

Developing a typology of older visitors to heritage attractions

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Developing a typology of older visitors to heritage attractions

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ABSTRACT

This article examines older visitors to UK heritage attractions and presents a typology to progress our understanding of this under-researched market. Although there is plenty of research on older tourists, scholars regard this market as homogeneous and neglect to investigate older day visitors to local attractions. We apply push-pull motivation and typology theories and employ a quantitative research design, which involves a survey of older heritage visitors. Confirmatory factor analysis produced five push motivation and five pull motivation dimensions, three visitation constraint dimensions, two constraint negotiation dimensions and two visitation benefit dimensions. A cluster analysis identified three distinct segments: 'Heritage Enthusiasts', 'Motivated but Unfulfilled' and 'Somewhat Interested but Satisfied' and developed a typology based on distinctive characteristics. Significant predictors of older visitors' satisfaction, recommendation and repeat visitation by cluster were also identified. The findings will facilitate more effective marketing of heritage attractions based on these segments.

RÉSUMÉ

Cet article examine les visiteurs plus âgés des attractions patrimoniales du Royaume-Uni et présente une typologie permettant de mieux comprendre ce marché sous-étudié. Bien qu'il existe de nombreuses recherches sur les touristes âgés, les universitaires considèrent ce marché comme homogène et négligent d'étudier les visiteurs plus âgés qui fréquentent les attractions locales pendant la journée. Nous nous appuyons sur les théories de la motivation « push-pull » et de la typologie, et utilisons un modèle de recherche quantitatif, qui implique un sondage auprès de visiteurs du patrimoine plus âgés. L'analyse factorielle confirmatoire a produit cinq dimensions de motivation « push » et cinq dimensions de motivation « pull », trois dimensions de contrainte de visite, deux dimensions de la négociation de la contrainte et deux dimensions d'avantage de visite. Une

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analyse en grappes a permis d'identifier trois segments distincts : les « passionnés du patrimoine », les « motivés, mais insatisfaits » et les « quelque peu intéressés, mais satisfaits », et a développé une typologie basée sur des caractéristiques distinctives. Des prédicteurs significatifs de la satisfaction des visiteurs plus âgés, des recommandations et des visites répétées par groupe ont également été identifiés. Ces résultats permettront un marketing plus efficace des attractions patrimoniales en fonction de ces segments.

1. Introduction

Older consumers, aged 50 years and over, represent the largest market for heritage attractions in the United Kingdom (UK) (Intel, 2019). Furthermore, 26% of the UK population will be aged 65 or over by 2041 (Office for National Statistics, 2018). Although there is plentiful research on older tourists (e.g. Otoo et al., 2021; Sie et al., 2016), little is known about older day visitors to heritage attractions located within their home region. Yet, given that regular leisure participation is known to improve the well-being of older adults (ten Bruggencate et al., 2019), it is important to understand this market. Relatedly, visiting local heritage sites may be perceived as an easier option for those who may experience non-negotiable constraints to travel (Huber et al., 2018). Moreover, by understanding the specific needs of such visitors, heritage attractions can develop bespoke products and experiences to fulfil them. Extant studies report on definitions (Sie et al., 2016), profiles (Alén et al., 2017), age-related tourist behaviour (Huber et al., 2018), motivations (Pestana et al., 2020), constraints, their negotiation (Kazemina et al., 2015), and benefits (Moal-Ulvoas & Taylor, 2014). These investigations usually examine specific elements of the tourist experience rather than adopting a more holistic approach. Moreover, there is a 'tendency to lump seniors together based on minimum ages as low as 50', casting doubt on conceptualizations and generalizations made about these tourists (Daniels et al., 2019, p. 105).

The primary aim of this article is to examine older day visitors to heritage attractions and present a typology of these consumers to progress our understanding of this market. Attractions are defined as 'natural, cultural or built assets that have been created or converted into a permanent visitor experience, where visitor interpretation and engagement with the asset is a core purpose of the development and management of the site' (Leask, 2018, p. 301). Typologies originate from existing theoretical understandings that explain the differences in characteristics among types of tourists (Luz Martín-Peña & Díaz-Garrido, 2008). They segment tourists according to their behaviour, socio-demographic profile,

motives, experiences, and impacts (Hvenegaard, 2002). Three key research questions (RQs) guide this study and reflect its focus on older heritage visitors.

RQ1: Can discrete segments in the older heritage attraction market be identified by combining their push and pull motivations, visitation constraints, constraint negotiation strategies and visitation benefits?

RQ2: Based on the segments, can a typology be developed on the basis of distinctive demographic, attitudinal and behavioural characteristics?

RQ3: Can a deeper understanding of older heritage visitor needs, and behaviour be established to facilitate more bespoke product development and marketing communication?

By examining these questions, our study offers several contributions. First, we use a neglect spotting strategy, which seeks to find ‘a missing “something”’ within an under-researched area (Nicholson et al., 2018, p. 213), by addressing the gap in the literature on older visitors to heritage attractions and by developing a typology of these consumers. The latter is based on their demographic and behavioural profiles, push and pull motivations, visitation constraints, constraint negotiation strategies and visitation benefits. Second, we contribute a new context strategy by applying typology theory to the older heritage market (Nicholson et al., 2018). As motivations are integral to typologies (Alén et al., 2017), it applies push-pull motivation theory (Dann, 1981), which has been under-utilized in research on older tourists, particularly in the day visitor market (Sie et al., 2016). Third, past research (Sangpikul, 2008; You & O’Leary, 1999) has predominantly employed a quantitative methodology. While this study also employs a quantitative analysis of data from a visitor questionnaire to facilitate comparisons, this was underpinned by semi-structured interviews with heritage attraction managers to inform the design of the survey instrument. This approach provides additional insights compared with the application of a single paradigm (Otoo & Kim, 2018). The study also makes a valuable contribution to industry practice. First, this typology will assist heritage attractions to better match their product offerings and experiences with their target markets and effectively implement promotional campaigns for older consumers (Chen & Huang, 2017). Second, understanding the constraints that older heritage visitors face, if and how they negotiate these, and their visitation benefits will help heritage attraction managers to focus on constraint alleviation and the positive outcomes of leisure participation (Huber et al., 2018).

This article starts with the Literature Review, which appraises pertinent research concerning the three key research questions. It then presents details of the methodological approach. The Results section which follows reports the key survey findings. The Discussion and Conclusion section evaluates these findings in the context of extant research and proposes recommendations for heritage attraction managers and for future research on older heritage visitors.

2. Literature review

2.1. Push and pull motivations

Push-pull motivation theory (Dann, 1981) has been a long-standing feature of tourism research and has assisted with developing a deeper understanding of tourists in a range of contexts. Firstly, consideration is given to the intrinsic factors which push individuals to temporarily leave their homes and their everyday norms (Dann, 1981). A key tenet of the model is that push motivations are derived from the need to escape from everyday experiences and fulfil internally related motivations, such as the need for relaxation (Dann, 1981). Pull motivations focus on the external factors attracting individuals to a destination and consider the attributes of particular attractions or destinations which induce a traveller's choice. Such pull factors may include the climate, and the facilities available at a destination. In turn, these factors respond and reinforce the push motivations (Dann, 1981). The push-and-pull model therefore offers a logical, sequential approach to understanding motivations for travel.

This lens is a useful construct to understand the motives of different tourist groups, such as international birders (Chen & Chen, 2015), rock climbers (Caber & Albayrak, 2016), hunters as tourists (Suni & Pesonen, 2019) and scuba divers (Albayrak et al., 2021). Studies focusing on the motives of tourists to destinations have also applied push-pull theory, including but not limited to Russian tourists to Turkey (Cengizci et al., 2020), British tourists to Thailand (Sastre & Phakdess-Aukson, 2017), and visitors to country parks in Hong Kong (Chan et al., 2018). Additionally, the complex nature of tourist motivations means that push-and-pull factors have been studied alongside other related constructs (Prayag & Ryan, 2011) such as customer satisfaction and loyalty (Brandano et al., 2018; Yi et al., 2018). The depth and breadth of this theory is therefore considerable.

More recently, there has been increasing scholarly interest in the push and pull motivations of older tourists (Sie et al., 2016). This research offers insights into the push and pull motives encouraging older people to visit heritage attractions. Older tourists' push motivations include escapism from the mundaneness of everyday life, a desire for novel experiences, relaxation,

socializing, strengthening family relationships, meeting like-minded individuals through organized tours and destination visits, and developing knowledge of a site, place, or culture (Otoo & Kim, 2020; Shavanddasht, 2018). Heritage attractions are well placed to provide older visitors with enriching cultural experiences that can fulfil their socializing, knowledge and learning needs (Sie et al., 2016). Pull motivations for older tourists concern the tangible attributes of a destination, such as climate, natural environment, accommodation, accessibility, cost, perceived safety, and heritage and cultural resources (Alén et al., 2017; Pestana et al., 2020). Destinations which target the older market should therefore develop their heritage attractions' offerings to fulfil their push motivations and contribute to a destination's pull factors. They should also consider the multidimensional needs, expectations, age, and health of these consumers (Wang et al., 2005).

2.2. Benefits realised from visiting heritage attractions

Older tourist motivations reflect the benefits realized from their experiences (Eusébio et al., 2017). Seeking to understand the benefits sought and applying them to the segmentation process can enhance the capacity to profile and classify consumers. Such explorations may reveal the importance consumers attach to both sensory and emotional benefits expected from a product or service (Frochot & Morrison, 2000). Understanding such benefits provides opportunities for attractions to tailor their offerings.

Studies on older adults' pre-visit motivations and post-visit benefits gained (Alén et al., 2017; Eusébio et al., 2017) identify perceived improvements to both physical health and mental wellbeing. Educational travel and cultural activities can lead to relaxation and socialization motivations being realized as older tourists' bond with other like-minded individuals (Nimrod & Rotem, 2012). Previous research (Pestana et al., 2020) has also found that their experiences are enhanced through improvements to destination resources and cultural attributes. While understanding the motivations of older consumers is valuable, it is important to understand the post-visit benefits, and whether heritage attractions can fulfil their motivations.

2.3. Typologies of older tourists

Several typologies of older tourists exist that focus on push and pull motivations (Alén et al., 2017; Sangpikul, 2008), preferences in visitor attractions, activities and technology, demographics and personality traits (Otoo et al., 2021; Otoo; Kim et al., 2021). Culture is a prominent theme within these typologies, with researchers identifying 'cultural hounds' (You & O'Leary, 1999), 'cultural and historical seekers' (Sangpikul, 2008), 'cultural explorers' (Ward, 2014), and 'travel for holiday or cultural purposes' (Alén et al., 2017)

as key clusters. Notably, nostalgia and personal connection motivations are not prominent within these typologies (Otoo & Kim, 2020). This is understandable given that much of the research investigates international tourists concerned with fulfilling escapism and relaxation needs. Yet, older visitors enjoy sites where they can draw on their own personal heritage and relive past experiences (Sie et al., 2016). Additionally, extant cultural tourist typologies, which often include heritage tourists (e.g. Chen & Huang, 2017; McKercher, 2002; McKercher et al., 2006; Nguyen & Cheung, 2014), are based on key motivations, festival and museum experiences, and specific destinations. However, older consumers are neglected in these cultural tourist typologies and in the specific heritage and broader leisure literature. Our study explores the role of nostalgia and personal connections in motivating older people to visit these sites and it develops a typology which addresses the older visitor gap in cultural tourist typologies.

2.4. Constraints and negotiation strategies

Before individuals engage in a leisure activity, they sequentially negotiate three levels of constraints – intrapersonal, interpersonal, and structural – according to the Hierarchical Leisure Constraints (HLC) model (Godbey et al., 2010). Intrapersonal constraints are physical and psychological factors that affect predilection, and, for older people, include health deterioration, reduced mobility, decreased stamina, emotional stress, and lack of self-confidence (Huber et al., 2018). Interpersonal constraints refer to the social capabilities of an individual to travel with a companion (Nyaupane & Andereck, 2008). The lack of companionship through the loss of a spouse is well documented as a powerful constraint for older tourists (Pan et al., 2020). Structural constraints describe the intervening factors that affect activity participation and preference. For older adults, these include a lack of financial resources, limited information, access, and climate (Chen et al., 2021). Furthermore, regarding heritage attractions, scholars (Wan et al., 2022) found that many older Chinese tourists would like to visit historical sites, yet accessibility issues prevent them from fully experiencing these. To date, the HLC model has been applied to older international tourists, but its roots in leisure studies mean it is well suited to this study's context of regional heritage attractions.

While constraints may affect activity preference, a strong desire to participate can result in their successful negotiation (Chen et al., 2021), which may bring a sense of accomplishment and improved confidence to older tourists (Nimrod & Rotem, 2010). Modifying the activity, booking organized tours, purchasing comprehensive insurance, adjusting to shorter holiday durations and joining clubs to mitigate against travelling solo, are constraint negotiation strategies used by older adults (Huber et al., 2018).

3. Methodology

3.1. Research design

This study adapts the approach that Fan et al. (2019) used to develop their tourist online social contact typology. This useful framework illustrates how the theoretical understanding of both face-to-face and online social contact is supported and layered with three key themes: travel motivation, tourist destination role, and tourist experience mode. These three layers of theory are combined to determine the dimensions and characteristics of the Tourist Typology of Social Contact (Fan et al., 2019). Similarly, Figure 1 indicates how our typology is informed by relevant theory, and how it uses empirical research from factor-cluster analysis and interview data to segment older visitors into three clusters.

We adapt the framework to fit our research design, to include a two-stage sequential design approach. Figure 1 illustrates this approach, comprising face to face semi-structured interviews with managers from regional heritage attractions to understand their older visitors and to inform the design of a visitor survey. The interviews took place from March to July 2019 and lasted 45 min on average. The attractions were considered to best represent the regions' heritage and varied in size, product offering and visitor numbers, while also being local or regional relative to their target markets. These interviews do not contribute to the findings presented here, but rather they were deployed to help develop the survey constructs and to corroborate key themes drawn from the literature.

This process assisted with ascertaining visitor profiles, behaviours and experiences. Similarly, they were also useful for the development of the typology and confirming the characteristics of each category. Typologies are constructs that go beyond classification and segmentation, and they can provide rich descriptions through identifying similarities and differences between complex phenomena through the use of multiple data sources (Doty & Glick, 1994; George & Bennett,

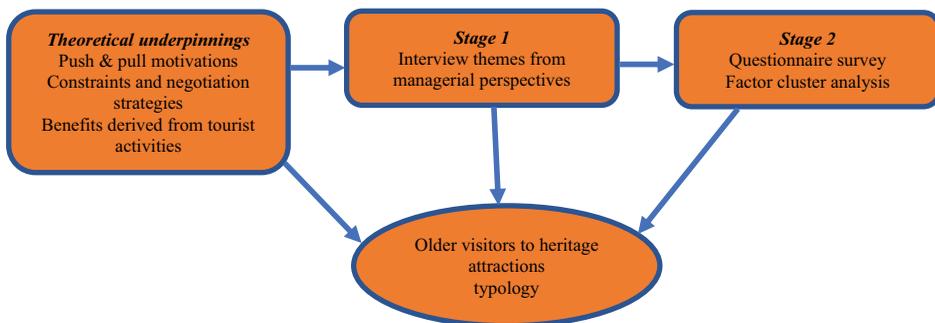


Figure 1. Approach to developing a typology of older visitors to heritage attractions.

2005). Here, the typology draws upon key themes from the Literature Review, which were refined through the interviews, then confirmed and augmented through the questionnaire survey. Through these three layers, the typology is able to outline characteristics of older adults' motivations to visit heritage attractions. As such, the primary research could gather insights from differing perspectives on older heritage visitors.

3.2. Data collection

We collected survey data onsite at the same heritage attractions where the interviews had taken place as well as via an online Qualtrics questionnaire. The target population for the quantitative stage of the study was older adults, aged 50 years and above, who visited heritage attractions across the South Yorkshire and Derbyshire region. The decision to survey heritage attraction visitors aged 50 years plus was informed by extant research (e.g. Otoo & Kim, 2020; Shoemaker, 2000; Sie et al., 2016), which defines older adults as those of this age and above. Additionally, we gathered data at local leisure clubs from older people who had visited, or regularly visited, these same heritage attractions. Distributing the survey at these clubs ensured that we captured a broad range of older heritage visitors from across the region. All onsite participants, including first-time visitors, were intercepted towards the end or midway through their visit. We strategically placed ourselves around the heritage site away from the entrance area, e.g. near the gift shop and the cafe. Participants took approximately 10 min to complete the survey, if they completed this themselves and 15 min if they needed assistance from the researcher to complete it. The survey questions asked about their experience at the actual attraction they were visiting, as well as the benefits they gained from visiting heritage attractions generally. When collecting survey data at local leisure clubs, the researchers spoke with potential participants and asked them about their visits to the same heritage attractions where the interviews had taken place. If participants had visited or regularly visited at least one of these, they were asked to complete the same questionnaire survey used for the onsite visitors. Using their visitor databases, heritage attraction managers sent the survey website link to their visitors. We asked online survey participants questions about the last heritage attraction they visited, as well as the benefits they gained from visiting heritage attractions generally.

The questionnaire ascertained information about older people's visit motivation, push and pull factors, visitation constraints, constraint negotiation and visitation benefits. A questionnaire protocol analysis (Babbie, 2010; Robson, 2003) was undertaken with five tourism and hospitality academics from the researchers' university to evaluate question interpretation, identify

any linkage, structural or branching issues, and confirm the completion time. Following this, we made minor adjustments to the questionnaire before piloting it in July 2019 with 10 older heritage visitors known to the research team. This resulted in several further minor changes to the instrument before distributing the final version to participants.

3.2.1. Participants

A sample of 406 older heritage visitors completed the questionnaire between July 2019 and February 2021. We approached potential participants at the heritage attractions if they appeared to fit the age profile (50 years and above). For the online version of the survey, we included the minimum age for participants in an email alongside the survey link, which was included in the email message. After deleting incomplete questionnaires, and those completed by participants under the age of 50, the survey produced 332 usable responses. The sample characteristics are presented in Table 1.

3.2.2. Measures and procedure

Visitor push and pull motivations, visitation constraints, constraint negotiation and visitation benefits were measured on five-point agreement/disagreement scales comprising items validated in the previous research (Otoo

Table 1. Sample characteristics.

Variable	n	%	Variable	n	%
Gender:			Employment Status:		
Male	116	34.9	Employed part-time	32	9.6
Female	216	65.1	Employed full-time	52	15.7
			Self-employed	19	5.7
Age:			Retired	199	59.9
50–59	65	19.6	Volunteer work	14	4.2
60–69	120	36.1	Currently unemployed	8	2.4
70–79	117	35.2	Unable to work	2	0.6
80+	30	9.1	Home maker	1	0.3
			Student	5	1.5
Highest Education Level:			Personal Annual Income:		
Secondary School	53	16.1	<£10,000	35	10.5
Further Education	99	29.8	£10,000–£20,000	79	23.8
Bachelor's Degree	118	35.5	£21,000–£30,000	41	12.4
Master's Degree	35	10.5	£31,000–£40,000	24	7.2
Doctorate	17	5.1	£41,000–£50,000	21	6.3
Prefer not to say	10	3.0	£51,000+	17	5.2
			Prefer not to say	115	34.6
Marital Status:			Ethnic Origin		
Single	31	9.4	White British	291	87.7
Married	212	63.9	White Irish	6	1.8
Living with partner	23	6.9	White Other	32	9.6
Widowed	27	8.1	Asian or Asian British	2	0.6
Separated/Divorced	26	7.8	Mixed African Groups	1	0.3
Prefer not to say	13	3.9			
Long-standing Illness, Disability/Infirmary:					
Yes	89	26.8			
No	243	73.2			

Notes: $N = 332$.

& Kim, 2020; Patuelli & Nijkamp, 2016; Sie et al., 2016). To test the dimensionality of the five constructs, participants' ratings were subjected to exploratory factor analysis (EFA) using SPSS Version 26. First, the skewness of respondent ratings was examined, and 11 variables (skew < -1.0) were statistically normed using reflected base-10 logarithmic transformation (see notes below [Tables 2 and 3](#)). The sample was then divided randomly into 40% calibration and 60% validation datasets. Principal axis factoring extraction was used to identify any weak dimensions and items were excluded from the analysis if they loaded on factors below 0.4 and had less than 0.10 difference in loadings between two or more factors (Tabachnick & Fidell, 2007). The number of factors to be retained was determined by the minimum eigenvalues of 1 (sample size > 250), visual examination of the scree plots and the results of a parallel analysis with a Monte Carlo simulation (O'Connor, 2000); in addition, the internal consistency was calculated using Cronbach's alpha formula (Cronbach, 1951). Promax oblique rotation was employed to reflect the reality of social science constructs more appropriately (Matsunaga, 2010). Assumptions of sample adequacy and absence of both identity matrices and multicollinearity were met. The EFA results were validated using confirmatory factor analysis (CFA) with AMOS Version 26, using maximum likelihood estimation. Composite construct reliability measures confirmed the internal consistency of the factors. A K-means cluster analysis and one way analysis of variance (ANOVA) were then used to identify meaningful segments in the older market for heritage visitors based on the identified dimensions. The concurrent and predictive criterion validity of the clusters was then verified. The segments were labelled according to the dimension loadings, and segment profiles were developed from the demographic and behavioural characteristics of each cluster. Finally, a typology of older heritage attraction visitors was developed, drawing on relevant theory, and the identified segments and profiles.

4. Results

4.1. The dimensional structure of older people's visitation to heritage attractions

The CFA confirms the existence of five push motivations, five pull motivations ([Table 2](#)), three visitation constraint, two constraint negotiation and two visitation benefit dimensions ([Table 3](#)). These were labelled following a thematic analysis of items loading on each one. The reliability and validity of the dimensions was confirmed using the following criteria. All items load significantly on their constructs and Cronbach's alpha coefficients (0.70 to 0.94) indicate the homogeneity of the dimensions (Nunnally, 1978). Moreover, the average variance explained (AVE) (0.50 to 0.84) and

Table 2. CFA models of visitor motivation dimensions.

Dimensions and Items\Loadings	Standardised Loadings	t-values ¹	SMCs
<i>Push Motivations:</i>			
1. Memory, nostalgia and tradition (ξ1: α = 0.86; AVE = 0.57; CCR = 0.84)			
I visit heritage attractions to relive some memories	.79***	58.99	.63
I visit heritage attractions that I have personal or family connection with	.62***	58.66	.40
I visit heritage attractions that make me feel nostalgic when visiting	.75***	64.74	.56
I visit heritage attractions to reminisce about the traditional way of life	.84***	60.14	.74
2. Health and wellbeing (ξ2: α = 0.90; AVE = 0.71; CCR = 0.88)			
I visit heritage attractions to improve my health	.86***	59.27	.73
I visit heritage attractions to improve my fitness	.88***	59.14	.78
I visit heritage attractions to improve my general well-being	.78***	77.42	.60
3. Socializing with family (ξ3: α = 0.76; AVE = 0.60; CCR = 0.75)			
I visit heritage attractions to spend time with my children	.82***	52.11	.67
I visit heritage attractions to spend time with my grandchildren	.73***	49.85	.54
4. Learning about the local area/history (ξ4: α = 0.80; AVE = 0.67; CCR = 0.80)			
I visit heritage attractions to learn about local history	.86***	108.64	.75
I visit heritage attractions to educate myself about the local region	.77***	93.42	.59
5. Escape to a different, relaxing place (ξ5: α = 0.70; AVE = 0.50; CCR = 0.70)			
I visit heritage attractions to escape my everyday life and usual routine	.73***	75.95	.53
I visit heritage attractions to enjoy a relaxing experience	.64***	102.22	.50
I visit heritage attractions to have a different experience	.62***	105.52	.42
Model fit: χ²(df):127.42 (62); p < .001; Normed χ²: 2.06; RMSEA: 0.039; CFI: .974; TLI: .961; IFI: .974; NFI: .951			
<i>Pull Motivations:</i>			
1. Festivals, events and family fun days (ξ1: α = 0.80; AVE = 0.55; CCR = 0.79)			
I visit heritage attractions which offer local food and drink festivals	.65***	50.20	.43
I visit heritage attractions which offer family fun days	.76***	61.04	.57
I visit heritage attractions which offer historical re-enactments	.82***	56.68	.68
2. Quality and value facilities and amenities (ξ2: α = 0.74; AVE = 0.51; CCR = 0.75)			
I visit heritage attractions because they have a shop which sells local and regional products	.88***	75.13	.78
I visit heritage attractions because they have good accessibility and facilities	.65***	68.83	.42

(Continued)

Table 2. (Continued).

Dimensions and Items	Loadings	t-values ¹	SMCS
I visit heritage attractions because they have a good quality restaurant or café	.58***	85.52	.38
3. Interesting activities for families (€3: $\alpha = 0.78$; AVE = 0.60; CCR = 0.75)			
I visit heritage attractions because they offer interesting activities for my children	.76***	55.51	.57
I visit heritage attractions because they offer interesting activities for my grandchildren	.79***	50.75	.63
4. Opportunities to learn about history, arts and crafts (€4: $\alpha = 0.70$; AVE = 0.50; CCR = 0.71)			
I visit heritage attractions because they offer guided tours if required	.57***	75.43	.38
I visit heritage attractions which offer specialist historic talks	.78***	76.95	.61
I visit heritage attractions which offer the opportunity to learn about art and sculpture	.50***	72.73	.34
I visit heritage attractions which offer the opportunity to learn about traditional crafts	.59***	73.54	.35
5. Historic buildings and settings (€5: $\alpha = 0.70$; AVE = 0.51; CCR = 0.70)			
I visit heritage attractions because they have historic buildings	.81***	124.78	.66
I visit heritage attractions because they have an attractive natural environment	.61***	112.79	.38
Model fit: $\chi^2(df):202.59 (61)$; $p < .001$; Normed χ^2: 3.32; RMSEA: 0.074; CFI: .920; TLI: .881; IFI: .921; NFI: .891			

Notes: 1= Critical ratios; * $p < .05$; ** $p < .01$; *** $p < .001$; SMC = squared multiple correlation; AVE = average variance extracted; (Σ standardised λ)/ n ; CCR = composite construct reliability; (Σ standardised λ)²/ $(\Sigma$ standardised λ)² + (Σ ϵ); RMSEA = root mean square of approximation; CFI = comparative fit index; TLI = Tucker-Lewis index; NFI = normed fit index; IFI = incremental fit index. The critical ratios indicate that the measurement variables are sufficient in their representation of the constructs and the standardised loadings and moderate to strong correlations between items loading on the same constructs also show evidence of convergent validity (Hair et al., 2009). Discriminant validity is also established for each dimension because all correlation coefficients between each pair of constructs are $< .85$ (Tabachnick & Fidell, 2007). Additionally, the square root of AVE for each dimension within each construct is greater than the highest correlation coefficient between the dimensions in each construct (Fornell & Larcker, 1981). The negative skew of the following variables was statistically normed using reflected base-10 logarithmic transformation: I visit heritage attractions to learn about local history; I visit heritage attractions to educate myself about the local region; I visit heritage attractions to enjoy a relaxing experience.

composite construct reliability (CCR) (0.70 to 0.92) are above the critical values (Bagozzi & Yi, 1988) indicating consistency, representativeness and inter-dimensional distinction.

4.2. Clusters of older visitors to heritage attractions

The K-means analysis produced three distinct clusters, with the large majority of the differences between them on the basis of the push and pull motivation, constraint, constraint negotiation and visit benefit dimensions reaching statistical significance (Table 4). The clusters have predictive criterion validity because they are also significantly differentiated on overall satisfaction and intention to recommend and revisit the attractions. They also have concurrent criterion validity regarding several variables including first visit to the survey site attraction, last visit to the survey site attraction and frequency of visits to all heritage attractions. The statistically significant differentiation supports the cluster dimension ratings and cluster identities based on the ratings. As such, the clusters were labelled as Cluster I (CI): 'Heritage Enthusiasts'; Cluster II (CII): 'Motivated but Unfulfilled'; Cluster III (CIII): 'Somewhat Interested but Satisfied'. Discrete segments in the older heritage attraction market have therefore been identified by combining their push and pull motivations, visitation constraints, constraint negotiation strategies and visitation benefits (RQ1).

CI (Heritage Enthusiasts) has the highest mean scores for push and pull motivations (with the exception of socializing with family for CIII). They have the lowest mean scores for visitation constraints, the highest mean scores for visitation benefits, overall satisfaction, and for intention to recommend and revisit heritage attractions, most of which are significantly higher than CII and all are significantly higher than CIII (Table 4). CII (Motivated but Unfulfilled) has significantly higher ratings on all motivation dimensions compared to CIII (except for socializing with family). However, it has significantly lower ratings than CI, except for three push and two pull motivation dimensions, which are not significantly differentiated. By contrast, CII has significantly higher scores than CI and CIII for visitation constraints, but also for constraint negotiation. The CII scores for visitation benefits are significantly lower than CI, but significantly higher than CIII, whereas its scores for overall satisfaction and intention to recommend are significantly lower than CI but undifferentiated from CIII. CIII (Somewhat Interested but Satisfied) has the lowest scores for push and pull motivations, except for socializing with family. Its scores for visitation constraints are significantly lower than for CII, but significantly higher than for CI, as are their scores for constraint acceptance, while those for constraint resistance and visitation benefits are significantly lower than for CI and CIII. CIII's ratings for satisfaction and intention to both recommend and revisit are undifferentiated from CII but are significantly lower than CI.



Table 3. CFA models of visitation constraints, constraint negotiation and benefits to visitation dimensions.

Dimensions and Items/Loadings	Standardised Loadings	t-values ¹	SMCS
<i>Visitation Constraints:</i>			
1. Intra-personal: immobility, health and age (ξ1: α = 0.94; AVE = 0.80; CCR = 0.92)			
I do not visit other heritage attractions because my mobility prevents me	.85***	40.27	.73
I do not visit other heritage attractions because my health prevents me	.86***	40.69	.74
I do not visit other heritage attractions because my age prevents me	.97***	42.51	.95
2. Inter-personal: family commitments (ξ2: α = 0.77; AVE = 0.51; CCR = 0.74)			
I do not visit other heritage attractions because I am too stressed looking after my spouse or partner	.82***	42.04	.66
I do not visit other heritage attractions because I am too busy with the rest of my family	.64***	40.03	.40
I do not visit other heritage attractions because I do not know how to get information about them	.62***	40.96	.40
3. Structural: accessibility (ξ2: α = 0.90; AVE = 0.84; CCR = 0.91)			
I do not visit other heritage attractions because they are located too far away	.86***	44.45	.73
I do not visit other heritage attractions because they are too difficult to get to	.97***	43.54	.94
Model fit: χ2(df):44.72 (14); p < .001; Normed χ2: 3.19; RMSEA: 0.075; CFI: .985; TLI: .971; IFI: .985; NFI: .979			
<i>Constraint Negotiation:</i>			
1. Constraint acceptance (ξ1: α = 0.73; AVE = 0.50; CCR = 0.70)			
I deal with the barriers by not visiting heritage attractions as often as I used to	0.62***	53.98	.32
I deal with the barriers by doing other leisure activities instead	0.64***	56.36	.36
I deal with the barriers by compromising and doing activities my family and friends prefer to do	0.70***	53.63	.48
2. Constraint resistance (ξ1: α = 0.70; AVE = 0.53; CCR = 0.77)			
I deal with the barriers by prioritizing my time so that I can still visit heritage attractions	0.55***	68.56	.30
I deal with the barriers by choosing a heritage attraction which meets my needs	0.88***	65.23	.78
I deal with the barriers by finding people with similar heritage interests to visit with	0.74***	54.39	.55
Model fit: χ2(df):18.5 (6); p < .001; Normed χ2: 3.08; RMSEA: 0.074; CFI: .976; TLI: .939; IFI: .976; NFI: .965			
<i>Benefits of Visitation:</i>			
1. Personal development (ξ1: α = 0.79; AVE = 0.52; CCR = 0.83)			
I benefit from visiting heritage attractions by growing as a person	0.87***	76.33	0.75
I benefit from visiting heritage attractions by developing a new or existing skill	0.77***	72.33	0.54
I benefit from visiting heritage attractions by strengthening my relationships	0.70***	79.33	0.50

(Continued)

Table 3. (Continued).

Dimensions and Items/Loadings	Standardised Loadings	t-values ¹	SMCs
I benefit from visiting heritage attractions by sharing my stories with others when I get home	0.50***	91.29	0.25
2. Rest, relaxation and health (ξ1: α = 0.86; AVE = 0.62; CCR = 0.81)			
I benefit from visiting heritage attractions by feeling rested during and after my visit	0.79***	81.40	0.63
I benefit from visiting heritage attractions by feeling relaxed during and after my visit	0.67***	95.96	0.45
I benefit from visiting heritage attractions by feeling healthy during and after my visit	0.89***	80.36	0.80

Model fit: $\chi^2(df):24.53 (12); p < .001$; Normed χ^2 : 2.04; RMSEA: 0.050; CFI: .989; TLI: .980; IFI: .989; NFI: .983

Notes: 1 = Critical ratios; * $p < .05$; ** $p < .01$; *** $p < .001$; SMC = squared multiple correlation; AVE = average variance extracted; (\sum standardised λ)/ n ; CCR = composite construct reliability; (\sum standardised λ)²/ $(\sum$ standardised λ)² + (\sum ϵ); RMSEA = root mean square of approximation; CFI = comparative fit index; TLI = Tucker-Lewis index; NFI = normed fit index; IFI = incremental fit index. The critical ratios indicate that the measurement variables are sufficient in their representation of the constructs and the standardised loadings and moderate to strong correlations between items loading on the same constructs also show evidence of convergent validity (Hair et al., 2009). Discriminant validity is also established for each dimension because all correlation coefficients between each pair of constructs are < .85 (Tabachnick & Fidell, 2007). Additionally, the square root of AVE for each dimension within each construct is greater than the highest correlation coefficient between the dimensions in each construct (Fornell & Larcker, 1981). The negative skew of the following variables was statistically normed using reflected base-10 logarithmic transformation: I do not visit other heritage attractions because I am too stressed looking after my spouse or partner I do not visit other heritage attractions because I do not know how to get information about them.

Table 4. Validation of the K-means three cluster solution.

Dimensions	One-way ANOVA, Post-Hoc Test Results and Cluster Dimension Scores						
	F	Cluster Differentiation			Cluster Differentiation		
		I-II	I-III	II-III	I	II	III
Push Motivations:							
1. Memory, nostalgia and tradition	48.11***	.96	***	***	3.52	3.44	2.49
2. Health and wellbeing	30.53***	***	***	***	3.82	3.35	2.68
3. Socializing with family	5.27***	.73	***	***	3.19	3.13	3.35
4. Learning about the local area/history	10.75***	***	***	.96	4.47	4.07	3.88
5. Escape to a different, relaxing place	16.30***	.90	***	***	4.10	3.92	3.62
Pull Motivations:							
1. Festivals, events and family fun days	91.07***	***	***	***	4.48	3.46	2.38
2. Quality and value facilities and amenities	57.02***	**	***	***	3.86	3.65	3.08
3. Interesting activities for families	87.40***	.60	***	***	3.33	3.18	2.18
4. Opportunities to learn history, arts and crafts	97.54***	.84	***	***	4.03	3.69	3.10
5. Historic buildings and settings	45.59***	***	***	***	4.66	4.22	4.03
Visitation Constraints:							
1. Intra-personal: immobility, health and age)	155.81***	***	**	***	1.43	2.42	1.56
2. Inter-personal: family commitments	139.74***	***	***	***	1.32	2.67	1.44
3. Structural: accessibility	53.64***	***	***	***	1.77	2.79	2.28
Constraint Negotiation:							
1. Constraint acceptance	39.88***	***	***	***	2.22	3.04	2.42
2. Constraint resistance	28.27***	.84	***	***	3.22	3.35	2.71
Benefits of Visitation:							
1. Personal development	78.32***	***	***	***	3.90	3.59	2.95
2. Rest, relaxation and health	59.59***	***	***	***	4.19	3.64	3.28
Predictive Criterion Validity:							
Overall satisfaction	14.34***	***	***	.17	4.71	4.17	4.35
Intention to recommend	11.72***	***	***	.57	4.70	4.21	4.32
Intention to revisit	11.21***	***	***	.96	4.56	4.06	4.02
Concurrent Criterion Validity:							
First visit to the survey site heritage attraction	$\chi^2(\text{df}):8.51(2); p = .01$						
Last visit to the survey site heritage attraction	$\chi^2(\text{df}):22.71(12); p = .03$						
Frequency of visits to all heritage attractions	$\chi^2(\text{df}):18.36(10); p = .02$						

Notes: Cluster I: Heritage Enthusiasts ($n = 98$); Cluster II: Engaged and Constraint Resistant ($n = 128$); Cluster III: Somewhat Interested but Satisfied ($n = 106$); $\text{df}: 2/377$; * $p < .05$; ** $p < .01$; *** $p < .001$; Welch's t-test was used because of unequal sample sizes; Bonferroni post-hoc tests were used to maintain statistical power given the small number of comparisons. Mean values were computed on the basis of aggregated scores for each dimension from attribute ratings on 5-point Likert scales: 1 = disagree strongly, 2 = disagree, 3 = neither disagree nor agree, 4 = agree, 5 = agree strongly. Mean ratings for overall satisfaction, intention to recommend and revisit ratings are also derived from the same 5-point scales. Both hierarchical and non-hierarchical algorithms were used in the partitioning procedure; the average linkage between-groups method and a squared Euclidean distance measure were used to specify cluster seed points for the K-means cluster analysis.

4.3. Typology of older visitors to heritage attractions

The cluster profiles based on the respondents' socio-demographic and behavioural characteristics are presented in Tables 5 and 6. Notably, in addition to the statistically significant differences between the clusters on the basis of the motivation, visitation constraint, constraint negotiation and visitation benefit dimensions and the predictive and concurrent validity criteria, there are significant differences between them in relation to age, highest level of education, employment status, religious affiliation and

Table 5. Heritage visitor cluster profiles

Socio-demographic Criteria\ Clusters	Cluster I (n = 98)	Cluster II (n = 128)	Cluster III (n = 106)
Gender ($\chi^2= 2.98(2); p = 0.67$)			
Male (%)	32.0	37.6	34.3
Female (%)	68.0	62.4	65.7
Age ($\chi^2 13.11(6); p = 0.04$)			
50-59 (%)	12.2	22.0	23.6
60-69 (%)	40.8	33.3	35.8
70-79 (%)	39.8	30.8	36.8
80+ (%)	7.1	13.9	3.8
Education (Highest Level) ($\chi^2 31.63(16); p = 0.02$)			
Secondary school (%)	10.2	16.8	5.5
Further education/ 6 th Form completed (%)	25.5	24.8	24.8
Further education/6 th form uncompleted (%)	6.1	3.2	5.5
Undergraduate degree (%)	28.6	24.8	22.9
Undergraduate study but uncompleted (%)	5.1	8.0	0.9
Masters degree (%)	9.2	5.6	17.4
Masters study but uncomplete (%)	10.2	7.2	10.1
Doctorate (%)	3.1	4.8	7.3
Doctoral study but uncompleted (%)	1.0	0.0	2.8
Undisclosed (%)	1.0	4.8	2.8
Marital Status ($\chi^2= 8.72(6); p = 0.56$)			
Single (%)	7.2	10.4	10.1
Married (%)	70.1	61.6	61.5
Living with partner (%)	6.2	4.8	10.1
Widowed (%)	8.2	8.0	8.2
Separated/Divorced (%)	6.2	8.8	8.3
Undisclosed (%)	2.1	6.4	1.8
Employment Status ($\chi^2= 21.29(12); p = 0.04$)			
Employed part-time (%)	8.1	7.5	14.0
Employed full-time (%)	9.0	18.9	20.6
Self-employed (%)	7.2	6.6	3.7
Retired (%)	71.2	57.5	55.1
Volunteer (%)	3.6	7.5	1.9
Out of work (%)	0.0	1.9	3.7
Unable to work (%)	0.9	0.0	0.9
Personal Income ($\chi^2= 16.27(10); p = 0.09$)			
≤ £10,000	12.3	22.4	13.2
£11,000-£20,000	40.0	31.6	38.2
£21,000-£30,000	24.6	7.9	25.0
£31,000-£40,000	9.2	17.1	6.5
£41,000-£50,000	7.7	11.8	9.2
£51,000+	6.2	9.2	7.9
Ethnicity ($\chi^2= 4.09(5); p = 0.85$)			
White British (%)	89.7	87.2	87.1
White Irish (%)	2.1	1.6	1.8
White Other (%)	8.2	10.4	10.2
Mixed or multiple ethnic groups (%)	0.0	0.8	0.0
African or Asian (%)	0.0	0.0	0.9
Religious Affiliation ($\chi^2= 18.73(5); p = 0.02$)			
Christian (%)	55.1	49.6	33.0
Buddhist (%)	0.0	0.8	0.0
Muslim (%)	3.1	0.8	2.8
No religion (%)	36.7	35.2	53.2
Undisclosed (%)	5.1	13.6	11.0
Illness/Disability ($\chi^2= 10.67(2); p = 0.005$)			
Yes (%)	22.4	36.8	19.1
No (%)	77.6	63.2	80.9

Table 6. Heritage visitor cluster profiles

Behavioral Criteria\ Clusters	Cluster I (n = 98)	Cluster II (n = 128)	Cluster III (n = 106)
First visit to the survey site heritage attraction ($\chi^2 = 8.51(2)$; $p = 0.01$)			
Yes (%)	18.9	31.9	35.6
No (%)	81.1	68.1	64.4
Last visit to the survey site heritage attraction ($\chi^2 = 22.71(12)$; $p = 0.03$)			
Within the last week (%)	19.5	12.5	12.2
Within the last 2 weeks (%)	18.4	17.5	14.0
Within the last month (%)	26.2	18.3	25.2
Within the last 2 months (%)	8.7	5.0	13.1
Within the last three months (%)	12.6	15.0	9.3
Within the last 6 months (%)	9.7	17.5	8.4
Undisclosed (%)	4.9	14.2	17.8
Frequency of visits to all heritage attractions ($\chi^2 = 18.36(10)$; $p = 0.02$)			
Weekly (%)	11.7	8.4	4.2
Monthly (%)	33.3	27.3	34.2
Every 3-6 months (%)	40.5	34.2	37.5
Every 7-12 months (%)	7.2	18.9	10.0
< 1 visit per year (%)	1.9	7.0	8.3
Undisclosed (%)	5.4	4.2	5.8
Acquisition of heritage attraction information ($\chi^2 = 16.17(10)$; $p = 0.09$)			
Word of mouth (%)	15.3	26.8	21.3
Social media (%)	6.3	5.1	4.7
Website research (%)	6.1	3.9	6.3
From previously visited attractions (%)	70.5	54.3	59.5
TIC (%)	1.0	4.7	2.8
Saw the sign for the attraction (%)	2.0	5.5	3.8
Mode of travel to and from the attraction ($\chi^2 = 14.94(14)$; $p = 0.25$)			
Public transport (%)	15.2	11.0	12.5
Private vehicle (%)	75.0	66.4	75.0
Group tour (%)	1.8	4.8	3.3
Walked (%)	6.3	13.7	4.2
Cycled (%)	0.9	1.3	2.5
Public transport and walked (%)	0.8	2.1	2.5
Taxi (%)	0.0	0.7	0.0
Who did they visit with ($\chi^2 = 8.50(12)$; $p = 0.75$)			
On their own (%)	16.8	18.1	15.4
With spouse/partner (%)	40.2	39.6	41.9
With children (%)	13.1	13.2	8.5
With grandchildren (%)	6.5	3.5	3.4
With other family member(s) (%)	1.9	4.9	3.4
With friends (%)	16.8	16.7	17.9
With club or society (%)	4.7	4.2	9.4
Length of stay ($\chi^2 = 8.14(8)$; $p = 0.42$)			
< 1 hour (%)	6.3	8.5	6.7
1-2 hours (%)	38.7	45.1	47.9
3-4 hours (%)	45.0	41.5	42.0
5-6 hours (%)	9.0	3.5	3.4
7-8 hours (%)	0.9	1.4	0.0
Overall satisfaction ($F = 14.34(2/327)$; $p < 0.001$)	4.71	4.17	4.35
Intention to recommend ($F = 11.72(2/327)$; $p < 0.001$)	4.70	4.21	4.32
Intention to revisit ($F = 10.45(2/326)$; $p < 0.001$)	4.56	4.06	4.02

illness/disability. There are significantly more 50–59-year olds in CII and CIII compared to CII, and significantly more 80+ year olds in CII compared to CII and CIII. Significantly less CIII are educated to school level only, while significantly more are educated to Master's degree level compared with CI and CII. Significantly less of CI are employed full time and

significantly more are retired compared to CII and CIII. Significantly less CIII are of Christian religious affiliation and significantly more have no religious affiliation compared to CII and CI. Finally, significantly more of CII have illness/disability compared with CI and CIII.

Each cluster shares some similar characteristics, e.g. its members are mostly female, of white British ethnicity, married, retired, and have completed either Further education/6th Form or a Bachelor's degree. They are most likely to use private vehicles to travel to attractions, have visited the survey site before and acquire heritage attraction information from their previous visits. Also, they tend to visit heritage sites with their spouse or partner.

4.4. Significant predictors of visitor satisfaction, word-of-mouth recommendation and repeat visitation intention by cluster

The significant predictors for each cluster's visit satisfaction, word-of-mouth recommendation and repeat visitation intention are presented in [Table 7](#). Across the three outcome variables, only two push motivations, one pull motivation, two constraints, two constraint negotiation items and one visitation benefit were found to be significant predictors for the three clusters. Learning about the local area/history is a significant push motivation for CII and CIII's satisfaction and CI and CIII's word-of-mouth recommendation, while memory, nostalgia and tradition are a uniquely significant push motivation for CI's word-of-mouth recommendation. Similarly, festivals, events and family fun days are uniquely significant pull motivations for CII's word-of-mouth recommendation and repeat visitation intention. Interestingly, family commitment is a uniquely significant interpersonal constraint on CIII's satisfaction, while accessibility is a uniquely significant structural constraint on CI's word-of-mouth recommendation. By comparison, constraint resistance is a uniquely significant constraint negotiation strategy for CI's satisfaction, word-of-mouth recommendation and repeat visitation intention, although constraint acceptance also uniquely and negatively impacts CI's satisfaction. Visitation benefits: rest, relaxation and health, are the dominant predictors of the outcome variables for the three clusters, both in terms of the breadth of their influence and the strength of their impact. It is the key predictor of CI's satisfaction, CI, CII and CIII's word-of-mouth recommendation and CI and CIII's repeat visitation intention; interestingly, it does not influence CII and CIII's satisfaction. Overall, a wider range of variables influence CI's visit satisfaction and intention to both recommend and revisit heritage attractions compared with CII and CIII. Further details relating to the differentiation between CI, CII and CIII on the basis of these variables are presented in the next section.

Table 7. Significant predictor variables for over 50s visitor satisfaction, recommendation and repeat visitation by cluster

Variables	β (SE)	β^1	t
Satisfaction:			
Cluster I: $R^2 = 0.20$; Adjusted $R^2 = 0.17$; Sum of Squares (df) = 7.01(4); F = 5.96; $p < 0.001$			
1. Rest, relaxation and health (benefit)	0.25(0.08)	0.29	3.15**
2. Constraint resistance (constraint negotiation)	0.15(0.06)	0.23	2.44*
3. Constraint acceptance (constraint negotiation)	-0.13(0.06)	-0.19	-1.99*
Cluster II: $R^2 = 0.05$; Adjusted $R^2 = 0.04$; Sum of Squares (df) = 7.34(2); F = 4.03; $p < 0.001$			
1. Learning about the local area/ history (push motivation)	0.20(0.09)	0.17	2.14*
Cluster III: $R^2 = 0.14$; Adjusted $R^2 = 0.12$; Sum of Squares (df) = 7.95 (2); F = 8.79; $p < 0.001$			
1. Inter-personal: family commitments (constraint)	-0.29(0.09)	-0.29	-3.25**
2. Learning about the local area/ history (push motivation)	0.20(0.07)	0.26	2.08*
Recommendation:			
Cluster I: $R^2 = 0.23$; Adjusted $R^2 = 0.18$; Sum of Squares (df) = 9.31(5); F = 5.09; $p < 0.001$			
1. Rest, relaxation and health (benefit)	0.26(0.09)	0.27	2.81**
2. Structural: accessibility (constraint)	-0.19(0.08)	-0.22	-2.25*
3. Learning about the local area/ history (push motivation)	0.18(0.08)	0.21	2.17*
4. Constraint resistance (constraint negotiation)	0.15(0.07)	0.21	2.11*
5. Memory, nostalgia and tradition (push motivation)	0.14(0.07)	0.19	2.01*
Cluster II: $R^2 = 0.12$; Adjusted $R^2 = 0.10$; Sum of Squares (df) = 11.31(2); F = 7.11; $p = 0.001$			
1. Rest, relaxation and health (benefit)	0.29(0.13)	0.23	2.50**
2. Festivals, events and family fun days (pull motivation)	0.26(0.10)	0.20	2.21*
Cluster III: $R^2 = 0.11$; Adjusted $R^2 = 0.10$; Sum of Squares (df) = 8.30(2); F = 7.01; $p < 0.001$			
1. Rest, relaxation and health (benefit)	0.26(0.10)	0.23	2.55**
2. Learning about the local area/ history (push motivation)	0.15(0.07)	0.20	2.23*
Repeat Visitation:			
Cluster I: $R^2 = 0.11$; Adjusted $R^2 = 0.09$; Sum of Squares (df) = 6.00(4); F = 5.71; $p = 0.005$			
1. Rest, relaxation and health (benefit)	0.30(0.12)	0.23	2.42**
2. Constraint resistance (constraint negotiation)	0.20(0.06)	0.24	2.51*
Cluster II: $R^2 = 0.06$; Adjusted $R^2 = 0.05$; Sum of Squares (df) = 8.94(1); F = 8.15; $p = 0.005$			
1. Festivals, events and family fun days (pull motivation)	0.37(0.13)	0.23	2.86**
Cluster III: $R^2 = 0.04$; Adjusted $R^2 = 0.03$; Sum of Squares (df) = 4.45(1); F = 4.59; $p = 0.03$			
1. Rest, relaxation and health (benefit)	0.28(0.13)	0.20	-2.14*

Notes: * $p < 0.05$ level; ** $p < 0.01$ level; *** $p < 0.001$ level; ns = nonsignificant.

β^1 = standardised beta; Durbin-Watson statistics (1.65 – 2.29) indicate that the assumption of independent errors is tenable in all models.

VIF values: 1.00 -1.08 (Cluster 1); 1.00 - 1.05 (Cluster 2); 0.99 - 1.00 (Cluster 3). Tolerance statistics: 0.90 - 1.00 (Cluster1); 0.95 -1.00 (Cluster 2); 1.00 - 1.03 (Cluster 3).

Predictor variance dimension loadings indicate the absence of collinearity in the data. In all models the confidence intervals indicate that the estimates are likely to be representative of 95% of other samples.

4.5. Older heritage cluster profile characteristics

The distinguishing characteristics of each older heritage visitor cluster profile: CI, CII and CIII, based on statistically significant differences between the clusters re: their socio-demographics, behavioural characteristics and the factors which predict their satisfaction and intention to recommend and revisit, are presented in Table 8.

4.5.1. CI: heritage enthusiasts

Given that CI members are significantly more motivated by health and wellbeing; learning about the local area/history; festivals, events, and family fun days; quality and value facilities; and historic buildings and settings than

Table 8. Older heritage cluster profile characteristics.

The majority of visitors in all three clusters are of mixed gender, with significantly more females than males and significantly more visitors aged 60–79 and educated either to further education/sixth form level or to first degree level. The majority are also married and retired, of white British ethnicity, either Christian or with no religious affiliation, with incomes in the £11,000 - £30,000 range and with no illness or disability. From a behavioural perspective, the majority had previously visited the survey site heritage attraction either within the last month, the last two weeks or within the last week. Most also visited other heritage attractions either every 3–6 months or monthly and acquired information about heritage attractions from their previous visits. The large majority travelled to the attraction by car, visited with their spouse or partner, with friends or on their own, and stayed between one and four hours. While the clusters share many characteristics, the *statistically significant differences* between C1 (Heritage Enthusiasts), CII (Engaged and Constraint Resistant) and CIII (Somewhat Interested but Satisfied) re: socio-demographic and behavioural characteristics, emotional visitation outcomes and the motivational, constraint, constraint negotiation and visitation benefit variables which influence the outcomes are highlighted in the individual profiles below.

C1: Heritage Enthusiasts (29.52%). From a socio-demographic perspective, while the majority of visitors in all three clusters are aged 60–79, C1 has more members in the 60–79 age range compared with CII and CIII, less 50–59 year-olds compared with both CII and CIII and less 80+ year-olds compared with CII. Less of C1 are educated to Master's degree level compared with CIII, while C1 members have more Christian religious affiliation and less no religious affiliation compared with CIII. Also, less of C1 are employed full-time, more are retired compared with CII and CIII, although there is less disability/illness in C1 compared with CII. Behaviourally, less C1 members were visiting the survey site heritage attraction for the first time compared with the other clusters, and more of C1 had visited the site within the last week compared with CII and CIII, and within the last month compared with CII. Moreover, more of C1 visit heritage attractions on a weekly basis compared with CIII. C1 members have higher levels of visit satisfaction and intention to both recommend and revisit compared with CII and CIII. Moreover, compared with CII and CIII, C1's visit satisfaction is uniquely influenced by rest, relaxation and health and, to a lesser extent, by visitation constraint resistance, the latter offsetting the negative impact of constraint acceptance on C1 visitation. C1's intention to recommend is significantly influenced by five variables compared with only two for CII and CIII. The recommendation intention of all three clusters is significantly influenced by rest relaxation and health, while the push motivation: learning about the local area/history is also shared with CII. However, the push motivation: memory, nostalgia and tradition is uniquely significant for C1, as is constraint resistance, which again offsets the negative impact of the accessibility structural constraint. C1's intention to revisit is again significantly influenced by both rest, relaxation and health and constraint resistance, which have consistently influenced all three outcomes, highlighting the importance of these variables for this cluster.

CII: Engaged and Constraint Resistant (38.55%). Socio-demographically, CII members are more evenly spread across the age categories compared with C1 and CIII, with more 50–59 year-olds than C1 and more 80+ year-olds than both C1 and CIII. More of CII left full-time education after completing secondary school compared with the other clusters and less are educated to Master's degree level compared with CIII, while more are currently employed full-time and less are retired compared with C1. Members of CII, like C1, have more Christian religious affiliation and less no religious affiliation compared with CIII. There is more disability/illness in CII compared with C1 and CIII. From a behavioural perspective, more CII members were visiting the survey site heritage attraction for the first time compared with C1, and less of CII had visited the site within the last week compared with C1, and within the last month compared with both C1 and CIII, while more of CII had visited the site less frequently (within the past 6 months) compared with C1 and CIII. Moreover, more CII members visit heritage attractions less frequently (every 7–12 months) compared with C1 and CIII. Not surprisingly, CII members have lower levels of visit satisfaction than C1. They are also less likely to recommend visitation or to revisit compared with C1, while their satisfaction, intention to recommend and to revisit are comparable with CIII. CII's visit satisfaction is influenced by only one variable, the push motivation: learning about the local area/history, which is also significant for CIII's visit satisfaction. As with C1 and CIII, rest, relaxation and health have most influence on CII's intention to recommend, although it is also uniquely influenced by the pull motivation: festivals, events and family fun days. Interestingly, the latter also uniquely influences CII's intention to revisit and has the strongest influence of any variable on any of the clusters, highlighting its importance for CII.

CIII: Somewhat Interested but Satisfied (31.93%). Like CII, CIII has more 50–59 year-olds compared with C1, but like C1, it has less 80+ year-olds than CII. Less of CIII left full-time education after completing secondary school compared with CII and more are educated to Master's degree level compared with C1 and CII. More of CIII are employed part-time compared with C1 and CII, employed full-time compared with C1, and less are retired compared with C1. Members of CIII have less Christian religious affiliation and more no religious affiliation compared with C1 and CII.

There is less disability/illness in CIII compared with CII. Re: CIII's visitation behaviour, more CIII members were visiting the survey site heritage attraction for the first time compared with C1, and more of CIII had visited the site within the last month compared with CII, and within the last two months compared with both C1 and CII, while less of CIII had visited the site less frequently (within the past 6 months) compared with CII.

(Continued)

Table 8. (Continued).

Less CIII members visit heritage attractions on a weekly basis compared with CI or less frequently (every 7–12 months) compared with CII. CIII members have lower levels of visit satisfaction, intention to recommend and to revisit compared with CI, but similar levels to CII, albeit with some differences in the variables which influence these outcomes. Like CII, CIII's visit satisfaction is influenced by the push motivation: learning about the local area/history, but unlike CII, it is negatively impacted, and to a greater extent, by the interpersonal constraint: family commitments. As with CI and CII, CIII's intention to recommend is influenced by rest, relaxation and health and also again, albeit to a lesser extent, by the push motivation: learning about the local area/history, which highlights its importance for this cluster. Rest relaxation and health also influence CIII's intention to revisit.

Notes: Each profile highlights the statistically significant differences between the three clusters. There are no significant differences between CI, CII and CIII re: socio-demographic characteristics on the basis of gender, marital status, personal income, ethnicity, or re: behavioural characteristics on the basis of acquisition of heritage attraction information, mode of travel to and from the attraction, who they visited with, or in relation to length of stay at the attraction. The profiles also include the variables which have a statistically significant influence on the clusters' visit satisfaction and intention to both recommend and revisit.

CII and CIII, this is the most important segment from a marketing perspective. By comparison, their motivation level is similar to CII, but significantly higher than CIII regarding memory, nostalgia, and tradition; interesting activities for families; and opportunities to learn about history, arts, and crafts. Notably, members of all three clusters represent visitors to heritage attractions rather than those who do not visit because of various constraints, and, understandably, have registered disagreement about visitation constraints. Nevertheless, CI has significantly lower visitation constraint ratings and lower acceptance of constraints than CII and CIII, while showing similar constraint resistance to CII. CI members also enjoy significantly higher levels of personal development, and particularly rest, relaxation, and health benefits than CII and CIII members. The high motivation ratings suggest substantial ambassadorial as well as repeat visit potential.

4.5.2. CII: motivated but unfulfilled

The ratings for CII are similar to those of CI and significantly higher than those of CIII on memory, nostalgia, and tradition; socializing with family; escape to a different, relaxing place; interesting activities for families; opportunities to learn about history, arts, and crafts; and constraint resistance. By comparison, CII's members are significantly less motivated than CI members and significantly more motivated than CIII members regarding health and wellbeing; festivals, events, and family fun days; quality and value facilities; and historic buildings and settings. Importantly, CII has significantly higher visitation constraints and constraint acceptance than both CI and CIII. This may, in part, be explained by the significantly higher numbers of ill and disabled members (almost two-fifths) of CII and/or the higher proportion of members in the \leq £10,000 income group compared with both CI and CIII. Despite being less frequent visitors to heritage attractions, CII members have significantly higher constraint resistance compared to CIII members. They have significantly lower visitation benefits compared to CI

members, but significantly higher benefits than CIII members, although interestingly, CIII member satisfaction and intention to recommend are both significantly higher than CII members. It is important, therefore, that heritage attractions carefully consider and respond to the constraints faced by this cluster to encourage repeat visitation.

4.5.3. CIII: somewhat interested but satisfied

CIII members are significantly less motivated than CI or CII members across all the push and pull dimensions, with the exception of socializing with family. Their visitation constraints are significantly higher than those of CI members, but significantly lower compared to CII members, although all three cluster ratings represent disagreement (<3) with these constraint dimensions. CIII's constraint acceptance ratings are significantly higher than those of CI and significantly lower than the CII ratings, while the CIII ratings for constraint resistance are lower than both CI and CII. Their visitation benefits are significantly lower than those of other cluster members, but interestingly, their ratings for satisfaction and intention to recommend are significantly higher than CII members, although significantly lower than CI members. The identified segment profile characteristics show that a typology can be developed on the basis of distinctive demographic, attitudinal and behavioural characteristics (RQ2). Moreover, the typology and segment profiles have provided a deeper understanding of older heritage visitors' needs and behaviour to facilitate more effective marketing of heritage attractions (RQ3). See [section 5](#) below for strategies relating to each segment.

5. Discussion and conclusion

This study makes an important theoretical contribution by identifying three discrete segments in the older heritage attraction market (RQ1) (neglect spotting strategy) and developing a typology. The latter is based on older heritage visitor profiles, push and pull motivations, visitation constraints, constraint negotiation strategies, visitation benefits and the factors which influence senior visitor satisfaction and intention to both recommend and revisit (RQ2) (new context strategy). It therefore extends typology theory given the existing gap in knowledge about this market. Firstly, the typology comprises three distinct clusters: 'Heritage Enthusiasts', 'Motivated but Unfulfilled', and 'Somewhat Interested but Satisfied'. Our typology moves away from the notion that older visitors are often assumed to be, and often referred to as, a single market. Daniels et al. (2019), argued that it is important to consider differences 'that might exist in neo-mature (aged 50–64) and veteran mature (aged 65+) segments' and the 'preeminent mature' (aged 85+)' (p.95). While we did find significant age differences

between the three clusters we identified, the wide range of socio-demographic and behavioural variables we used in the analysis provides more insight into the statistically significant differentiation between the clusters, which is more valuable both theoretically and from a practical marketing perspective. Secondly, we examine domestic 'day visitors', whereas scholarly attention has previously focused on older 'tourists' (Kazeminia et al., 2015). Thirdly, our inclusion of a broad range of dimensions in the cluster analysis provides a more holistic, deeper understanding of these consumers. By contrast, previous older tourist typologies are based on a limited number of dimensions (Alén et al., 2017); notably, constraints and constraint negotiation are lacking in these studies, yet we found significant differences between the three segments in these dimensions. Moreover, there is an absence of research (Eusébio et al., 2017) which examines the benefits realized by older adults' post-experience, and our findings also show significant differences in visitation benefits experienced by each segment. Fourthly, this study highlights the importance of pull motivations for older heritage visitors. Developing a deeper understanding of older heritage visitors' needs and behaviour can facilitate more bespoke product development and marketing communication, based on distinct segments rather than assumptions of homogeneity (RQ3). Those with promotional or product development roles at heritage attractions can use this typology to better understand their older visitors, be aware of their constraints and their constraint negotiation process and ensure that they fully benefit from their visit through targeted product development and marketing. The findings reflect older visitors to heritage attractions in South Yorkshire and Derbyshire and may be relevant to other UK regions where the context is similar.

The most significant push motivation dimension and predictor variable across all three clusters is learning about the local area/history. These findings align with previous research findings that learning and culture are key motivations for specific clusters of older tourists, such as the 'escape and learn' (Shoemaker, 2000, p. 19) and 'culture hounds' groups (You & O'Leary, 1999, p. 28). They also reflect older tourists' desire 'to enhance their sense of well-being mostly through meaningful tourism activities and engagement' (Kim et al., 2021, p. 538). Evidently, heritage attractions already offer learning opportunities to enhance their older visitor provision, and some have developed their market segments based on this theme. However, there may be scope for heritage attractions to focus on nostalgic experiences for older adults with personal connections to sites, special interest talks and guided tours to accommodate their desire for knowledge and learning.

A prominent benefit dimension and significant predictor variable across all three clusters is rest, relaxation and health. These benefits are important to specific clusters of older tourists, particularly 'women of advanced age who

travel for health reasons' (Alén et al., 2017, p. 1462). Another study (Mélou et al., 2018) found that older tourists have higher well-being scores than older non-tourists, are more likely to participate in social, cognitive, and physical activities in their daily lives, and report better health. Other research (Frochot & Morrison, 2000; Nimrod & Rotem, 2010) also notes the importance of relaxation, socializing and emotional benefits to older tourist experiences. Accordingly, heritage attractions should emphasize such motivations and benefits in their promotional materials for older adults and ensure their sites provide facilities such as cafes and frequent events for these visitors to rest, socialize and relax. These measures will positively impact on their satisfaction, encourage recommendations to friends and family, and entice them to become regular visitors to maintain and enhance their health and well-being.

These findings facilitate the development of specific strategies for each distinct cluster. CI members are highly motivated, less affected by constraints, and benefit considerably from their visits. However, heritage attractions should continually seek new ways of ensuring loyalty and high satisfaction. CI particularly values festivals, events, and family fun days. Heritage attractions should also harness the enthusiasm and loyalty of this cluster by offering ambassadorial and volunteering opportunities to nurture their personal development. Extant research (ten Bruggencate et al., 2019) confirms the importance of volunteer work in helping to satisfy the social needs and well-being of older adults.

While CII is similarly motivated by CI across a number of dimensions and is significantly more motivated than CIII, our findings have highlighted significantly higher visitation constraints and constraint acceptance for CII compared to CI and CIII, albeit with similar constraint resistance to CI. Additionally, offsite structural constraints such as poor transport connections and interpersonal family constraints also deter some older visitors. Therefore, while heritage attractions can reduce constraints, particularly those on site, there is a limit to what they can do. For older adults, removing structural constraints is critical to 'overcoming concerns with leaving home, for even a short period of time' (Daniels et al., 2019, p. 104). Furthermore, common interests within such groups will facilitate socializing between members and encourage repeat visits to these attractions. Heritage sites should also focus on improving satisfaction levels and encouraging both recommendations to others and repeat visitation from CII. An in-depth understanding of the constraints that these older consumers face both onsite and offsite will help managers and staff to better cater for their needs.

CIII is less strongly motivated than the other two clusters, and their constraint resistance ratings is significantly lower than either CI or CII. Their visitation benefit ratings, particularly on personal development, are also significantly lower than CI or CII despite high ratings for satisfaction

and intention to recommend. Interestingly, the highest scoring push motivation for CIII is learning about the local area/history, which indicates that these older adults are motivated by personal development but do not always achieve this from their attraction experiences. It should also be noted that the socializing with family push motivation was also significantly higher for CIII compared with CI and CII. To ensure these needs are fulfilled, heritage attractions should aim to provide engaging learning opportunities for the whole family.

While the study has produced important findings, its limitations should be noted. The CFA confirmed the validity and reliability of the factors derived from the EFA, and the K-means cluster algorithm produced three distinct segments which were significantly differentiated on the basis of the large majority of the dimensions, a wide range of socio-demographic and behavioural variables and the dimensions which significantly influence their emotional and behavioural outcomes. However, the number of clusters may vary depending on the procedure adopted for data-driven approaches to segmentation. The factor-cluster approach was adopted in this study, and while this represents the method adopted in the majority of visitor segmentation studies, factor analysing the data before clustering can change the relations between the variables. This may reduce the differences between segments because they are identified based on the transformed space rather than the original information. The interpretation of clusters based on the original variables may also be distorted given that they have been constructed using the factor scores (Dolnicar & Grün, 2008). Where data are not well structured, the random selection of data points in the k-means procedure can also produce different solutions (Ernst & Dolnicar, 2018). Cluster segmentation as opposed to factor-structure segmentation, for example two-step cluster analysis is, therefore, recommended for future data-driven segmentation studies of older visitors to heritage attractions to compare the number and characteristics of the segments with the results from this study.

Screening for day or overnight status of visitors together with differentiation between participants' data, including completions, on the basis of the three survey distribution techniques were inadequate and required further planning and implementation. For instance, participants at the younger end of the age group, in their 50s and 60s, may have preferred online completion, whereas those at the older end may have preferred onsite completions. Furthermore, respondent access to the survey through different means may have influenced the results. Future research should include procedures to assess the impact of visitor type, survey distribution method, and both time and location of onsite surveys. Additionally, this study did not use age-standardized comparisons between the clusters. In future research on older visitors, mathematical adjustment to the clusters to account for differences in their age structure could provide a more representative picture of their profile characteristics. The cross-sectional design also prevented an analysis

of sequential influences or linkages among the main constructs of the model and limited the scope for making inferences about the directions of causality. Future research should consider a longitudinal design to address these issues.

This research examines visitors and neglects non-visitors who may not be aware of regional heritage attractions, may not be motivated to visit sites, or may be constrained from visitation. Therefore, future research should investigate older non-visitors to ascertain their level of interest in heritage attractions, to assess potential push and pull motivations, and identify their visitation constraints and constraint negotiation. Extant research on older non-tourists offers insights into why this is important. Older tourists are healthier, educated, participate more in social and physical activities and have higher levels of well-being than older non-tourists (Mélou et al., 2018). Heritage attractions should therefore provide cultural heritage which appeals to older non-visitors.

This is a small-scale study of older heritage visitors from two regions in England. Each region has unique characteristics and product offerings based on industrial heritage and modest sites. Further work should examine a larger geographical scale to ascertain similarities and differences between each region and its visitors. Research should focus on larger sites that appeal to international, domestic, regional, and local markets, allowing for a comparison of day visitors. Investigations of a wider range of older visitors relative to age, ethnic origin, religious and cultural beliefs could also be insightful. Scholars should direct their attention to older tourists, who are often neglected in research because they are not easy to access and sometimes have complex medical needs (Daniels et al., 2019). Nonetheless, to fully understand the heterogeneity of the older heritage market, it is critical to examine older adults across the entire age spectrum.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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