoked with people than without them.

Regarding *nostalgia priming*, we examine the possible difference between visual (e.g., Starbucks brand) (Nam et al., 2016) and textual (e.g., listing five common food items most likely to make you feel nostalgic) (Zhou et al., 2019) manipulations. Visual manipulation may be more tangible and capable of evoking more than just a nostalgic feeling. Consequently, we expect that visual nostalgia priming will have a stronger effect on nostalgia consequences. Thus, we posit the following hypothesis:

**H8.** The effects of nostalgia are stronger with visual than textual priming.

Regarding *nostalgia type*, we analyze the possible influence of the nature of the nostalgic experience, which can be personal (directly experienced by the person) or collective (an experience shared by a

group of people) (Holak & Havlena, 1998). Since personal nostalgia stems from memories directly experienced by the consumer, we assume that personal nostalgia will have stronger consequences than collective nostalgia. Thus, we propose that:

**H9.** The effects of nostalgia are stronger when evoked by personal than collective experience.

## 2.4.2 | Individual characteristics

Consistent with the meta-analytical tradition, we investigated the three following individual characteristics that could attenuate or enhance nostalgia consequences: sample type (student vs. nonstudent), gender ratio (female vs. male), and mean age.

Regarding *sample type*, we anticipate that studies using student samples would tend to evoke stronger relationships than nonstudent studies since student samples are more homogeneous (Fern & Monroe, 1996). Thus, the following hypothesis is presented:

**H10.** The effects of nostalgia are more prominent among students than nonstudents.

Regarding *gender ratio*, we propose that samples with a predominance of women (vs. men) would be more effective in responding to nostalgic feelings through intentions. According to the literature, nostalgia is an ambivalent emotion, and women report a higher intensity of ambivalent emotions (Leunissen et al., 2021). Thus, we hypothesize the following:

**H11.** The effects of nostalgia are more prominent among females than males.

Regarding *mean age*, we expect that older (vs. younger) samples will tend to evoke a stronger association with nostalgia and subsequently influence consumer outcomes. This is in line with the literature positing that older (vs. younger) adults have more extensive memory storage (Leunissen et al., 2021; Schulkind et al., 1999). Therefore, we propose that:

**H12.** The effects of nostalgia are more prominent among older than younger adults.

## 2.4.3 | Culture

In this meta-analysis, we utilized the long-term cultural orientation framework proposed by Hofstede (2010) to assess the potential implications of nostalgia effects. Prior research has demonstrated that nostalgia is a cross-cultural experience (Hepper et al., 2014). We selected this particular dimension of culture due to its inherent connection with life's temporal progression, encapsulating the past, present, and future (Hofstede, 2011). Within this framework,

societies characterized by long-term cultural orientation typically exhibit greater receptivity toward future rewards, whereas those with a short-term cultural orientation display a stronger propensity towards rewards linked with the past and present (Hofstede, 2010). Given that nostalgia inherently evokes past memories, it logically follows that its effects may be more pronounced in societies with a short-term cultural orientation compared to those with a long-term cultural orientation. In light of this, we put forth the final hypothesis of our theoretical framework:

**H13.** The effects of nostalgia are more prominent in short-term than long-term orientated cultures.

### 3 | METHODOLOGY

#### 3.1 | Data collection and inclusion criteria

##### 3.1.1 | Data collection

Meta-analysis is an established statistical method used to combine results from multiple independent studies to derive a comprehensive and robust conclusion. The method is widely used in business (Liao et al., 2023), psychology (Moldes & Ku, 2020), and marketing (Ladeira et al., 2023). Our meta-analysis endeavored to examine the role of nostalgia in marketing by focusing on experimental studies. We conducted an exhaustive search of relevant literature through multiple electronic databases, including Scopus and Web of Science, to ensure a comprehensive and inclusive compilation in line with review guides (Donthu et al., 2021; Paul et al., 2021). We used a diverse set of keywords, such as “nostalgia\*.\*,” “experiment,” “marketing,” “customer,” “consumer,” and “psychology,” based on our extensive review of related literature. To ensure a thorough search, we also applied the same keywords on Google Scholar and expanded our search by reviewing references in relevant literature reviews and empirical studies. When we could not access full-text versions of articles, we contacted the corresponding authors for the articles. Our initial search yielded 132 articles.

##### 3.1.2 | Inclusion criteria

We established inclusion criteria based on an in-depth review of existing literature on nostalgia in marketing. Studies were eligible for inclusion if they were experimental with nostalgia manipulation and tested consumers' behavioral intentions (behavioral intention, purchase intention, and willingness to buy) as dependent variables. The studies also needed to provide the mean and standard deviation for both experimental and control groups. We limited our search to articles published in English and on or before January 31, 2023, following previous review-based research (Lim & Rasul, 2022; Lim, Rasul, et al., 2022). This approach allowed us to build on existing

knowledge and provide valuable insights into the role of nostalgia in marketing. We narrowed down the articles to 22 using established review protocols like PRISMA (Moher & PRISMA Group, 2009; Santini et al., 2020) (Web Appendix A), ensuring a rigorous and unbiased selection process (Kraus et al., 2022; Lim, Kumar, et al., 2022). Table 1 presents the articles and the specific studies within those articles that have been included in this meta-analysis.

##### 3.1.3 | Coding of experiments

In line with established practices (Rust & Cooil, 1994), two independent coders coded the experiments based on direct relationships, moderators, and meta-analytic statistics (mean and standard deviation of nostalgia and control conditions). The coders achieved a high agreement level (97%) and resolved disagreements through discussion, following established practices (de Oliveira Santini et al., 2020; Palmatier et al., 2006). Table 2 presents the coding scheme for all variables used in this research.

#### 3.2 | Calculation of effect size and regression estimates

##### 3.2.1 | Effect size calculation

We used Cohen's *d* (Cohen, 1998) to calculate effect sizes, a commonly employed statistic in meta-analyses. This measure represents the difference between two means (i.e., experimental condition vs. control condition) divided by the combined standard deviation (Chernev et al., 2015). We employed random effects models for all analyses (Hunter & Schmidt, 2004).

##### 3.2.2 | Publication bias assessment

We evaluated potential publication bias using Egger's test and funnel plot (Egger et al., 1997; Sterne & Egger, 2005; Thornton & Lee, 2000) to determine if our data distribution was a representative sample of nostalgia experiments rather than being asymmetric. The Egger regression measures the degree of funnel plot asymmetry using the intercept from the regression of standard normal deviations against precision (Egger et al., 1997). Publication bias did not affect our results. The Egger's test was not significant for pleasantness ( $t = 1.21$ ;  $p = 0.270$ ), self-continuity ( $t = -0.499$ ;  $p = 0.628$ ), attitudes ( $t = 0.177$ ;  $p = 0.861$ ), or behavioral intentions ( $t = 1.51$ ;  $p = 0.139$ ).

##### 3.2.3 | Regression estimate calculation

We employed hierarchical linear meta-analysis (HiLMA), a multivariate regression-based approach (e.g., de Oliveira Santini et al., 2020; Geyskens et al., 2009; Van Berlo et al., 2023). Raw effect sizes

TABLE 1 Overview of articles and studies included in the meta-analysis.

Article author(s) and year	Study #	Journal	Country of study	Context of study	Sample size	Nostalgia manipulation	Female ratio	Mean age
Chang and Feng (2016)	3	<i>International Journal of Advertising</i>	Not informed	Sandals	262	Photos	54.61	35.63
Chung (2019)	1	<i>Global Business &amp; Finance Review</i>	South Korea	Not informed	113	Past event memory	61.94	24.15
Dimitriadou et al. (2019)	3	<i>Journal of Experimental Psychology: Applied</i>	Greek	Music	90	Past event memory	70.00	31.19
Fan et al. (2020)	1	<i>Psychology &amp; Marketing</i>	United States of America	Shopping task	91	Past event memory	42.68	Not informed
Gong et al. (2023)	2	<i>Psychology &amp; Marketing</i>	China	Circular fridge	399	Classic event reflection task	69.40	29.16
	3		China	Circular fridge	398	Classic event reflection task	59.80	28.70
	4		China	Circular vase	132	Cartoon characters	67.60	21.99
	5		China	Circular fridge	390	Classic event reflection task	59.20	28.60
Hallegatte et al. (2018)	1	<i>Journal of Product &amp; Brand Management</i>	Online forum	Retro brand	189	Songs	17.80	Not informed
Ju et al. (2016)	1	<i>Management Decision</i>	United States of America	Fragrance, sunscreen	199	Photos	33.70	28.56
Kessous et al. (2015)	1	<i>Psychology &amp; Marketing</i>	France	Nostalgic and non-nostalgic brands	606	Past event memory	Not informed	Not informed
Kim and Magnini (2020)	1	<i>International Journal of Hospitality Management</i>	United States of America	Food	236	Nostalgic names	43.5	43.6
Langaro et al. (2020)	1	<i>Journal of Promotion Management</i>	Portugal	Beer, toothpaste	575	Photos	Not informed	Not informed
Lasaleta et al. (2021)	1	<i>Appetite</i>	United States of America	Health food	405	Classic event reflection task	52.36	20.02
	2		United States of America	Health food	382	Classic event reflection task	69.55	34.77
Lasaleta et al. (2014)	1	<i>Journal of Consumer Research</i>	United States of America	Sales book	70	Photos	55.07	21.58
	2		United States of America	Events	129	Past event memory	49.61	24.37
Ma et al. (2021)	2	<i>The Service Industries Journal</i>	China	Hospitality	150	Classic event reflection task	66.40	33.99
Marchegiani and Phau (2012)	1	<i>The International Review of Retail, Distribution and Consumer Research</i>	Australia	Music	244	Photos	Not informed	Not informed

TABLE 1 (Continued)

Article author(s) and year	Study #	Journal	Country of study	Context of study	Sample size	Nostalgia manipulation	Female ratio	Mean age
Muehling et al. (2014)	1	<i>Journal of Advertising</i>	United States of America	Toothpaste	180	Photos	54.40	22.10
Muehling and Pascal (2011)	1	<i>Journal of Advertising</i>	United States of America	Photo camera	249	Photos	47.60	25.60
Nam et al. (2016)	1	<i>Journal of Consumer Behavior</i>	South Korea	Starbucks	157	Photos	60.00	21.00
Quach et al. (2022)	1	<i>Asia Pacific Journal of Marketing and Logistics</i>	United States of America	Ice cream	200	Photos	39.00	38.64
	2		United States of America	Fruit salad	203	Photos	44.00	38.89
Wang and Chao (2020)	1	<i>Business Research Quarterly</i>	Not informed	Green consumption	206	Classic event reflection task	51.90	32.30
	2		Not informed	Green consumption	172	Classic event reflection task	32.60	33.10
Zhou et al. (2012)	1	<i>Journal of Consumer Research</i>	China	Donation	43	Classic event reflection task	21.74	55.81
	2		China	Donation	71	Classic event reflection task	56.63	18.92
	3		China	Donation	40	Classic event reflection task	60.00	23.13
	4		China	Donation	64	Classic event reflection task	34.37	25.79
	5		China	Donation	108	Classic event reflection task	55.55	20.79
Zhou et al. (2019)	1	<i>Appetite</i>	China	Food	127	Past event memory	71.65	19.68
	2		United States of America	Food	182	Past event memory	54.94	35.93
	3		China	Food	100	Past event memory	73.00	19.68
	4		China	Food	2426	Photos	Not informed	Not informed
Zou et al. (2019)	1	<i>Personality and Social Psychology Bulletin</i>	United Kingdom	Inflate balloons	169	Classic event reflection task	68.04	28.64

TABLE 2 Coding schema.

Variable	Code
<i>Article identification</i>	
Author(s)	Name of article author(s)
Journal	Journal name and acronym (e.g., <i>Journal of Business Research</i> = JBR)
Publication year	Year of article publication
<i>Study information</i>	
Context of study	Context where study was conducted (e.g., hospitality, retail)
Country of study	Country where study was conducted
Description of manipulation	Summary about nostalgia manipulation (e.g., photos with people, self-reflections, song)
Study number	Study # in the article (e.g., Study 1, Study 2, Study 3, Study 4, Study 5)
Sample of control group	Number of participants in the experiment's control group
Sample of manipulated group	Number of participants in the experiment's manipulated group
Mean of control group	Mean of consumers' behavioral intentions in the experiment's control group
Mean of manipulated group	Mean of consumers' behavioral intentions in the experiment's manipulated group
Standard deviation of control group	Standard deviation of consumers' behavioral intentions in the experiment's control group
Standard deviation of manipulated group	Standard deviation of consumers' behavioral intentions in the experiment's manipulated group
Dependent variable	Nostalgia dependent variable (e.g., pleasantness, self-continuity, attitudes, behavioral intentions)
<i>Nostalgia activators (manipulation characteristics)</i>	
Nostalgia recall	Dummy: 1 = events (e.g., event reflection task), 0 = objects (e.g., vintage products)
Nostalgia intensity	Dummy: 1 = nonrealistic situation (e.g., cartoon characters), 0 = realistic situation (e.g., list of products)
Nostalgia concept	Dummy: 1 = people-related nostalgia (e.g., friends and families exposed to ads), 0 = other manipulation (e.g., photos without individuals)
Nostalgia priming	Dummy: 1 = visual (e.g., photos of products), 0 = text (e.g., list of products)
Nostalgia type	Dummy: 1 = collective, 0 = personal
<i>Culture (short-term vs. long-term orientation)</i>	
Cultural orientation	Continuum variable (short-term to long-term) according to sample country origin and Hofstede's index (available on: <a href="https://www.hofstede-insights.com/country-comparison/">https://www.hofstede-insights.com/country-comparison/</a> )

TABLE 2 (Continued)

Variable	Code
<i>Individual characteristics (sample characteristics)</i>	
Sample type	Dummy: 1 = sample consists of students, 0 = sample does not solely consist of students
Gender ratio	Percentage of sample that was female, NI = not informed
Mean age	Mean age of sample, NI = not informed

from primary studies were used as dependent variables in the multivariate regression analysis, with all moderators included in the same analysis. We conducted all analyses using the metafor package in R (Viechtbauer, 2010).

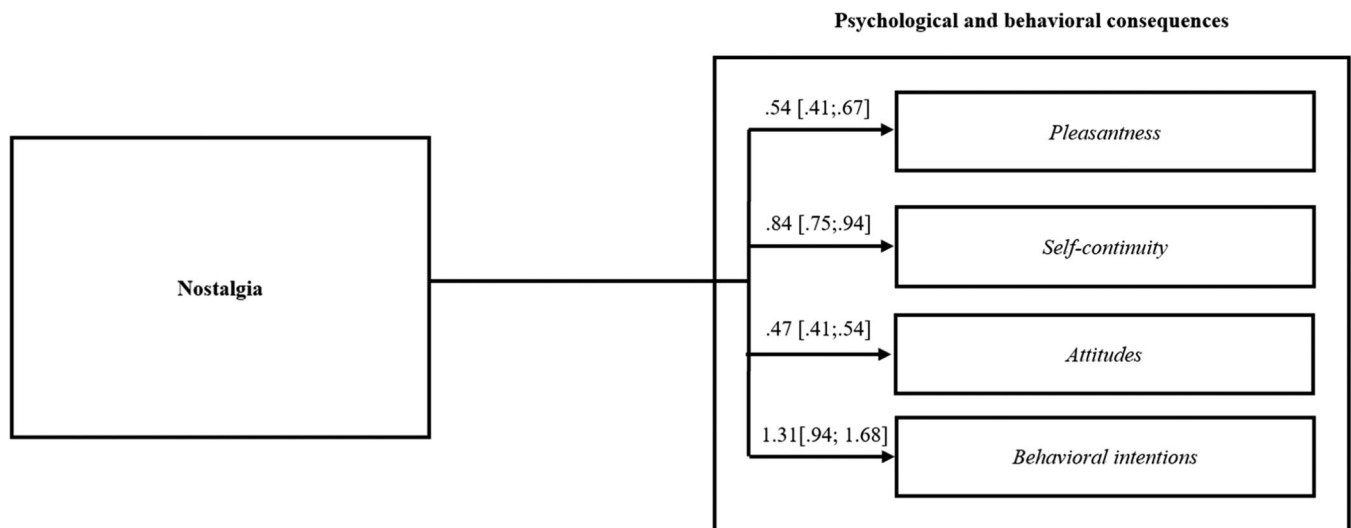
## 4 | RESULTS

In this study, we aimed to expand upon the existing literature on nostalgia by investigating its psychological and behavioral consequences, specifically pleasantness, self-continuity, attitudes, and behavioral intentions. We developed a meta-analytical theoretical framework (Figure 1) to examine the effects of experimentally manipulated nostalgia appraisals and their consequences while systematically addressing inconsistencies in previous research. Furthermore, we explored the moderators of nostalgia effects, such as nostalgia activators, culture, and individual characteristics.

### 4.1 | Nostalgia and its consequences

To evaluate our proposed framework, we investigated the following psychological and behavioral consequences of nostalgia: pleasantness, self-continuity, attitudes, and behavioral intention. Consistent with our expectations, nostalgia (vs. control) was perceived as more pleasant ( $d = 0.54$ , 95% CI = [0.41, 0.67],  $Z = 8.16$ ,  $p < 0.001$ ), supporting H1, and promoted greater self-continuity ( $d = 0.84$ , 95% CI = [0.75, 0.94],  $Z = 17.45$ ,  $p < 0.001$ ), supporting H2. These relationships were confirmed by 8 and 9 effect sizes, respectively. Moreover, in line with our framework, nostalgia (vs. control) led to stronger attitudes ( $d = 0.47$ , 95% CI = [0.41, 0.54],  $Z = 6.96$ ,  $p < 0.001$ ), supporting H3, and improved behavioral intentions ( $d = 1.31$ , 95% CI = [0.94, 1.68],  $Z = 6.96$ ,  $p < 0.001$ ), supporting H4, with 20 and 53 effect sizes, respectively.

Overall, our findings offer robust, generalizable support for our theoretical framework based on the appraisal theory of nostalgia (Van Tilburg et al., 2019) and demonstrate that nostalgia significantly influence consumers' psychological and behavioral consequences. However, the results exhibited high heterogeneity ( $I^2$  values ranging from 69% to 99%), which necessitates a moderation analysis to



**FIGURE 2** The direct effects of nostalgia on psychological and behavioral consequences. *d* values are presented outside the brackets while confidence intervals are enclosed inside the brackets.

elucidate specific circumstances that shape nostalgia appraisal outcomes. Figure 2 summarizes the direct effects of nostalgia.

## 4.2 | Moderators and their influence on nostalgia effects

We examined potential moderators affecting nostalgia effects, including nostalgia activators, culture, and individual characteristics. We focused our analysis solely on the relationship between consumers' nostalgia and behavioral intentions, as this relationship encompassed more than 30 effect sizes (Geyskens et al., 2009). Table 3 presents the moderation analysis.

### 4.2.1 | Nostalgia activators

We investigated how various nostalgia activators could influence consumer behavioral intentions by examining nostalgia recall (events vs. objects), nostalgia intensity (nonrealistic vs. realistic situations), nostalgia concept (people-related vs. non-people-related), nostalgia priming (visual vs. textual), and nostalgia type (personal vs. collective). As anticipated, nostalgia recall moderated behavioral intentions, with events generating stronger intentions than objects ( $\beta = 5.29$ ;  $p < 0.001$ ), supporting H5. Nostalgia intensity also produced stronger behavioral intentions when activated by realistic rather than nonrealistic situations ( $\beta = -2.91$ ;  $p = 0.003$ ), supporting H6. As expected, nostalgia concept had weaker effects on behavioral intentions when people were involved in the manipulation ( $\beta = -2.58$ ;  $p < 0.001$ ), supporting H7. Nostalgia priming was more effective on behavioral intentions with visual compared to textual manipulation ( $\beta = 7.59$ ;  $p < 0.001$ ), supporting H8. Lastly, nostalgia effects on behavioral intentions were not influenced by nostalgia

type (personal vs. collective) ( $\beta = -0.07$ ;  $p = 0.962$ ), rendering no support for H9.

### 4.2.2 | Individual characteristics

In line with meta-analytical tradition (Fern & Monroe, 1996), we assessed three potential moderators related to individual characteristics: sample type (student vs. nonstudent sample), gender ratio (percentage of women vs. men), and mean age (average age of each study's sample). As anticipated, nostalgia effects yielded stronger behavioral intentions in samples with a higher percentage of female participants ( $\beta = 0.05$ ;  $p = 0.028$ ), lending support for H11. However, neither sample type ( $\beta = 0.09$ ;  $p = 0.729$ ) nor mean age ( $\beta = -0.06$ ;  $p = 0.792$ ) significantly affected nostalgia's influence on behavioral intentions, providing no support for H10 and H12, respectively.

### 4.2.3 | Culture (long-term vs. short-term cultural orientation)

We explored the potential impact of cultural orientation—as a proxy for culture—on nostalgia effects. As per our assumptions, our findings revealed that nostalgia effects were stronger in short-term compared to long-term oriented culture ( $\beta = -0.06$ ;  $p < 0.001$ ), thereby supporting H13.

### 4.2.4 | Post hoc analysis

As an additional measure of robustness in response to peer review scrutiny, we conducted a post hoc analysis that explores the potential influence of product type (service vs. good) and product value

TABLE 3 Moderation effects.

Effect	Estimate	Standard error	Z Value	p Value	Key takeaway
Intercept	-9.50	-3.60	-14.66	0.000	
<i>Nostalgia activators (manipulation characteristics) as a moderator</i>					
Nostalgia recall (events vs. objects)	5.29	0.60	8.73	0.000	Recall of nostalgic events generates stronger behavioral intentions than recall of nostalgic objects
Nostalgia intensity (nonrealistic vs. realistic)	-2.91	1.00	-2.90	0.003	Nostalgic intensity of realistic situations generates stronger behavioral intentions than nostalgic intensity of nonrealistic situations
Nostalgia concept (people vs. no people involved)	-2.57	1.46	-1.75	0.000	Nostalgia with people generates weaker behavioral intentions than nostalgia without people
Nostalgia priming (visual vs. textual)	7.59	1.83	4.32	0.000	Visual activation of nostalgia generates stronger behavioral intentions than textual activation of nostalgia
Nostalgia type (personal vs. collective)	-0.07	1.43	-0.05	0.962	No significant difference in behavioral intentions regardless of nostalgia activation through personal or collective experiences
<i>Individual characteristics (sample characteristics) as a moderator</i>					
Sample type (student vs. nonstudent)	0.09	0.29	0.34	0.729	No significant differences in behavioral intentions regardless of nostalgia activation using student or nonstudent samples
Gender ratio (female vs. male)	0.05	0.01	2.11	0.028	Nostalgia effects were stronger for women than men
Mean age (older vs. younger)	-0.06	0.23	-0.26	0.792	No significant differences in behavioral intentions regardless of nostalgia activation among older and younger adults
<i>Culture as a moderator</i>					
Cultural orientation (long-term vs. short-term)	-0.06	0.01	-6.05	0.001	Nostalgia effects were stronger in short-term- rather than long-term oriented culture

(utilitarian vs. hedonic). As indicated in Supporting Information: Appendix B, no significant moderation effects were observed among these variables, indicating that nostalgia effects transcend product type ( $\beta = -0.81$ ;  $p = 0.124$ ) and product value ( $\beta = -0.05$ ;  $p = 0.790$ ).

## 5 | DISCUSSION

In recent decades, the literature on nostalgia in marketing has expanded significantly, incorporating insights from various social sciences, including psychology and sociology. Academic scholars and marketing professionals have explored this phenomenon using diverse research techniques (Marchegiani & Phau, 2011). Overall, research has demonstrated that nostalgia is associated with consumer outcomes and can influence consumers' behavioral intentions (Holak & Havlena, 1992; Schindler & Holbrook, 2003).

Numerous studies have been conducted to enhance our understanding of this phenomenon. Consequently, a vast amount of data has been collected, leading to inconsistencies and fragmentation within the literature. To organize and generalize our understanding of

nostalgia's influence on consumer behavioral intention, we performed a meta-analysis that integrated 90 effect sizes across 9757 cumulative samples. Our study contributes four major implications.

First, previous experiments revealed conflicting results regarding the actual effect of nostalgia on consumer outcomes. While some studies reported positive relationships (e.g., Gong et al., 2023), others showed neutral (e.g., Lasaleta & Loveland, 2019) or negative (e.g., Wang & Chao, 2020) effects. Our meta-analysis resolves these discrepancies (Fern & Monroe, 1996) by consolidating the main effects of nostalgia on consumers' sense of pleasantness, self-continuity, attitudes, and behavioral intentions.

Second, substantial heterogeneity was expected in the experiments, with the main direct relationship with behavioral intentions exhibiting up to 99% heterogeneity ( $I^2$ ). Thus, our meta-analysis accounted for several moderators, which constitute our second contribution. As observed, the relationship between nostalgia and consumers' behavioral intentions was stronger in female-predominant samples, corroborating previous assumptions that gender plays a crucial role in explaining human emotions. Specifically, within the context of nostalgia, females are thought to exhibit more ambivalent emotions (Leunissen et al., 2021). These findings could

stimulate further experimental research examining this influence or considering it as a covariate.

Third, we examined five nostalgia manipulation choices, which provided valuable insights by simultaneously assessing a broad range of manipulation types that would be unattainable in primary studies (Hulland & Houston, 2020). We discovered that nostalgia manipulations evoking events (vs. objects), realistic (vs. nonrealistic) situations, non-people-involved (vs. people), and visual (vs. textual) cues were more effective in generating consumers' behavioral intentions. Future studies can benefit from this information when selecting more effective manipulation techniques.

Lastly, we investigated the impact of cultural orientation on the direct or main effects of nostalgia. As noted in a recently published article, culture warrants further exploration in the context of nostalgia (Sedikides & Wildschut, 2022). Our meta-analysis encompassed a diverse sample of countries, allowing for simultaneous investigation of nostalgia relationship with consumer behavioral intentions in short-term (e.g., Australia, United Kingdom, and United States) and long-term (e.g., China, France, and South Korea) oriented cultures. The results revealed stronger relationships in short-term oriented cultures, supporting the notion that these cultures are more inclined to reflect on the past (Hofstede, 2010).

## 6 | CONCLUSION

The present research offers valuable insights into nostalgia effects by resolving discrepancies in previous research and highlighting the role of moderators. Noteworthy, the findings of this research indicate that nostalgia positively affects consumers' sense of pleasantness, self-continuity, attitudes, and behavioral intentions. Furthermore, the findings reveal that the relationship between nostalgia and behavioral intentions is stronger in female-predominant samples and short-term oriented cultures. More importantly, the findings suggest that future research and strategies can benefit from adopting more effective nostalgia manipulation techniques, such as evoking events, realistic situations, non-people-involved scenarios, and visual cues.

Notwithstanding its contributions, this research has two major limitations, paving the way for further research. First, this research reconciles previous research findings by synthesizing nostalgia effects, with the goal of reducing heterogeneity in primary and single-sampled studies. However, its meta-analysis is constrained by the variables available in a sufficient but limited number of studies and, thus, should be considered a summary of the most commonly investigated characteristics pertaining to nostalgia effects. Consequently, further research on nostalgia effects should consider the context in which the nostalgic phenomenon transpires to extend available evidence and insights in the literature. Second, our analysis of variables related to nostalgia was limited to examining direct and moderation effects due to the scarcity of information in existing studies. We encourage future research to explore additional nostalgia-related variables such as antecedents, correlates, and mediators to gain a more comprehensive understanding of nostalgia.

Lastly, we advise both researchers and practitioners to employ tailored strategies for nostalgic appeals based on the specific characteristics of the nostalgic phenomenon, products, and cultural contexts in which these strategies will be implemented, which, in turn, should enable them to more effectively capitalize on the powerful influence of nostalgia.

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## CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

## DATA AVAILABILITY STATEMENT

Data available on request from the authors.

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## REFERENCES

- Baldwin, M., Biernat, M., & Landau, M. J. (2015). Remembering thereal me: Nostalgia offers a window to the intrinsic self. *Journal of Personality and Social Psychology*, 108(1), 128–147. <https://doi.org/10.1037/a0038033>
- Borenstein, M., Cooper, H., Hedges, L., & Valentine, J. (2009). Effect sizes for continuous data. In H. Cooper, L. Hedges & J. P. T. Higgins, (Eds.), *The Handbook of Research Synthesis and Meta-analysis* (pp. 221–235). Wiley.
- Chang, C. T., & Feng, C. C. (2016). Bygone eras vs. the good ol' days: How consumption context and self-construal influence nostalgic appeal selection. *International Journal of Advertising*, 35(3), 589–615. <https://doi.org/10.1080/02650487.2015.1071084>
- Chernev, A., Böckenholt, U., & Goodman, J. (2015). Choice overload: A conceptual review and meta-analysis. *Journal of Consumer Psychology*, 25(2), 333–358. <https://doi.org/10.1016/j.jcps.2014.08.002>
- Chung, H. (2019). What kind of product does the person who feel nostalgia buy? Examine the effect of product types. *Global Business & Finance Review*, 24(3), 43–50. <https://doi.org/10.17549/gbfr.2019.24.3.43>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.
- de Oliveira Santini, F., Ladeira, W. J., Pinto, D. C., Herter, M. M., Sampaio, C. H., & Babin, B. J. (2020). Customer engagement in social media: A framework and meta-analysis. *Journal of the Academy of Marketing Science*, 48(6), 1211–1228. <https://doi.org/10.1007/s11747-020-00731-5>
- Dimitriadou, M., Maciejovsky, B., Wildschut, T., & Sedikides, C. (2019). Collective nostalgia and domestic country bias. *Journal of Experimental Psychology: Applied*, 25(3), 445–457. <https://doi.org/10.1037/xap0000209>
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, 285–296. <https://doi.org/10.1016/j.jbusres.2021.04.070>

- Egger, M., Smith, G. D., Schneider, M., & Minder, C. (1997). Bias in meta-analysis detected by a simple, graphical test. *BMJ*, 315(7109), 629–634. <https://doi.org/10.1136/bmj.315.7109.629>
- Euromonitor. (2017). Top 10 consumer trends for 2017. Available on: [http://abiepan.com.br/cloud/Top\\_10\\_consumer\\_trends\\_2017.pdf](http://abiepan.com.br/cloud/Top_10_consumer_trends_2017.pdf)
- Fan, Y., Jiang, J., & Hu, Z. (2020). Abandoning distinctiveness: The influence of nostalgia on consumer choice. *Psychology & Marketing*, 37(10), 1342–1351. <https://doi.org/10.1002/mar.21370>
- Fern, E. F., & Monroe, K. B. (1996). Effect-size estimates: Issues and problems in interpretation. *Journal of Consumer Research*, 23(2), 89–105. <https://doi.org/10.1086/209469>
- Geyskens, I., Krishnan, R., Steenkamp, J. B. E. M., & Cunha, P. V. (2009). A review and evaluation of meta-analysis practices in management research. *Journal of Management*, 35(2), 393–419. <https://doi.org/10.1177/0149206308328501>
- Gong, X., Zhang, H., Zhang, X., & Wang, Y. (2023). Circular or angular? How nostalgia affects product shape preference. *Psychology & Marketing*, 40(2), 288–299. <https://doi.org/10.1002/mar.21757>
- Hallegatte, D., Ertz, M., & Marticotte, F. (2018). Blending the past and present in a retro branded music concert: The impact of nostalgia proneness. *Journal of Product & Brand Management*, 27(5), 484–497. <https://doi.org/10.1108/JPBM-08-2017-1546>
- Hepper, E. G., Ritchie, T. D., Sedikides, C., & Wildschut, T. (2012). Odyssey's end: Lay conceptions of nostalgia reflect its original homeric meaning. *Emotion*, 12(1), 102–119. <https://doi.org/10.1037/a0025167>
- Hepper, E. G., Wildschut, T., Sedikides, C., Ritchie, T. D., Yung, Y.-F., Hansen, N., Abakoumkin, G., Arikan, G., Cisek, S. Z., Demassosso, D. B., Gebauer, J. E., Gerber, J. P., González, R., Kusumi, T., Misra, G., Rusu, M., Ryan, O., Stephan, E., Vingerhoets, A. J. J., & Zhou, X. (2014). Pancultural nostalgia: Prototypical conceptions across cultures. *Emotion*, 14(4), 733–747. <https://doi.org/10.1037/a0036790>
- Hofstede, G. (2010). The GLOBE debate: Back to relevance. *Journal of International Business Studies*, 41, 1339–1346. <https://doi.org/10.1057/jibs.2010.31>
- Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online Readings in Psychology and Culture*, 2(1), 8. <https://doi.org/10.9707/2307-0919.1014>
- Holak, S. L., & Havlena, W. J. (1992). Nostalgia: An exploratory study of themes and emotions in the nostalgic experience. In J. F. Sherry & B. Sternthal (Eds.), *Advances in Consumer Research*, (pp. 380–387). Association for Consumer Research.
- Holak, S. L., & Havlena, W. J. (1998). Feelings, fantasies, and memories. *Journal of Business Research*, 42(3), 217–226. [https://doi.org/10.1016/S0148-2963\(97\)00119-7](https://doi.org/10.1016/S0148-2963(97)00119-7)
- Holbrook, M. B. (1993). Nostalgia and consumption preferences: Some emerging patterns of consumer tastes. *Journal of Consumer Research*, 20(2), 245–256. <https://doi.org/10.1086/209346>
- Holbrook, M. B., & Schindler, R. M. (1994). Age, sex, and attitude toward the past as predictors of consumers' aesthetic tastes for cultural products. *Journal of Marketing Research*, 31(3), 412–422. <https://doi.org/10.2307/3152228>
- Huang, X., Huang, Z., & Wyer, Jr., R. S. (2016). Slowing down in the good old days: The effect of nostalgia on consumer patience. *Journal of Consumer Research*, 43(3), 372–387. <https://doi.org/10.1093/jcr/ucw033>
- Hulland, J., & Houston, M. B. (2020). Why systematic review papers and meta-analyses matter: An introduction to the special issue on generalizations in marketing. *Journal of the Academy of Marketing Science*, 48, 351–359. <https://doi.org/10.1007/s11747-020-00721-7>
- Hunter, J. E., & Schmidt, F. L. (1991). Meta-analysis. In R. K. Hambleton & J. N. Zaal (Eds.), *Advances in educational and psychological testing: Theory and applications*, (pp. 157–183). Kluwer Academic/Plenum Publishers. [https://doi.org/10.1007/978-94-009-2195-5\\_6](https://doi.org/10.1007/978-94-009-2195-5_6)
- Hwang, J., & Hyun, S. S. (2013). The impact of nostalgia triggers on emotional responses and revisit intentions in luxury restaurants: The moderating role of hiatus. *International Journal of Hospitality Management*, 33, 250–262. <https://doi.org/10.1016/j.ijhm.2012.09.001>
- Ju, I., Kim, J., Chang, M. J., & Bluck, S. (2016). Nostalgic marketing, perceived self-continuity, and consumer decisions. *Management Decision*, 54(8), 2063–2083. <https://doi.org/10.1108/MD-11-2015-0501>
- Kessous, A., Roux, E., & Chandon, J. L. (2015). Consumer-brand relationships: A contrast of nostalgic and non-nostalgic brands. *Psychology & Marketing*, 32(2), 187–202. <https://doi.org/10.1002/mar.20772>
- Kim, S., & Magnini, V. P. (2020). The impacts of descriptive food names on consumer impressions. *International Journal of Hospitality Management*, 88, 102533. <https://doi.org/10.1016/j.ijhm.2020.102533>
- Kraus, S., Breier, M., Lim, W. M., Dabić, M., Kumar, S., Kanbach, D., Mukherjee, D., Corvello, V., Piñeiro-Chousa, J., Liguori, E., Palacios-Marqués, D., Schiavone, F., Ferraris, A., Fernandes, C., & Ferreira, J. J. (2022). Literature reviews as independent studies: Guidelines for academic practice. *Review of Managerial Science*, 16(8), 2577–2595. <https://doi.org/10.1007/s11846-022-00588-8>
- Ladeira, W. J., Lim, W. M., de Oliveira Santini, F., Rasul, T., Perin, M. G., & Altinay, L. (2023). A meta-analysis on the effects of product scarcity. *Psychology & Marketing*, 40(7), 1267–1279. <https://doi.org/10.1002/mar.21816>
- Langaro, D., Loureiro, S. M., & Contreiras, M. L. (2020). The impact of nostalgia and probability markers on the effectiveness of advertising creative strategies. *Journal of Promotion Management*, 26(6), 791–811. <https://doi.org/10.1080/10496491.2020.1745982>
- Lasaleta, J. D., & Loveland, K. E. (2019). What's new is old again: Nostalgia and retro-styling in response to authenticity threats. *Journal of the Association for Consumer Research*, 4(2), 172–184.
- Lasaleta, J. D., Sedikides, C., & Vohs, K. D. (2014). Nostalgia weakens the desire for money. *Journal of Consumer Research*, 41(3), 713–729. <https://doi.org/10.1086/677227>
- Lasaleta, J. D., Werle, C. O. C., & Yamim, A. P. (2021). Nostalgia makes people eat healthier. *Appetite*, 162, 105187. <https://doi.org/10.1016/j.appet.2021.105187>
- Leunissen, J., Wildschut, T., Sedikides, C., & Routledge, C. (2021). The hedonic character of nostalgia: An integrative data analysis. *Emotion Review*, 13(2), 139–156. <https://doi.org/10.1177/1754073920950455>
- Liao, Y. K., Nguyen, V. H. A., Yeong, H. Y., Hong Vu, V. T., & Trinh, H. T. (2022). Unraveling the effects of entrepreneurial passion and entrepreneurship education on entrepreneurial intention: The moderating role of demographic characteristics. *Global Business and Organizational Excellence*. <https://doi.org/10.1002/joe.22190>
- Lim, W. M., Kumar, S., & Ali, F. (2022a). Advancing knowledge through literature reviews: 'What', 'why', and 'how to contribute'. *The Service Industries Journal*, 42(7–8), 481–513. <https://doi.org/10.1080/02642069.2022.2047941>
- Lim, W. M., & Rasul, T. (2022). Customer engagement and social media: Revisiting the past to inform the future. *Journal of Business Research*, 148, 325–342. <https://doi.org/10.1016/j.jbusres.2022.04.068>
- Lim, W. M., Rasul, T., Kumar, S., & Ala, M. (2022b). Past, present, and future of customer engagement. *Journal of Business Research*, 140, 439–458. <https://doi.org/10.1016/j.jbusres.2021.11.014>
- Ma, J., Tu, H., Zhou, X., & Niu, W. (2021). Can brand anthropomorphism trigger emotional brand attachment? *The Service Industries Journal*, 43, 555–578. <https://doi.org/10.1080/02642069.2021.2012163>
- Marchegiani, C., & Phau, I. (2011). The value of historical nostalgia for marketing management. *Marketing Intelligence & Planning*, 29(2), 108–122. <https://doi.org/10.1108/0263450111117575>

- Marchegiani, C., & Phau, I. (2012). The effect of music on consumers' nostalgic responses towards advertisements under personal, historical and non-nostalgic conditions. *The International Review of Retail, Distribution and Consumer Research*, 22(1), 27–53. <https://doi.org/10.1080/09593969.2011.618885>
- Merchant, A., Ford, J. B., & Rose, G. (2011). How personal nostalgia influences giving to charity. *Journal of Business Research*, 64(6), 610–616. <https://doi.org/10.1016/j.jbusres.2010.06.013>
- Moher, D., & PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *Annals of Internal Medicine*, 151(4), 264–269. <https://doi.org/10.7326/0003-4819-151-4-200908180-00135>
- Moldes, O., & Ku, L. (2020). Materialistic cues make us miserable: A meta-analysis of the experimental evidence for the effects of materialism on individual and societal well-being. *Psychology & Marketing*, 37(10), 1396–1419. <https://doi.org/10.1002/mar.21387>
- Muehling, D. D., & Pascal, V. J. (2011). An empirical investigation of the differential effects of personal, historical, and non-nostalgic advertising on consumer responses. *Journal of Advertising*, 40(2), 107–122. <https://doi.org/10.2753/JOA0091-3367400208>
- Muehling, D. D., Sprott, D. E., & Sultan, A. J. (2014). Exploring the boundaries of nostalgic advertising effects: A consideration of childhood brand exposure and attachment on consumers' responses to nostalgia-themed advertisements. *Journal of Advertising*, 43(1), 73–84. <https://doi.org/10.1080/00913367.2013.815110>
- Nam, J., Lee, Y., Youn, N., & Kwon, K. M. (2016). Nostalgia's fulfillment of agentic and communal needs: How different types of self-concepts shape consumer attitudes toward nostalgia. *Journal of Consumer Behaviour*, 15(4), 303–313. <https://doi.org/10.1002/cb.1568>
- Nike. (2022, May 17). *Nike 50th anniversary | Seensee it all—Spike Leespike lee director's cut*. YouTube. <https://www.youtube.com/watch?v=rD-XFcmvGuc>
- Orth, U. R., & Bourrain, A. (2008). The influence of nostalgic memories on consumer exploratory tendencies: Echoes from scents past. *Journal of Retailing and Consumer Services*, 15(4), 277–287. <https://doi.org/10.1016/j.jretconser.2007.06.001>
- Palmatier, R. W., Dant, R. P., Grewal, D., & Evans, K. R. (2006). Factors influencing the effectiveness of relationship marketing: A meta-analysis. *Journal of Marketing*, 70(4), 136–153. <https://doi.org/10.1509/jmkg.70.4.136>
- Park, C. W., MacInnis, D. J., Priester, J., Eisingerich, A. B., & Iacobucci, D. (2010). Brand attachment and brand attitude strength: Conceptual and empirical differentiation of two critical brand equity drivers. *Journal of Marketing*, 74(6), 1–17. <https://doi.org/10.1509/jmkg.74.6.1>
- Paul, J., Lim, W. M., O'Cass, A., Hao, A. W., & Bresciani, S. (2021). Scientific procedures and rationales for systematic literature reviews (SPAR-4-SLR). *International Journal of Consumer Studies*, 45(4), O1–O16. <https://doi.org/10.1111/ijcs.12695>
- Quach, S., Septianto, F., & Thaichon, P. (2022). The divergent effects of neat food presentation on purchase likelihood: The moderating role of time-related positioning. *Asia Pacific Journal of Marketing and Logistics*, 35, 1425–1442. <https://doi.org/10.1108/apjml-03-2022-0224>
- Routledge, C., Arndt, J., Wildschut, T., Sedikides, C., Hart, C. M., Juhl, J., Vingerhoets, A. J. J. M., & Schlotz, W. (2011). The past makes the present meaningful: Nostalgia as an existential resource. *Journal of Personality and Social Psychology*, 101(3), 638–652.
- Rust, R. T., & Coolil, B. (1994). Reliability measures for qualitative data: Theory and implications. *Journal of Marketing Research*, 31(1), 1–14. <https://doi.org/10.1177/002224379403100101>
- Schibik, A., Strutton, D., & Thompson, K. N. (2022). What makes a product vintage? Investigating relationships between “consumer pastness,” scarcity and purchase intentions toward vintage products. *European Journal of Marketing*, 56(7), 1830–1855. <https://doi.org/10.1108/EJM-02-2021-0140>
- Schindler, R. M., & Holbrook, M. B. (2003). Nostalgia for early experience as a determinant of consumer preferences. *Psychology & Marketing*, 20(4), 275–302. <https://doi.org/10.1002/mar.10074>
- Schulkind, M. D., Hennis, L. K., & Rubin, D. C. (1999). Music, emotion, and autobiographical memory: They're playing your song. *Memory & Cognition*, 27, 948–955. <https://doi.org/10.3758/BF03201225>
- Sedikides, C., & Wildschut, T. (2018). Finding meaning in nostalgia. *Review of General Psychology*, 22(1), 48–61. <https://doi.org/10.1037/gpr0000109>
- Sedikides, C., & Wildschut, T. (2019). The sociality of personal and collective nostalgia. *European Review of Social Psychology*, 30(1), 123–173. <https://doi.org/10.1080/10463283.2019.1630098>
- Sedikides, C., & Wildschut, T. (2022). Nostalgia across cultures. *Journal of Pacific Rim Psychology*, 16, 18344909221091649. <https://doi.org/10.1177/18344909221091649>
- Sedikides, C., Wildschut, T., Cheung, W. Y., Routledge, C., Hepper, E. G., Arndt, J., Vail, K., Zhou, X., Brackstone, K., & Vingerhoets, A. J. J. M. (2016). Nostalgia fosters self-continuity: Uncovering the mechanism (social connectedness) and consequence (eudaimonic well-being). *Emotion*, 16(4), 524–539. <https://doi.org/10.1037/emo0000136>
- Sierra, J. J., & McQuitty, S. (2007). Attitudes and emotions as determinants of nostalgia purchases: An application of social identity theory. *Journal of Marketing Theory and Practice*, 15(2), 99–112. <https://doi.org/10.2753/MTP1069-6679150201>
- Spielmann, N., Babin, B. J., & Manthiou, A. (2018). Places as authentic consumption contexts. *Psychology & Marketing*, 35(9), 652–665. <https://doi.org/10.1002/mar.21113>
- Sterne, J. A., & Egger, M. (2005). Regression methods to detect publication and other bias in meta-analysis. In H. R. Rothstein, A. J. Sutton, & M. Borenstein (Eds.), *Publication bias in meta-analysis: prevention, assessment and adjustments* (pp. 99–110). John Wiley and Sons. <https://doi.org/10.1002/0470870168.ch6>
- Thornton, A., & Lee, P. (2000). Publication bias in meta-analysis: Its causes and consequences. *Journal of Clinical Epidemiology*, 53(2), 207–216. [https://doi.org/10.1016/S0895-4356\(99\)00161-4](https://doi.org/10.1016/S0895-4356(99)00161-4)
- Van Berlo, Z. M. C., Meijers, M. H. C., Eelen, J., Voorveld, H. A. M., & Eisend, M. (2023). When the medium is the message: A meta-analysis of creative media advertising effects. *Journal of Advertising*. <https://doi.org/10.1080/00913367.2023.2186986>
- Van Tilburg, W. A. P., Bruder, M., Wildschut, T., Sedikides, C., & Göritz, A. S. (2019). An appraisal profile of nostalgia. *Emotion*, 19(1), 21–36. <https://doi.org/10.1037/emo0000417>
- Viechtbauer, W. (2010). Conducting meta-analyses in R with the meta for package. *Journal of Statistical Software*, 36, 1–48. <https://doi.org/10.18637/jss.v036.i03>
- Wang, X., & Chao, C. H. (2020). Nostalgia decreases green consumption: The mediating role of past orientation. *Business Research Quarterly*, 23(4), 270–284. <https://doi.org/10.1177/2340944420966867>
- Wang, X., Keh, H. T., & Chao, C. H. (2018). Nostalgia and consumer preference for indulgent foods: The role of social connectedness. *International Journal of Consumer Studies*, 42(3), 316–326. <https://doi.org/10.1111/ijcs.12419>
- Wildschut, T., Sedikides, C., Arndt, J., & Routledge, C. (2006). Nostalgia: Content, triggers, functions. *Journal of Personality and Social Psychology*, 91(5), 975–993. <https://doi.org/10.1037/0022-3514.91.5.975>
- Zhou, X., Sedikides, C., Wildschut, T., & Gao, D. G. (2008). Counteracting loneliness: On the restorative function of nostalgia. *Psychological Science*, 19(10), 1023–1029. <https://doi.org/10.1111/j.1467-9280.2008.0219>
- Zhou, X., Van Tilburg, W. A. P., Mei, D., Wildschut, T., & Sedikides, C. (2019). Hungering for the past: Nostalgic food labels increase purchase intentions and actual consumption. *Appetite*, 140, 151–158. <https://doi.org/10.1016/j.appet.2019.05.007>

- Zhou, X., Wildschut, T., Sedikides, C., Shi, K., & Feng, C. (2012). Nostalgia: The gift that keeps on giving. *Journal of Consumer Research*, 39(1), 39–50. <https://doi.org/10.1086/662199>
- Zou, X., Lee, M., Wildschut, T., & Sedikides, C. (2019). Nostalgia increases financial risk taking. *Personality and Social Psychology Bulletin*, 45(6), 907–919. <https://doi.org/10.1177/0146167218799717>

#### SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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