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To cite this article: Heetae Cho, Do Young Pyun & Chee Keng John Wang (2019): Leisure nostalgia: Scale development and validation, Journal of Leisure Research, DOI: [10.1080/00222216.2019.1602014](https://doi.org/10.1080/00222216.2019.1602014)

To link to this article: <https://doi.org/10.1080/00222216.2019.1602014>



Published online: 29 Apr 2019.



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Leisure nostalgia: Scale development and validation

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ABSTRACT

Nostalgia is one of the most critical constructs influencing individuals' future behavioral intention. However, a measurement scale for nostalgia has not been widely explored and has not been developed in the context of leisure. Therefore, the study aimed to develop a scale, based on the classification of nostalgia, to measure nostalgic leisure behavior. This study followed a rigorous scale development procedure to achieve adequate psychometric properties. The leisure nostalgia scale developed in this study contributes to a deeper understanding of nostalgia in leisure and expands extant knowledge by building a comprehensive conceptual framework in leisure research. In addition, a better understanding of leisure nostalgia allows researchers to extend this model with other leisure constructs and more effectively explain leisure participation in various populations. Drawing on the findings of this study, managers in the leisure industry can develop and implement effective strategies to appeal to leisure participants and promote business competitiveness.

KEYWORDS

Leisure nostalgia; classification of nostalgia; leisure participation; leisure experience; scale development

Past experience and positive memory are integral psychological antecedents of individuals' behavior. They not only stimulate individuals' motivation but also increase behavioral intention (Cho, Ramshaw, & Norman, 2014; Kim, 2017). Particularly, previous experiences filled with positive emotions tap people into their past, longing for past positive experiences. This phenomenon is highly related to the concept of nostalgia. *Nostalgia* is defined as a longing for yesterday and is "a positively toned evocation of a lived past in the context of some negative feeling toward present or impending circumstance" (Davis, 1979, p. 18). Davis (1979) stressed the positive effect of nostalgia and highlighted that "nostalgic feeling is almost never infused with those sentiments we commonly think of as negative—for example, unhappiness, frustration, despair, hate, shame, and abuse" (p. 14). Cho, Joo, and Chi (2019) also noted that nostalgia is strongly associated with positive experience in the past, and positive memories evoke nostalgic feelings.

In leisure settings, individuals may be exposed to a variety of environments, having diverse experiences and emotions. In addition, their positive emotions toward people, places, experiences, and things could generate nostalgic feelings (Fairley, 2003). According to Lee, Dattilo, and Howard (1994), people have positive experiences and emotions (e.g., fun, enjoyment, social bonding, relaxation, introspection, creative expression, escaping,

communion with nature, freedom of choice, physical stimulation, and intellectual cultivation) when they participate in leisure activities. Such positive experiences can be a vehicle for evoking nostalgic feelings (Cho et al., 2014; Fairley & Gammon, 2005).

To date, the concept of nostalgia has been studied in diverse fields, including psychology (e.g., Sedikides, Cheung, Wildschut, Hepper, Baldursson, & Pedersen, 2018; Zhou, Wildschut, Sedikides, Chen, & Vingerhoets, 2012), sociology (e.g., Bennett, 2018; May, 2017), marketing (e.g., Marchegiani & Phau, 2011; Reisenwitz, Iyer, & Cutler, 2004), consumer behavior (Nam, Lee, Youn, & Kwon, 2016; Youn & Jin, 2017), and tourism (Cho et al., 2014; Robinson, 2015), as it is an essential construct to understanding individuals' future behavior. However, despite the importance of the concept of nostalgia in the field of leisure, only a few studies have examined nostalgia using a qualitative approach (e.g., Glover & Bates, 2006; Gvion, 2009). One possible reason for the dearth of nostalgia research using a quantitative approach would be that a measurement scale for nostalgia has not been developed in the context of leisure. A precise measurement tool of leisure nostalgia is important to move the scientific generalization of the domain forward. Therefore, the purpose of this study is to develop a Leisure Nostalgia Scale (LNS) based on Cho and colleagues' (2014) classification of nostalgia. The classification of nostalgia is derived from nostalgic experience (Fairley, 2003; Fairley & Gammon 2005; Wilson, 2005), identity theory (Stets & Burke, 2000; Stryker, 1987), and social identity theory (Jenkins, 1996; Tajfel, 1981). The classification on two dimensions (i.e., the purpose of nostalgia and the structure of nostalgia) results in four factors: experience, socialization, personal identity, and group identity. Grounded in the four factors of the classification of nostalgia, the purpose of this study is to develop a sound, reliable, and valid scale to measure nostalgic leisure behavior and illustrate how nostalgia is important in individuals' leisure life.

Conceptual framework of nostalgia

Over the years, the phenomenon of nostalgia has evolved, shifting the focus to its connection to a predominantly positive affect. According to Hofer (1934), in earlier years nostalgia was highly linked with abnormal symptoms, such as depression and extreme tiredness. However, in recent times, the concept of nostalgia has broadened to define it as a longing. It is triggered when an individual's past is used as a point of reference to their current unfulfilled moment (Baker & Kennedy, 1994; Davis, 1979; Fairley & Gammon, 2005; Merchant & Ford, 2008). Nostalgia is now more readily accepted without stigma. It has almost no negative memories connected to the past, and if it does, the positive memories of the past seem to outweigh the negative memories, creating positive emotions. Although today nostalgia still somewhat signifies homesickness, it is more often used to describe a positive memory from the past that brings out positive feelings in an unfulfilling present (Davis, 1979; Fairley, 2003; Stern, 1992). Some of the widely accepted definitions of nostalgia commonly note these aspects as well.

Emphasizing the positive memory of the past, Stern (1992) defined nostalgia as "an emotional state in which an individual yearns for an idealized or sanitized version of an earlier time period" (p. 11). In line with this definition of nostalgia, Baker and Kennedy (1994) stated that "nostalgia is a sentimental or bittersweet yearning for an experience,

product, or service from the past” (p. 169). Individuals who are unsatisfied with their present situation escape reality by experiencing nostalgia. Consequently, nostalgia brings back positive memories associated with objects or experiences (Baker & Kennedy, 1994; Fairley, 2003). Sedikides, Wildschut, and Baden (2004) supported this notion that strays from the older definition of homesickness. The positive emotions evoked by nostalgia come from one’s memory. However, individuals possess the capability to tap into the positivity-inducing aspects of a memory selectively. Thus, nostalgia is a feeling that is generally positive with little or no negativity attached to it.

More recently, Cho et al. (2014) integrated the previous definitions of nostalgia and elucidated that an individual’s nostalgia is mainly affected by positive experiences and feelings for the past, and an individual’s current and future status can influence the level of nostalgia:

An individual longs for the past with strong positive feelings. Since one cannot return to the past, a person can have negative feelings. In addition, types of experience lead to different degrees of feelings of nostalgia, which is changed depending on one’s current or the future status in reverse proportion. (p. 15–16)

As opposed to earlier beliefs of nostalgia carrying a stigma of negativity and uncertainty of the future, it is currently defined as the selective retrieval of the past that has positive emotions attached to it. However, nostalgia does not stop there. It comes with a broader and more complex notion. It is something that can be felt through first-hand experiences in the past or otherwise felt through vicarious experiences that include pictures, photos, articles, and movies (Goulding, 2002; Stern, 1992). Therefore, the nature of nostalgia is understood as multidimensional. Some see nostalgia as a collective experience (Baker & Kennedy, 1994) while others see it as an existence strictly at an individual level (Batcho, 1998; Davis, 1979).

Recently, Cho et al. (2014) developed a classification of nostalgia with two dimensions: (a) purpose of nostalgia and (b) structure of nostalgia. The purpose of nostalgia consists of experience-based nostalgia and identity-based nostalgia and was developed on the basis of nostalgic experience (Fairley, 2003; Fairley & Gammon 2005; Wilson, 2005), identity theory (Stets & Burke, 2000; Stryker, 1987), and social identity theory (Jenkins, 1996; Tajfel, 1981). The structure of nostalgia comprises object-based nostalgia and interpersonal relationship-based nostalgia on the basis of Fairley and Gammon’s (2005) findings. That is, the classification of nostalgia produces a two-by-two matrix and results in four factors: experience, socialization, personal identity, and group identity.

The first component of the classification is nostalgia as experience. Individuals’ nostalgic feelings can be retrieved from past personal experiences and sport/leisure objects, such as sport/leisure facilities, venues, and clubs. Fairley (2003) pointed out that nostalgia could also emerge through people, places, and past experiences. Individuals might feel attachment to a specific athlete, team, or venue. For example, when one experiences sentimental moments, such as a boy watching his first football match together with his father on his birthday, the experience can be unforgettable, and he might be attached to the football team or stadium. Wallendorf and Arnould (1988) discussed that attachment is an indication of a personal connection to a favorite object, and Schultz, Kleine, and Kernan (1989) defined attachment as a favorite association or possession derived from

self-developmental tasks of integration, individualization, and temporal orientation or changes in the situation. Positive past memories related to favorite leisure objects can recall the nostalgic feeling. In addition, external stimuli (e.g., smell and music) may evoke nostalgic feelings, which may motivate a person to attend the sport events. Hence, the positive past memories associated with leisure objects can have an impact on behavioral intentions.

The second component of the classification is nostalgia as socialization. During recreation events, participants tend to make new friends, share information, and create networks among other participants. Socialization is an integral part of the leisure experience as the most people participate in leisure activities as part of a group at some point in time. This could be as part of a leisure participant group, a group of friends, or even getting to know other spectators at event venues. Fairley (2003) and Fairley and Gammon (2005) noted that socialization plays an especially important role in evoking nostalgic feelings. That is, positive memories of building relationships and socializing with others can recall the nostalgic feeling.

The third component of the classification is nostalgia as personal identity. This component is conceptualized based on the identity theory (McCall & Simmons, 1966; Stryker, 1987) and focuses on the self-description of individuals' attributes and role-related behaviors. For example, by participating in sporting events, the feeling of being a sport fan, having pride in being a sport fan, and having a sense of accomplishment as a sport fan can evoke and affect an individual's identity, which in turn may lead to nostalgic emotions. Wann and Branscombe (1993) affirmed that level of identification can influence the individual's emotions, and it could influence their nostalgic behavior (Cho et al., 2014; Davis, 1979).

The last component of the classification is nostalgia as group identity. It occurs when individuals long to return to being a member of a particular group, such as fans of the same team in the stadium singing their club songs or anthems. Such groups commonly distinguish themselves from others through unique characteristics or traits, such as having a particular outfit, accessories, behavior, or activities (Tajfel, 1981). Fairley and Gammon (2005) noted that "memories that an individual holds include both self and collective memories that reflect an individual's identification with, and belongingness to, a particular social group" (p. 183). In addition, an individual's attachment to a specific sport group and positive memories or experiences with the group increases group identity that can stimulate nostalgia. In sport tourism, large sporting events typically encourage the formation of group identities as teams play against one another, making group associations a key aspect of nostalgia (Cho et al., 2014). Individuals longing to relive that group experience could be more likely to make a conscious decision in the future to attend a similar sporting event where such an experience is likely to occur again.

Overall, the four leisure nostalgia factors are specified in the relevant theories and concepts. For the development of better measures, this study follows the scale development procedure recommended by Hinkin, Tracey, and Enz (1997). It consists of seven steps: (a) item generation, (b) content adequacy assessment, (c) questionnaire administration, (d) factor analysis, (e) internal consistency assessment, (f) construct validity, and (g) replication. For the effective implementation of the scale development

procedures, a two-phase study design was carried out. Phase One (pilot study) included item generations for the four factors and purifications of the items through content adequacy assessment, factor analysis, and internal consistency assessment. Phase Two (main study) was designed to test the assessment of overall model fit and construct validity.

Phase One: Pilot test

Research participants

For the pilot study, the targeted samples were university students who had nostalgic feelings toward their favorite leisure activities. A convenience sampling technique was used to collect data using a self-administered questionnaire. The data were collected through a face-to-face mode at a university in western Singapore. To identify a respondent's nostalgia level, this study asked one question using a 7-point Likert scale (i.e., do you have any positive memories regarding your favorite leisure activity in the past?), as nostalgia is derived from positive memories. If any respondents answered that they did not have positive memories toward their favorite leisure, they would then be excluded from the data pool. However, the study found that all respondents answered they had positive memories toward their favorite leisure in the past ($M = 5.82$).

The pilot test was based on 134 participants' responses. Of the 134 respondents, 69 (51.5%) were male and 65 (48.5%) were female. Age was asked using an open-ended question, and the average age of the respondents was 24.25. As for marital status, single (97.8%) was the most common, followed by married (2.2%). The most-reported category of monthly household income was under S\$2,000 (35.8%), and 25.4% of respondents answered that their household income was S\$8,000 or higher.

Scale development

Through a comprehensive literature review, the items of each factor were generated to prepare an initial questionnaire. The initial pool included 78 items representing the four nostalgia factors: experience (33 items), socialization (15 items), personal identity (14 items), and group identity (16 items). The items were developed and modified from the relevant literature in leisure participation (e.g., Ateca-Amestoy, Serrano-del-Rosal, & Vera-Toscano, 2008; Di Bona, 2000; Iwasaki & Havitz, 2004; Kivel, 2000; Kyle, Absher, Norman, Hammitt, & Jodice, 2007; Siegenthaler & O'Dell, 2000; Spiers & Walker, 2008), nostalgia (e.g., Cho et al., 2014; Cho, Lee, Moore, Norman, & Ramshaw, 2017; Fairley, 2003; Fairley & Gammon, 2005; Routledge, Arndt, Sedikides, & Wildschut, 2008; Stern, 1992), and fan motivation (e.g., Mahony, Nakazawa, Funk, James, & Gladden, 2002; Serafini & Adams, 2002; Trail & James, 2001).

After generating the initial item pool, this study employed the Q-sort technique and expert review to examine the face validity of the items. A Q-sort technique was utilized to determine the relevance of the items to their respective factors. Fifteen doctoral students and seven professors in the fields of leisure, tourism, sport psychology, and sport management conducted the Q-sort test, retaining items with over 80% consensus percentages (Brown, 1980). In addition, the second draft of the item pool was examined

for content validity. The expert panel of scholars was asked to assess whether the factors were adequately represented and to review each item after generating the second item pool from the results of the Q-sort test. The panel of experts consisted of five professors: three from leisure, one from tourism, and one from sport management. Out of 78 items in the initial pool, 39 items were removed through the Q-sort examination and content validity procedures. The remaining 39 items (refer to [Table 1](#) for the individual item statements) were prepared for the pilot study to improve reliability and validity of the scale (Gay, 1996). All items were measured using a 7-point Likert scale, anchored from *strongly disagree* (1) to *strongly agree* (7).

Data analysis

The Statistical Package for the Social Science (SPSS 23.0) was employed to analyze the data, including descriptive statistics, exploratory factor analysis (EFA), and internal consistency tests. EFA is commonly utilized in the item purification stage as “it provides a tool for consolidating variables and for generating hypotheses about underlying processes” (Hair, Anderson, Tatham, & Black, 1998; Tabachnick & Fidell, 1989, p. 599). To decide on a number of factors, this study analyzed the scree plot and compared initial eigenvalues with random data eigenvalues found in a parallel analysis (Fabrigar, Wegener, MacCallum, & Strahan, 1999). After determining the number of factors, this study conducted EFA using the principal axis factoring procedure with oblique (promax) rotation, followed by internal consistency tests.

Results

Preliminary analysis showed that there were no outliers or missing values for any of the variables. Skewness and kurtosis values were used to evaluate the distribution of data. The skewness statistics (ranging from -1.35 to -0.31) and the kurtosis statistics (ranging from -0.71 to 2.66) were close to the norm for normal distribution pattern (George & Mallery, 2010; see [Table 1](#) for more details).

From the results of the scree plot and the comparison between the initial eigenvalues with random data eigenvalues, the decision to further compare two models (a four- and a five-factor model) was made. The result of the EFA fixed with four factors revealed five items (LE7, LE8, LE9, S5, and S9) with low factor loadings; the result of the EFA fixed with five factors revealed five items (LE2, LE8, LE9, S5, and S9) with low factor loadings, according to the criterion of .50 (Hair et al., 1998). In terms of the dispositions of the problematic items from each model, there was not a great difference between the four-factor model and the five-factor model. However, the main difference is that 12 items out of the initial 15 experience items loaded into two separated factors instead of one factor as would be expected for a four-factor model (see [Table 2](#)). After assessing the content of the items across the two separated factors, this study found that the items in the first separated factor were related to leisure experience, whereas the items in the second separated factor were more relevant to environment. Therefore, this study selected the five-factor model and named two newly separated factors: leisure experience (LE1, 3, 4, 5, and 6) and environment (E1–E7).

Table 1. Descriptive statistics for the measures in the pilot study ($N = 134$).

Item	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
Leisure experience				
(LE1) Remembering my leisure activity that I enjoyed	5.57	1.12	-0.96	1.17
(LE2) Remembering the moment of learning leisure knowledge	5.32	1.12	-0.76	1.02
(LE3) My exciting leisure experience in the past	5.61	0.94	-0.58	0.81
(LE4) Remembering the freedom I experienced during my favorite leisure activity	5.69	1.02	-0.50	-0.34
(LE5) Free time I had during my favorite leisure activity	5.51	1.34	-0.84	1.26
(LE6) Recharging myself through leisure activity	5.63	1.00	-0.42	-0.32
(LE7) The food I ate during my favorite leisure time period	4.30	1.50	-0.31	-0.22
(LE8) The atmosphere created at the location of my favorite leisure activity	5.49	1.26	-0.93	1.22
(LE9) The music that I heard during my favorite leisure activity	4.93	1.44	-0.62	0.28
(LE10) The appearance of my favorite leisure place	4.87	1.12	-0.59	0.39
(LE11) Memorable weather during my favorite leisure time	4.57	1.49	-0.50	0.15
(LE12) The practical design of my favorite leisure place	4.49	1.36	-0.86	0.98
(LE13) The architectural design of my favorite leisure place	4.38	1.43	-0.51	0.22
(LE14) The leisure activity equipment I used	5.06	1.36	-0.90	0.97
(LE15) The size of my favorite leisure place	4.60	1.47	-0.68	0.31
Socialization				
(S1) Family members participating in leisure activity with me	4.34	1.77	-0.44	-0.71
(S2) Friends participating in leisure activity with me	5.54	1.21	-1.03	1.45
(S3) Positive memories shared with others during my favorite leisure activity	5.58	1.13	-1.33	2.66
(S4) Memories of building friendships with others during my favorite leisure activity	5.53	1.24	-1.02	1.40
(S5) Memories of getting useful information by talking to others during my favorite leisure activity	5.28	1.19	-0.95	1.26
(S6) Memories of socializing with others during my favorite leisure	5.54	1.24	-1.11	1.94
(S7) Memories of making new friends during my favorite leisure	5.13	1.53	-1.16	1.17
(S8) Entertainments enjoyed with others during my leisure activity	5.35	1.25	-1.35	2.47
(S9) Memories of dining out together	4.95	1.61	-0.99	0.43
Personal identity				
(PI1) Identifying myself as a lover of my favorite leisure activity	5.25	1.35	-0.99	1.34
(PI2) Pride in being a lover of my favorite leisure activity	5.25	1.32	-0.94	1.09
(PI3) A feeling of satisfaction as a loyal leisure participant of my favorite leisure activity	5.37	1.28	-1.26	2.49
(PI4) Positive feelings about myself as a lover of my favorite leisure activity	5.31	1.29	-0.96	1.38
(PI5) My value as a leisure participant	5.25	1.31	-1.04	1.66
(PI6) Sense of accomplishment as a leisure participant	5.49	1.26	-1.16	1.82
(PI7) Being loyal to my favorite leisure activity	5.24	1.40	-0.90	0.93
Group identity				
(GI1) Unique characteristics of my leisure social group	5.07	1.47	-1.05	0.97
(GI2) The traditions of my leisure group	4.77	1.43	-0.71	0.66
(GI3) Group rituals at the leisure place	4.70	1.53	-0.80	0.44
(GI4) Shared memories which affected my group identity at the leisure place	4.97	1.57	-0.87	0.61
(GI5) History of my group that shared a lot in common with my group members	4.82	1.48	-0.83	0.61
(GI6) Pride of being a part of my group at the leisure place	4.93	1.50	-0.94	0.80
(GI7) Experiences of group bonding during my leisure activity	5.20	1.56	-1.15	1.04
(GI8) How important I was to the members of my leisure group	4.84	1.60	-0.87	0.33

The five items (LE2, LE8, LE9, S5, and S9) with factor loadings less ± 0.50 were deleted (Hair et al., 1998). In addition, the first socialization item (S1) was removed as its community value (.28) was too low (Costello & Osborne, 2005). Next, this study tested internal consistency of the measures and found that five factors

Table 2. Factor patter matrix in the pilot study ($N = 134$).

Item	Leisure experience	Environment	Socialization	Personal identity	Group identity	Communality
LE1	.72	-.03	-.02	.02	.16	.60
LE2 ^a	.25	.27	.16	.29	-.34	.40
LE3	.73	-.07	.21	-.08	.17	.69
LE4	.56	-.05	.03	.31	-.28	.48
LE5	.68	-.10	.06	.20	-.02	.61
LE6	.66	-.00	-.14	-.07	.33	.51
LE7 (E1)	-.03	.66	-.10	-.04	.06	.40
LE8 ^a	.18	.28	.05	.15	.12	.35
LE9 ^a	-.11	.39	-.12	.23	.03	.22
LE10 (E2)	-.03	.61	-.20	.22	.11	.52
LE11 (E3)	.06	.65	.06	-.19	.21	.52
LE12 (E4)	.03	.90	-.03	-.06	.03	.77
LE13 (E5)	.06	.87	.01	-.10	-.03	.70
LE14 (E6)	.06	.56	.01	.21	.04	.56
LE15 (E7)	-.08	.78	.03	.11	-.01	.69
S1 ^a	.02	.06	.64	-.07	-.17	.28
S2	-.10	-.19	.75	.06	.23	.75
S3	-.02	-.17	.80	.05	.11	.73
S4	-.00	-.07	.75	.09	.12	.74
S5 ^a	.10	-.09	.20	.12	.40	.40
S6	.07	-.16	.78	.04	.08	.69
S7	.01	.37	.65	-.01	-.05	.67
S8	.09	.08	.86	-.18	.02	.70
S9 ^a	-.23	.40	.33	-.00	.16	.44
PI1	-.06	.05	.28	.74	-.07	.76
PI2	-.03	.02	.13	.81	.03	.81
PI3	-.00	.04	-.10	.91	-.01	.76
PI4	.01	-.03	.05	.86	.06	.84
PI5	-.01	.05	-.05	.83	.09	.77
PI6	.07	-.13	-.09	.63	.29	.56
PI7	.10	-.04	-.14	.75	.20	.69
GI1	.07	.04	-.09	.13	.81	.78
GI2	.13	.06	-.08	-.09	.88	.73
GI3	-.03	.30	.04	-.17	.75	.74
GI4	-.03	.13	.04	.16	.69	.79
GI5	-.04	-.04	.15	.07	.74	.74
GI6	.01	.03	.21	.10	.67	.84
GI7	-.06	-.04	.18	.02	.79	.82
GI8	.02	.13	.12	.06	.65	.72

Note. LE = leisure experience; S = socialization, PI = personal identity; GI = group identity; E = environment. The parentheses show the renamed items after EFA.

^aItems removed after EFA.

presented good reliability values ($\alpha = .79$ to $\alpha = .96$). Finally, a total of 33 items were prepared for the main study: leisure experience (five items), environment (seven items), socialization (six items), personal identity (seven items), and group identity (eight items, see Table 2).

Phase Two: Main study

Research participants

The targeted samples for the main study were event participants and spectators attending a popular sporting event in Singapore (i.e., The DBS Marina Regatta 2018) for leisure and recreational purposes and who noted nostalgic feelings toward their favorite

leisure activities in the past. As in Phase One of the study, nostalgic feelings were assessed with one question to determine respondents' nostalgia level. All respondents answered they had positive memories toward their favorite leisure activities ($M = 5.65$). Using a convenience sampling technique, two trained research assistants approached and recruited individuals to participate in the survey. A S\$10 (about US\$7.3) cash voucher was offered to each participant for participating in this study. The respondents answered questions about their leisure experience and leisure nostalgia. Upon completion, the research assistants checked to ensure that the questionnaires were completely answered before requesting the respondents to sign on the form to indicate that they received the cash voucher. A total of 450 responses were collected, with a response rate of 92.98%.

Data analysis

In this phase of the study, confirmatory factor analysis (CFA) was conducted to assess the overall model fit, reliability, and validity of the measurement scale using EQS 6.3. For the goodness-of-fit tests for the model, Satorra-Bentler scaled statistic ($S-B\chi^2$), root mean square error of approximation (RMSEA), standardized root mean squared residual (SRMR), nonnormed fit indices (NNFI), and comparative fit index (CFI) were employed. This study used the cutoff values of .90 for CFI and NNFI, .06 for RMSEA, and .08 for SRMR (Hu & Bentler, 1999). To examine the reliability of the measures, composite reliability was calculated. Convergent validity was assessed by average variance extracted (AVE) techniques. Convergent validity is achieved if the amount of common variance that is explained by a factor is greater than amount of variance due to its measurement error ($>.50$, Fornell & Larcker, 1981). Discriminant validity was examined by comparing the square root of AVEs and correlations among the factors. To support discriminant validity, the square root of AVEs for each factor should exceed correlations with the other factors (Fornell & Larcker, 1981). Last, the equivalence of the measurement model between the pilot test samples (student group) and the main test samples (more generic group) was tested using a chi-square difference test.

Preliminary analysis and demographic information

Before analyzing the data, data screening processes were conducted to exclude outliers based on z values and Mahalanobis distance, and missing values were treated using the expectation maximization (EM) algorithm. According to Cho et al. (2014), nostalgia can be defined as longing for the past with positive memories. Two respondents who answered they did not have any nostalgic experiences were excluded. In addition, 28 responses with univariate outliers based on z statistics and 16 responses with multivariate outliers based on Mahalanobis distance were removed from this study. This left 404 responses that were used in the main study. Further, this study examined skewness and kurtosis to identify univariate normality. The skewness statistics ranged from -0.77 to -0.13 , and the kurtosis statistics ranged from -0.71 to 0.63 (see Table 3), supporting univariate normality. For multivariate normality, Mardia's (1985) multivariate kurtosis coefficient was used to identify multivariate normality. The results showed that

Table 3. Descriptive statistics of the measures in the main study ($N = 450$).

Item evokes my nostalgic feelings.	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
Leisure experience				
(LE1) Remembering my leisure activity that I enjoyed	5.63	1.04	-0.40	-0.44
(LE3) My exciting leisure experience in the past	5.64	0.90	-0.38	-0.44
(LE4) Remembering the freedom I experienced during my favorite leisure activity	5.61	1.05	-0.54	-0.20
(LE5) Free time I had during my favorite leisure activity	5.29	1.25	-0.48	-0.34
(LE6) Recharging myself through leisure activity	5.50	1.14	-0.48	-0.38
Environment				
(E1) The food I ate during my favorite leisure time period	4.68	1.43	-0.31	-0.17
(E2) The appearance of my favorite leisure place	5.25	1.24	-0.29	-0.26
(E3) Memorable weather during my favorite leisure time	4.96	1.34	-0.40	0.01
(E4) The practical design of my favorite leisure place	4.82	1.31	-0.23	-0.29
(E5) The architectural design of my favorite leisure place	4.73	1.38	-0.13	-0.39
(E6) The leisure activity equipment I used	5.29	1.21	-0.54	0.17
(E7) The size of my favorite leisure place	4.86	1.33	-0.28	0.05
Socialization				
(S2) Friends participating in leisure activity with me	5.81	1.20	-0.77	0.63
(S3) Positive memories shared with others during my favorite leisure activity	5.81	0.95	-0.47	-0.37
(S4) Memories of building friendships with others during my favorite leisure activity	5.83	0.96	-0.51	-0.34
(S6) Memories of socializing with others during my favorite leisure	5.67	0.99	-0.44	-0.31
(S7) Memories of making new friends during my favorite leisure	5.60	1.07	-0.49	-0.26
(S8) Entertainments enjoyed with others during my leisure activity	5.50	1.03	-0.42	-0.20
Personal identity				
(PI1) Identifying myself as a lover of my favorite leisure activity	5.48	1.12	-0.49	-0.23
(PI2) Pride in being a lover of my favorite leisure activity	5.53	1.06	-0.34	-0.65
(PI3) A feeling of satisfaction as a loyal leisure participant of my favorite leisure activity	5.53	1.05	-0.31	-0.65
(PI4) Positive feelings about myself as a lover of my favorite leisure activity	5.52	1.08	-0.36	-0.51
(PI5) My value as a leisure participant	5.38	1.08	-0.21	-0.65
(PI6) Sense of accomplishment as a leisure participant	5.64	1.05	-0.40	-0.50
(PI7) Being loyal to my favorite leisure activity	5.47	1.13	-0.41	-0.39
Group identity				
(GI1) Unique characteristics of my leisure social group	5.30	1.13	-0.15	-0.71
(GI2) The traditions of my leisure group	5.14	1.24	-0.39	0.00
(GI3) Group rituals at the leisure place	4.71	1.33	-0.13	-0.17
(GI4) Shared memories which affected my group identity at the leisure place	5.17	1.20	-0.15	-0.37
(GI5) History of my group that shared a lot in common with my group members	5.17	1.16	-0.22	-0.04
(GI6) Pride of being a part of my group at the leisure place	5.30	1.19	-0.14	-0.84
(GI7) Experiences of group bonding during my leisure activity	5.47	1.12	-0.24	-0.69
(GI8) How important I was to the members of my leisure group	5.31	1.20	-0.25	-0.59

Mardia's (1985) multivariate kurtosis coefficient was 58.69, indicating the multivariate normality was violated (Bentler, 2005). Therefore, this study used Satorra-Bentler scaled statistic ($S-B\chi^2$; Satorra & Bentler, 1994) and robust standard errors (Bentler & Dijkstra, 1985) for CFA.

Of the 404 respondents, 58.9% ($n = 238$) were male and 41.1% ($n = 166$) were female. Age was asked using an open-ended question, and the average age of the respondents was 28.23. As for marital status, single (85.4%) was the most common, followed by married (13.6%), divorced (0.7%), and widowed (0.2%). The most reported category of monthly household income was from S\$2,000 to S\$4,999 (30.4%), while 29.1% of respondents answered that their household income was S\$8,000 or higher. In addition,

Table 4. Demographic information in the main study ($N = 404$).

Variable	Category	<i>N</i>	Percentage	Total
Gender	Male	238	58.9	404
	Female	166	41.1	
	No response	3	.5	
Age	20–29	281	69.5	404
	30–39	83	50.5	
	40–49	12	3.0	
	50–59	20	5.0	
	60 and over	7	1.7	
	No response	1	0.2	
Marital status	Single, never married	345	85.4	404
	Married	55	13.6	
	Separated/divorced	3	0.7	
	Widowed	1	0.2	
	No response	1	0.2	
Monthly household income	Under S\$2,000	85	21.0	404
	S\$2,000–S\$4,999	123	30.4	
	S\$5,000–S\$7,999	72	17.8	
	S\$8,000–S\$9,999	41	10.1	
	S\$10,000–S\$14,999	34	8.4	
	S\$15,000 over	43	10.6	
	No response	6	1.5	
Monthly payment for leisure activity	Under S\$49	279	69.1	404
	S\$50–S\$99	51	12.6	
	S\$100–S\$199	37	9.2	
	S\$200–S\$299	14	3.5	
	S\$300 over	22	5.4	
	No response	1	0.2	

only 18.1% of the respondents spent more than S\$100 per month for their favorite leisure activities, and 36% of the respondents answered that they did not spend their money on leisure activities (see Table 4).

Assessment of the measurement model

The initial model fit the data poorly: $S-B \chi^2(517) = 1,471.37$, $RMSEA = .07$, $SRMR = .08$, $NNFI = .89$, and $CFI = .90$. This study also conducted the Lagrange multiplier tests to identify the necessity of treating error covariances. From the result of the Lagrange multiplier tests, three error covariances (E4 and E5 in environment, PI1 and PI2 in personal identity, and GI1 and GI2 in group identity) were correlated to improve the model. The revised model showed an improved fit: $S-B \chi^2(482) = 1,153.33$, $RMSEA = .06$, $SRMR = .07$, $NNFI = .92$, and $CFI = .93$ (90% confidence intervals [.05, .06]).

Next, the researchers assessed the reliability, convergent validity, and discriminant validity of the measurement model (see Table 5). First, the overall rho coefficient of the total measurement model was .97, and the rho coefficients of the five factors ranged from .85 for leisure experience to .94 for group identity, indicating satisfactory internal consistency. To confirm convergent validity, this study assessed average variance extracted (AVE). The results showed that all AVEs of the five factors, ranging from .52 (environment) to .69 (socialization), were higher than .50, indicating acceptable convergent validity (common variance > unique variance; Fornell & Larcker, 1981). Last, the correlations between the factors were compared with the square root of AVE to identify discriminant validity. The square roots of AVEs (.72–.83) of five factors were higher

Table 5. Factor loadings, composite reliability, and AVEs of the measurement model.

Factor	Item	λ	Rho coefficient	AVE			
Leisure experience	LE1	.82	.85	.54			
	LE3	.82					
	LE4	.74					
	LE5	.68					
	LE6	.59					
	Environment	E1			.56	.88	.52
	E2	.71					
	E3	.75					
	E4	.79					
	E5	.75					
	E6	.68					
	E7	.76					
Socialization	S2	.82	.93	.69			
	S3	.89					
	S4	.90					
	S6	.88					
	S7	.81					
	S8	.65					
	Personal identity	PI1			.77	.93	.66
		PI2			.84		
PI3		.88					
PI4		.86					
PI5		.76					
PI6		.77					
PI7		.79					
Group identity		G11	.72	.94	.67		
	G12	.72					
	G13	.70					
	G14	.90					
	G15	.88					
	G16	.90					
	G17	.86					
	G18	.82					

than the correlations among all factors (.45–.70), indicating discriminant validity (see Table 6).

Last, this study further examined the invariance of the nostalgia scale using the two previous data sets: the Phase One student group ($n = 134$) versus the Phase Two generic group ($n = 404$). The study conducted a χ^2 difference test and compared the values between the null model with unconstrained parameters ($S-B\chi^2 = 1,781.80$, $df = 966$) and the alternative model with all factor loadings constrained to be equal ($S-B\chi^2 = 1,810.37$, $df = 994$). The test revealed that the chi-square difference value ($\Delta S-B\chi^2 = 28.67$, $\Delta df = 28$) was less than its critical value of 41.34 at the .05 probability level, failing to reject the null of equality (see Table 7). In addition, the two models showed no change in CFI ($\Delta CFI = .000$), supporting metric invariance of the scale (Cheung & Rensvold, 2002). Hence, it was concluded that the contents of all items in the nostalgia scale were identically perceived by the two different groups of leisure participants.

Discussion

The main purpose of this study was to develop a sound measurement scale for nostalgic leisure behavior. The procedures recommended by Hinkin et al. (1997) were undertaken

Table 6. Correlations among the factors of the measurement scale.

	1	2	3	4	5
1. Leisure experience	.73 ^a				
2. Environment	.66	.72 ^a			
3. Socialization	.63	.45	.83 ^a		
4. Personal identity	.68	.67	.62	.81 ^a	
5. Group identity	.53	.53	.68	.70	.82 ^a

^aSquare root of AVE.

Table 7. Test for invariance of the measurement model.

	S-B χ^2	df	CFI	RMSEA	RMSEA 90% CI	Δ S-B χ^2	Δ df	Δ CFI
Ho: Model with no constrained parameters	1,781.80	966	.915	.056	.052, .060	—	—	—
H _A : Model with all factor loadings constrained	1,810.37	994	.915	.056	.051, .060	28.57	28	.000

for enhanced rigor in this scale development. The domains of nostalgia in leisure were developed on the basis of Cho and colleagues’ (2014) classification of nostalgia in sport tourism, which was grounded on the concepts of the structure and the purpose of nostalgia (Fairley, 2003; Fairley & Gammon, 2005; Jenkins, 1996; Stets & Burke, 2000; Wilson, 2005). The classification consists of two domains: purpose of nostalgia and structure of nostalgia. These are then divided into four subdomains: nostalgia as experience, nostalgia as socialization, nostalgia as personal identity, and nostalgia as group identity. Hence, the four-dimensional nostalgia scale was specified.

However, the factor analysis in this study supported a five-factorial structure of the nostalgia construct (i.e., leisure experience, environment, socialization, personal identity, and group identity), unlike the four-factor model proposed by Cho et al. (2014). Specifically, the first domain, nostalgia as leisure experience, branched out into two factors—leisure experience and environment. After generating the initial sample of items, a Q-sort and expert review were utilized for face and content validity (Zait & Berteau, 2011). The purpose of the Q-sort method was to develop a set of items that represented each of the four factors, and the respondents were simply asked to determine the relevance of the items with the four factors given. Therefore, they were not provided a chance to review whether each factor was adequately conceptualized. By contrast, a panel of experts was provided the two-by-two classification of nostalgia (Cho et al., 2014) as well as the detailed definition of each factor and then asked to assess the appropriateness of each item for its specified factor. Unfortunately, the experts did not identify the potential for leisure experience to assess different aspects. However, this result is not necessarily surprising. Nostalgia as experience explains how people, places, and experiences or things can evoke individuals’ nostalgic feelings (Fairley, 2003). While the components of leisure experience and environment are matched exactly with Cho and colleagues’ (2014) concept of nostalgia as experience, each poses different and distinct characteristics in leisure. The measures of leisure experience are mainly associated with personally derived aspects of the leisure experience itself, such as “remembering my leisure activity ...”, “my exciting leisure activities in the past ...”, “remembering the freedom I experienced ...”, and so on. However, the items measuring environment address the more external aspects of leisure facilities and ambiance, such as “my favorite

leisure place ...”, “memorable weather ...”, “the architectural design ...”, and so on. Thus, the nostalgia as experience domain encompassed two factors (i.e., leisure experience and environment), suggesting that they are distinctive in their nature and should be conceptualized separately.

This finding is important and valuable as it can shed light on detailed aspects of nostalgia by more precisely specifying the role of nostalgia in the context of leisure. As mentioned, the domain of nostalgia as experience may encompass many triggering factors. The differentiation allows for better specificity and thorough observation of the underlying nostalgia-driven behaviors. The first factor, leisure experience, refers to an affective affliction toward past experiences. Supporting this proposition, Gammon (2002) highlighted the significance of memory and emotion to experiences that induce nostalgic feelings. It places more weight on the overall experience than the event alone, including the journey to a leisure event, social experience, and having the opportunity to interact with one’s favorite leisure activities. Next, leisure environment can account more for external components, such as facilities, equipment, and atmosphere. For example, Gammon and Ramshaw (2007) explained that individuals’ childhood memories related to the atmosphere of a sporting event can trigger nostalgia, leading to feeling contentment, attending a sport event, and being surrounded by the same atmosphere. Certainly, the atmosphere created at the leisure location, the design of facilities, equipment, or memorable weather during leisure activities could be unique attractions and primary sources that evoke nostalgic feelings.

Next, this study found that the other three factors (i.e., socialization, personal identity, and group identity) were consistent with the classification of nostalgia (Cho et al., 2014). In the field of leisure, the importance of socialization has been highlighted as an essential determinant of leisure participation (Funk & James, 2006). Individuals are connected to groups in various forms, such as family, friends, and even media outlets (Lock, Taylor, Funk, & Darcy, 2012), and are exposed to social factors that are influential in the early affiliation with a preference (James, 2001). In addition, the past social experience evokes individuals’ nostalgic feelings (Cho et al., 2014). Fairley (2003) addressed the concept that social experience is a significant factor influencing individuals’ nostalgia. That is, consistent with previous studies, this study found that individuals could have diverse social experiences and memories of social interaction while being involved in leisure activities, which, in turn, generate their nostalgic feelings.

Next, this study showed that individuals have nostalgic feelings regarding personal identity established during leisure experiences. Personal identity involves a self-description of individuals’ attributes, and personal identity salience is dependent on the situation (Trepte & Loy, 2017). While participating in leisure activities, individuals can understand and identify themselves (Haggard & Williams, 1992) and express their identity (Kleiber, 1999). They might also come to the realization that the leisure activity is important to them (Loveday, Lovell, & Jones, 2018). In other words, by participating in leisure activities, an individual can build his or her personal leisure identity, affecting not only individuals’ behavior (Wann & Branscombe, 1993) but also their feelings of nostalgia (Davis, 1979).

In addition, this study found that leisure participants have nostalgic feelings regarding group identity. Group identity refers to the feeling of belonging to one or more groups (Tajfel, 1981). It is the perception of self with regard to the identified group and focuses on

collective memory that includes a group's iconic moment (Jacobson, 2003). Fairley and Gammon (2005) noted that a group-based experience leads people to feel nostalgia, which pushes an individual to participate in a particular leisure activity and become involved as a member of the group. In addition, the maintenance of support or involvement in leisure is dependent on the support of in-group members (Wann, Tucker, & Schrader, 1996). With this support, the utility of the classification (Cho et al., 2014) has made the findings less generic and more precise in the knowledge they offer. Therefore, the understanding of nostalgia can propel a more comprehensive approach to encourage leisure engagement.

Cho et al. (2014) noted that "the concept of nostalgia is complex and difficult to measure, in part because of its diverse emotional perspectives" (p. 145). Nostalgia is highly related to the concept of motivation (Ramshaw & Gammon, 2005; Weed & Bull, 2004). Previous research that focused on motivations behind travel suggested that nostalgia can be a push factor (Leong, Yeh, Hsiao, & Huan, 2015). On the other hand, Cho et al. (2014) contended that although nostalgia and motivation might be closely related, in essence they are conceptually different. Nostalgia is a bittersweet emotion and theoretically consists of four components (Cho et al., 2014), whereas motivation can be examined by measuring physical attraction, escape, esthetic pleasure, and social interaction (Trail & James, 2001). In drawing a relationship between nostalgia and motivation, Stephan et al. (2014) suggested that nostalgia acts as a regulator in maintaining psychological stability and cushioning the negative impact of a stimulus. It also strengthens the key role of nostalgia by providing a positive outlook on the future. Hence, to provide a broader insight on leisure, nostalgia should be considered an emotional factor that strengthens and optimizes the functioning of the cognitive, affective, and behavioral system (Sedikides et al., 2015).

Individuals have an ability to mediate the past and attempt to recreate or partake in more activities that induce the same positive emotions they experience (Nauright, 2003). Therefore, nostalgia is a pivotal notion in steering individuals' behavior, such as leisure participation (Gordon, 2013). Understanding nostalgia can propel a more comprehensive approach to encouraging leisure engagement. The LNS developed in this study contributes to a deeper appreciation of nostalgia in the context of leisure and expands the current knowledge in leisure research. In other words, this study provides the empirical framework that ties nostalgia with leisure and introduces a scale that measures nostalgia in the context of leisure. It can be considered a stepping-stone in establishing the role of nostalgia within the context of leisure. As a result, the development of a scale contributes to the theoretical and practical body of understanding that may be used to further research in this field.

Limitations and future research

Although the study was successful in delivering its purpose, there are several limitations to note. First, the majority (i.e., 85.4%) of the respondents in this study were single. Having the majority of the sample with one marital status may not provide a comprehensive understanding of leisure nostalgia for other groups. Single adults may partake in different kinds of leisure activities compared to people who are married and have young children (Brown, Mishra, Lee, & Bauman, 2000). For example, married individuals may have less time to participate in leisure and have a tendency to participate in

leisure activities that are more inclusive of their families (Lee & Bhargava, 2004). Second, the data were collected only in Singapore. Given that, although the findings provide a good support of the concept of nostalgia within the parameters of leisure, the pool of responses may not be generalizable across different populations around the world. Therefore, future research needs to collect data from other countries and conduct a cross-cultural invariance test of the LNS to enhance its external validity. Last, it can be observed from the results that memory is closely associated with nostalgia. Memory, however, is not a constant and stagnant part of the mind. It changes and may even get distorted at different times (Kim, 2017). In other words, there is a tendency for individuals to change their opinions about events or experiences during different periods of time and in a different space. Hence, future research should employ a longitudinal study, implementing repeated observations at times to examine this aspect more closely.

Conclusion

Understanding the concept of nostalgia may be difficult for research participants as nostalgia has multiple dimensions and may hold both positive and negative emotions (Cho et al., 2014). In addition, nostalgia is related to diverse constructs, such as motivation, place attachment, emotional solidarity, attitude, and behavioral intentions. Therefore, to avoid misunderstanding the concept, this study provided the definition of nostalgia to the research participants, focusing on a “longing for the past.” Previous research has not widely studied the concept of nostalgia in the field of leisure. This study has laid down the groundwork for further research regarding nostalgia in this context. From an academic viewpoint, this study addressed the psychometric properties of the LNS by examining the overall and internal fit of the model to the data. With the measurement model proposed in this study, the scale can be brought forward to encourage more generalizable and detailed research on leisure nostalgia. For example, by using the LNS, future research may investigate the impacts of leisure nostalgia on psychological responses (e.g., well-being, life satisfaction) and behavioral intentions (e.g., participation intention) of leisure participants. From a practical viewpoint, the LNS can be effectively used in leisure and recreation industries. Nostalgia plays a role in shaping the perception of personal identity with regard to social settings (Gvion, 2009) and facilitating leisure choices (Fairley, 2003). Thus, managers and stakeholders in the leisure industry could use the LNS as a tool to better understand leisure participants’ nostalgic behavior and the relationship between nostalgia and leisure consumer behavior.

Funding

This work was supported by the National Institute of Education, Nanyang Technological University under [Grant SUG-NAP 1/17 CHT].

References

- Ateca-Amestoy, V., Serrano-del-Rosal, R., & Vera-Toscano, E. (2008). The leisure experience. *Journal of Socio-Economics*, 37(1), 64–78. doi:10.1016/j.socec.2006.12.025

- Baker, S. M., & Kennedy, P. F. (1994). Death by nostalgia: A diagnosis of context-specific case. *Advances in Consumer Research*, 21(1), 169–174.
- Batcho, K. I. (1998). Personal nostalgia, world view, memory, and emotionality. *Perceptual and Motor Skills*, 87(2), 411–432. doi:10.2466/pms.1998.87.2.411
- Bennett, J. (2018). Narrating family histories: Negotiating identity and belonging through tropes of nostalgia and authenticity. *Current Sociology*, 66(3), 449–465. doi:10.1177/0011392115578984
- Bentler, P. M. (2005). *EQS 6 structural equations program manual*. Encino, CA: Multivariate Software.
- Bentler, P. M., & Dijkstra, T. (1985). Efficient estimation via linearization in structural models. In P. R. Krishnaiah (Ed.), *Multivariate analysis VI* (pp. 9–42). Amsterdam, The Netherlands: North-Holland.
- Brown, S. R. (1980). *Political subjectivity: Applications of Q methodology in political science*. New Haven, CT: Yale University Press.
- Brown, W. J., Mishra, G., Lee, C., & Bauman, A. (2000). Leisure time physical activity in Australian women: Relationship with well being and symptoms. *Research Quarterly for Exercise and Sport*, 71(3), 206–216. doi:10.1080/02701367.2000.10608901
- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structure Equation Modeling: A Multidisciplinary Journal*, 9(2), 233–255. doi:10.1207/S15328007SEM0902_5
- Cho, H., Joo, D., & Chi, C. G. (2019). Examining nostalgia in sport tourism: The case of US college football fans. *Tourism Management Perspectives*, 29, 97–104. doi:10.1016/j.tmp.2018.11.002
- Cho, H., Lee, H. W., Moore, D., Norman, W. C., & Ramshaw, G. (2017). A multilevel approach to scale development in sport tourist nostalgia. *Journal of Travel Research*, 56(8), 1094–1106. doi:10.1177/0047287516683834
- Cho, H., Ramshaw, G., & Norman, W. C. (2014). A conceptual model for nostalgia in the context of sport tourism: Re-classifying the sporting past. *Journal of Sport & Tourism*, 19(2), 145–167. doi:10.1080/14775085.2015.1033444
- Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment, Research & Evaluation*, 10(7), 1–9.
- Davis, F. (1979). *Yearning for yesterday: A sociology of nostalgia*. New York, NY: The Free Press.
- Di Bona, L. (2000). What are the benefits of leisure? An exploration using the Leisure Satisfaction Scale. *British Journal of Occupational Therapy*, 63(2), 50–58. doi:10.1177/030802260006300202
- Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, 4(3), 272–299. doi:10.1037//1082-989X.4.3.272
- Fairley, S. (2003). In search of relived social experience: Group-based nostalgia sport tourism. *Journal of Sport Management*, 17(3), 284–304. doi:10.1123/jsm.17.3.284
- Fairley, S., & Gammon, S. (2005). Something lived, something learned: Nostalgia's expanding role in sport tourism. *Sport in Society*, 8(2), 182–197. doi:10.1080/17430430500102002
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. doi:10.2307/3151312
- Funk, D. C., & James, J. (2006). Consumer loyalty: The meaning of attachment in the development of sport team allegiance. *Journal of Sport Management*, 20(2), 189–217. doi:10.1123/jsm.20.2.189
- Gammon, S. (2002). Fantasy, nostalgia, and the pursuit of what never was. In S. Gammon & J. Kurtzman (Eds.), *Sport tourism: Principals and practice* (pp. 61–71). Eastbourne, UK: Leisure Studies Association Publications.
- Gammon, S., & Ramshaw, G. (2007). *Heritage, sport and tourism: Sporting pasts-tourist futures*. New York, NY: Routledge.
- Gay, L. R. (1996). *Educational research: Competencies for analysis and application*. Englewood Cliffs, NJ: Prentice-Hall.

- George, D., & Mallery, P. (2010). *SPSS for Windows step by step: A simple guide and reference 17.0 update* (10th ed.). Boston, MA: Pearson.
- Glover, T. D., & Bates, N. R. (2006). Recapturing a sense of neighbourhood since lost: Nostalgia and the formation of first string, a Community Team Inc. *Leisure Studies*, 25(3), 329–351. doi: [10.1080/02614360500468154](https://doi.org/10.1080/02614360500468154)
- Gordon, K. O. (2013). Emotion and memory in nostalgia sport tourism: Examining the attraction to postmodern ballparks through an interdisciplinary lens. *Journal of Sport & Tourism*, 18(3), 217–239. doi: [10.1080/14775085.2013.846228](https://doi.org/10.1080/14775085.2013.846228)
- Goulding, C. (2002). An exploratory study of age related vicarious nostalgia and aesthetic consumption. *Advances in Consumer Research*, 29(1), 542–546.
- Gvion, L. (2009). Organised leisure as promoting nostalgia: Israeli senior citizens singing in Yiddish. *Leisure Studies*, 28(1), 51–65. doi: [10.1080/02614360802334856](https://doi.org/10.1080/02614360802334856)
- Haggard, L. M., & Williams, D. R. (1992). Identity affirmation through leisure activities: Leisure symbols of the self. *Journal of Leisure Research*, 24(1), 1–18. doi: [10.1080/00222216.1992.11969868](https://doi.org/10.1080/00222216.1992.11969868)
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis* (5th ed.). Upper Saddle River, NJ: Prentice-Hall.
- Hinkin, T. R., Tracey, J. B., & Enz, C. A. (1997). Scale construction: Developing reliable and valid measurement instruments. *Journal of Hospitality & Tourism Research*, 21(1), 100–120. doi: [10.1177/109634809702100108](https://doi.org/10.1177/109634809702100108)
- Hofer, J. (1934). Medical dissertation on nostalgia (C. K. Anspach, Trans.). *Bulletin of the History of Medicine*, 2, 376–391.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. doi: [10.1080/10705519909540118](https://doi.org/10.1080/10705519909540118)
- Iwasaki, Y., & Havitz, M. E. (2004). Examining relationships between leisure involvement, psychological commitment and loyalty to a recreation agency. *Journal of Leisure Research*, 36(1), 45–72. doi: [10.1080/00222216.2004.11950010](https://doi.org/10.1080/00222216.2004.11950010)
- Jacobson, B. (2003). The social psychology of the creation of a sports fan identity: A theoretical review of the literature. *The Online Journal of Sport Psychology*, 5(2), 1–14.
- James, J. D. (2001). The role of cognitive development and socialization in the initial development of team loyalty. *Leisure Sciences*, 23(4), 233–262. doi: [10.1080/01490400152809106](https://doi.org/10.1080/01490400152809106)
- Jenkins, R. (1996). *Social identity*. New York, NY: Routledge.
- Kim, J. H. (2017). The impact of memorable tourism experiences on loyalty behaviors: The mediating effects of destination image and satisfaction. *Journal of Travel Research*, 57(7), 856–870. doi: [10.1177/0047287517721369](https://doi.org/10.1177/0047287517721369)
- Kivel, B. D. (2000). Leisure experience and identity: What difference does difference make? *Journal of Leisure Research*, 32(1), 79–81. doi: [10.1080/00222216.2000.11949890](https://doi.org/10.1080/00222216.2000.11949890)
- Kleiber, D. A. (1999). *Leisure experience and human development: A dialectical interpretation*. New York, NY: Basic Books.
- Kyle, G., Absher, J., Norman, W., Hammitt, W., & Jodice, L. (2007). A modified involvement scale. *Leisure Studies*, 26(4), 399–427. doi: [10.1080/02614360600896668](https://doi.org/10.1080/02614360600896668)
- Lee, Y. G., & Bhargava, V. (2004). Leisure time: Do married and single individuals spend it differently? *Family and Consumer Sciences Research Journal*, 32(3), 254–274. doi: [10.1177/1077727X03261631](https://doi.org/10.1177/1077727X03261631)
- Lee, Y., Dattilo, J., & Howard, D. (1994). The complex and dynamic nature of leisure experience. *Journal of Leisure Research*, 26(3), 195–211. doi: [10.1080/00222216.1994.11969956](https://doi.org/10.1080/00222216.1994.11969956)
- Leong, A. M. W., Yeh, S. S., Hsiao, Y. C., & Huan, T. C. T. (2015). Nostalgia as travel motivation and its impact on tourists' loyalty. *Journal of Business Research*, 68(1), 81–86. doi: [10.1016/j.jbusres.2014.05.003](https://doi.org/10.1016/j.jbusres.2014.05.003)
- Lock, D., Taylor, T., Funk, D., & Darcy, S. (2012). Exploring the development of team identification. *Journal of Sport Management*, 26(4), 283–294. doi: [10.1123/jsm.26.4.283](https://doi.org/10.1123/jsm.26.4.283)

- Loveday, P. M., Lovell, G. P., & Jones, C. M. (2018). The importance of leisure and the psychological mechanisms involved in living a good life: A content analysis of best-possible-selves texts. *The Journal of Positive Psychology, 13*(1), 18–28. doi:10.1080/17439760.2017.1374441
- Mahony, D. F., Nakazawa, M., Funk, D. C., James, J. D., & Gladden, J. M. (2002). Motivational factors influencing the behaviour of J. League spectators. *Sport Management Review, 5*(1), 1–24. doi:10.1016/S1441-3523(02)70059-4
- Marchegiani, C., & Phau, I. (2011). The value of historical nostalgia for marketing management. *Marketing Intelligence & Planning, 29*(2), 108–122. doi:10.1108/02634501111117575
- Mardia, M. V. (1985). Mardia's test of multinormality. In S. Kotz & N. L. Johnson (Eds.), *Encyclopedia of statistical sciences* (pp. 217–221). New York, NY: John Wiley.
- May, V. (2017). Belonging from afar: nostalgia, time and memory. *The Sociological Review, 65*(2), 401–415. doi:10.1111/1467-954X.12402
- McCall, G. J., & Simmons, J. L. (1966). *Identities and interactions*. New York, NY: Free Press.
- Merchant, A., & Ford, J. (2008). Nostalgia and giving to charity: A conceptual framework for discussion and research. *International Journal of Nonprofit and Voluntary Sector Marketing, 13*(1), 13–30. doi:10.1002/nvsm.300
- 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. doi:10.1002/cb.1568
- Nauright, J. (2003). Nostalgia, culture and modern sport. In V. Møller & J. Nauright (Eds.), *The essence of sport* (pp. 35–50). Odense: University Press of Southern Denmark.
- Ramshaw, G., & Gammon, S. (2005). More than just nostalgia? Exploring the heritage/sport tourism nexus. *Journal of Sport & Tourism, 10*(4), 229–241. doi:10.1080/14775080600805416
- Reisenwitz, T. H., Iyer, R., & Cutler, B. (2004). Nostalgia advertising and the influence of nostalgia proneness. *Marketing Management Journal, 14*(2), 55–66.
- Robinson, P. (2015). I remember it well: Epiphanies, nostalgia, and urban exploration as mediators of tourist memory. *Tourism Culture & Communication, 15*(2), 87–101. doi:10.3727/109830415X14401707765881
- Routledge, C., Arndt, J., Sedikides, C., & Wildschut, T. (2008). A blast from the past: The terror management function of nostalgia. *Journal of Experimental Social Psychology, 44*(1), 132–140. doi:10.1016/j.jesp.2006.11.001
- Satorra, A., & Bentler, P. M. (1994). Corrections to test statistics and standard errors in covariance structure analysis. In A. von Eye & C. C. Clogg (Eds.), *Latent variables analysis: Applications for developmental research* (pp. 399–419). Thousand Oaks, CA: Sage.
- Schultz, S. E., Kleine, R. E., & Kernan, J. B. (1989). 'These are a few of my favorite things': Toward an explication of attachment as a consumer behavior construct. *Advances in Consumer Research, 16*(1), 359–366.
- Sedikides, C., Cheung, W. Y., Wildschut, T., Hepper, E. G., Baldursson, E., & Pedersen, B. (2018). Nostalgia motivates pursuit of important goals by increasing meaning in life. *European Journal of Social Psychology, 48*(2), 209–216. doi:10.1002/ejsp.2318
- Sedikides, C., Wildschut, T., & Baden, D. (2004). Nostalgia: Conceptual issues and existential functions. In J. Greenberg, S. L. Koole, & T. A. Pyszczynski (Eds.), *Handbook of experimental existential psychology* (pp. 200–214). New York, NY: Guilford Press.
- Sedikides, C., Wildschut, T., Routledge, C., Arndt, J., Hepper, E. G., & Zhou, X. (2015). To nostalgize: Mixing memory with affect and desire. In *Advances in experimental social psychology* (Vol. 51, pp. 189–273). Cambridge, MA: Academic Press.
- Serafini, T. E., & Adams, G. R. (2002). Functions of identity: Scale construction and validation. *Identity, 2*(4), 361–389. doi:10.1207/S1532706XID0204_05
- Siegenthaler, K. L., & O'Dell, I. (2000). Leisure attitude, leisure satisfaction, and perceived freedom in leisure within family dyads. *Leisure Sciences, 22*(4), 281–296.
- Spiers, A., & Walker, G. J. (2008). The effects of ethnicity and leisure satisfaction on happiness, peacefulness, and quality of life. *Leisure Sciences, 31*(1), 84–99. doi:10.1080/01490400802558277

- Stephan, E., Wildschut, T., Sedikides, C., Zhou, X., He, W., Routledge, C., ... Vingerhoets, A. J. J. M. (2014). The mnemonic mover: Nostalgia regulates avoidance and approach motivation. *Emotion, 14*(3), 545–561. doi:[10.1037/a0035673](https://doi.org/10.1037/a0035673)
- Stern, B. B. (1992). Historical and personal nostalgia in advertising text: The fin de siècle effect. *Journal of Advertising, 21*(4), 11–22. doi:[10.1080/00913367.1992.10673382](https://doi.org/10.1080/00913367.1992.10673382)
- Stets, J. E., & Burke, P. J. (2000). Identity theory and social identity theory. *Social Psychology Quarterly, 63*(3), 224–237. doi:[10.2307/2695870](https://doi.org/10.2307/2695870)
- Stryker, S. (1987). Identity theory: Developments and extensions. In K. Yardley & T. Honess (Eds.), *Self and identity: Psychological perspectives* (pp. 89–103). New York, NY: Wiley.
- Tabachnick, B. G., & Fidell, L. S. (1989). *Using multivariate statistics*. New York, NY: Harper Collins.
- Tajfel, H. (1981). *Human groups and social categories: Studies in social psychology*. Cambridge, UK: Cambridge University Press.
- Trail, G. T., & James, J. D. (2001). The motivation scale for sport consumption: Assessment of the scale's psychometric properties. *Journal of Sport Behavior, 24*(1), 108–127.
- Trepte, S., & Loy, L. S. (2017). *Social identity theory and self-categorization theory*. London, UK: John Wiley & Sons.
- Wallendorf, M., & Arnould, E. J. (1988). “My favorite things”: A cross-cultural inquiry into object attachment, possessiveness, and social linkage. *Journal of Consumer Research, 14*(4), 531–547. doi:[10.1086/209134](https://doi.org/10.1086/209134)
- Wann, D. L., & Branscombe, N. R. (1993). Sports fans: Measuring degree of identification with their team. *International Journal of Sport Psychology, 24*(1), 1–17.
- Wann, D. L., Tucker, K. B., & Schrader, M. P. (1996). An exploratory examination of the factors influencing the origination, continuation, and cessation of identification with sports teams. *Perceptual and Motor Skills, 82*(3), 995–1001. doi:[10.2466/pms.1996.82.3.995](https://doi.org/10.2466/pms.1996.82.3.995)
- Weed, M. E., & Bull, C. (2004). *Sports tourism: Participants, policy, and providers* (2nd ed.). Oxford, UK: Elsevier.
- Wilson, J. L. (2005). *Nostalgia: Sanctuary of meaning*. Cranbury, NJ: Bucknell University Press.
- Youn, S., & Jin, S. V. (2017). Reconnecting with the past in social media: The moderating role of social influence in nostalgia marketing on Pinterest. *Journal of Consumer Behaviour, 16*(6), 565–576. doi:[10.1002/cb.1655](https://doi.org/10.1002/cb.1655)
- Zait, A., & Berteau, P. E. (2011). Methods for testing discriminant validity. *Management & Marketing, 9*(2), 217–224.
- Zhou, X., Wildschut, T., Sedikides, C., Chen, X., & Vingerhoets, A. J. (2012). Heartwarming memories: Nostalgia maintains physiological comfort. *Emotion, 12*(4), 678–684. doi:[10.1037/a0027236](https://doi.org/10.1037/a0027236)