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# Cyclists' positive and negative memorable travel experiences and emotions through photo-elicitation

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**Abstract**
This study examines the positive and negative aspects of travellers' memorable cycling experiences, as well as the underlying emotions, using photo-elicitation. Accordingly, semi-structured photo-elicitation interviews were conducted with 18 international cyclists, based on their selection of 82 photos. As a result of content analysis, themes of positive memorable experiences were identified as "accomplishments," "discovery of landscape, history, and rural settings," "local and authentic aspects," "infrastructure and amenities of destinations," and "socialising and support." In contrast, negative memorable experiences included "infrastructure and amenities of destinations," "challenging weather conditions," "personal issues," and "mechanical failures." Underlying emotions for each theme are also presented. The research outputs offer a significant theoretical framework on memorable cycling experiences and the underlying emotions from a holistic perspective, aiding destination managers, policymakers, and service providers.

**Keywords:** Cycling traveller, tourism, memorable experience, photo-elicitation, destination infrastructure.

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## 1. Introduction

Cycling tourism is considered significant as a wide range of travellers prefer cycling activity to explore destinations and their attributes (Shipway *et al.*, 2016). In particular, after the Second World War, cycling attracted numerous leisure travellers who used it as an outdoor recreational activity rather than utilising cycling as a basic transportation or engaging in it as a sports activity (Han *et al.*, 2020; Lamont, 2009). It has also been incorporated into the destination agenda since it offers practitioners and planners sustainable planning and management opportunities (Lee, 2014).

Recent studies in tourism literature indicate a significant paradigm shift in the theoretical framework of the 'tourist experience' concept, moving from behavioural to cognitive approaches (Liu *et al.*, 2025). Experience is now understood as a highly subjective and complex psychological process, shaped by tourists' expectations, memories, and cognitive appraisals, rather than as a simple behavioural response to environmental stimuli. Contemporary tourism research increasingly examines not only tourists' actions but also their mental and emotional interpretations of multifaceted experiences (Liu *et al.*, 2025). Within this context, cycling tourism is conceptualised as a complex experiential domain with transformative effects in which emotions and memories are intricately connected (Chen, 2025).

Given the importance of academic and managerial perspectives, numerous studies have been conducted to understand the conceptual framework of cycling tourism and to develop a roadmap for destination infrastructure (Han *et al.*, 2020). Previous research has primarily focused on different aspects of this tourism type, including developing road cycling routes (Mundet *et al.*, 2022), motivations and satisfaction of cycling travellers (Rejón-Guardia *et al.*, 2023), sustainable cycling tourism (Sann *et al.*, 2024), and the well-being of cycling travellers (Xu *et al.*, 2019). Although memorability plays a significant role in cycling travellers' behavioural intentions (Satrya *et al.*, 2024) and their experiences (Shipway *et al.*, 2016), there is limited empirical evidence related to the cycling tourism literature, and to the best of our knowledge, no studies have investigated memorable experiences from negative and positive perspectives.

Scholars conceptualise memorable travel experience (MTE) mainly in terms of positive and negative experiences. In the early usage of the concept, many authors defined MTE as those that are positively remembered and recalled (Kim *et al.*, 2012). However, in a recent study (Sthapit *et al.*, 2021), it was emphasised that on-site experience could be negative as well. In particular, Hosany *et al.* (2022) reviewed the literature and found that the research community has largely neglected negative memorable experiences. According to the authors, further research should ascertain "both positive and negative facets of MTE to provide a holistic understanding of the construct" (Hosany *et al.*, 2022, p. 1477). Despite the predominance of studies on positive MTE, only a few have focused on understanding different types of tourism experiences from a negative, memorable perspective, including food tourism (Akhoondnejad, 2024; Stone & Sthapit, 2024) and heritage tourism (Zhiqi *et al.*, 2023).

Although some scholars recognise the significance of memorable experiences (e.g., Jan Fui *et al.*, 2020), empirical investigations of cycling tourism remain limited, and prior studies have not adequately addressed a holistic approach that considers both positive and negative experiences. Existing studies mostly relied on surveys (Kim, 2018) or interviews (Seyfi *et al.*, 2020) to explore MTE. While such techniques may help individuals avoid overlooking issues that may come to mind later, they might not be mentioned during the interview. Kyololo *et al.* (2023) propose a visual-based technique in which researchers can collect meaningful data through images and verbalisation. According to Tiwari *et al.* (2023) emotions significantly impact the overall MTE, leading to loyal behaviour. Although the literature on memorable tourism experiences recognises the role of emotions, the cycling tourism literature remains limited, as it primarily focuses on the cognitive aspects of travellers' biking

experiences (Munanura *et al*., 2024). Thus, considering the emotions of cyclists from an experiential perspective will help in understanding memorability from an affective perspective.

This paper contributes to the existing literature by examining the positive and negative memorable experiences and underlying emotions of cycling travellers through photo-elicitation. Accordingly, the article makes both theoretical and practical contributions to the literature on cycling tourism and memorable experiences. The theoretical contributions lie in proposing a dimension-based framework that outlines the key components of memorable cycling experiences from a holistic perspective (i.e., encompassing both positive and negative experiences). The article's outputs enrich the research methodology by revealing hidden or overlooked memorable moments of travellers, rather than relying solely on traditional oral interviews. Incorporating supporting materials into semi-structured interviews to explore memory-related concepts will yield valuable insights for scholars. In practice, this study can assist destination managers, policymakers, and service providers in understanding the crucial factors that contribute to travellers' memorable cycling experiences.

## 2. Literature review

### *2.1 Cycling traveller experience, memorability, and underlying emotions*

The study of tourism experience has evolved from descriptive studies to a more comprehensive stage that encompasses subjective, emotional, and transformative aspects (Chen, 2025). Nevertheless, available approaches to addressing the complexity of experience/memory have limitations. For example, studies on MTEs have conceptualised memory/experience from a static/reductionist marketing perspective (Martens, Jarvis, & Weeden, 2025). Recent discussions on theory have highlighted that experience cannot be seen as merely a matter of in-situ perceptions but as a complex process involving remembering/forgetting (Martens *et al*., 2025).

Cycling, as a soft adventure tourism activity, is defined as "recreational travel away from home, in which leisure cycling constitutes a fundamental and significant part of the trip" (Centre for the Promotion of Imports from developing countries [CBI], 2023). In the body of knowledge, numerous papers focus on cycling experience. However, there are limited studies that focus on understanding cycling experiences within the tourism context. The majority of studies conducted on recreation (Aşan & Yolal, 2024) or in the general tourism context (Gričar *et al*., 2025; Mundet *et al*., 2022). Some studies have focused specifically on the experiences of cycling travellers. For example, Lee (2014) identified factors determining cycling experience: 'provision of signage services,' 'provision of safety and emergency services,' and 'quality of bicycle routes.' These attributes play a major role in enhancing the cycling traveller experience and satisfaction. Unlike passive leisure and conventional sightseeing, cycling tourism is considered a high-involvement, challenge-based adventure travel product that demands sustained physical and mental exertion (Chauhan, 2025). In such settings, tourists are forced to test their physical and comfort limits and confront environmental vulnerabilities, and thus need to overcome them (Sahoo *et al*., 2026).

According to Shipway *et al*. (2016), bicycles can provide a memorable experience for cyclists travelling to a destination. Chen (2023) suggested that destination planners to create novel and unforgettable experiences for cycling travellers by enhancing destination tour routes. Moreover, a situational report on cycling was prepared by Nickerson *et al*. (2014), which identified long-lasting memories among cycling travellers, including scenery, climbs, descents, passes, challenges, weather, undesirable experiences, friendly locals, and hospitality. Seyitoğlu and Atsız (2022a) also found memorability to be a significant component of tourists' peer-to-peer, local-guided bike tour experiences.

The distinctiveness of MTE in cycling tourism is deeply rooted in the fulfilment of fundamental psychological needs, such as autonomy, competence, and relatedness (Sahoo *et al*., 2026). The cyclists

control their own pace, have an intimate connection with their physical environment, and co-create their experiences, resulting in a strong perception of independence and mastery over their experiences (Sahoo *et al.*, 2026). Hence, theoretically, applying the MTE model to cycling tourism is of great significance to build upon existing passive models of consumption, revealing the potential of high-involvement, physically demanding, and self-directed travel in crafting intricate, enduring, and transformative memories.

During memorable moments, cyclists may experience emotions that contribute to satisfaction and loyalty (Chen & Huang, 2021). Munanura *et al.* (2024) consider the emotions of cyclists as distinctive factors that may play a determining role in post-trip recommendation behaviour. A study found that road conditions influence the emotional state of cyclists (Kaplan & Prato, 2016). In the cycling tourism literature, emotions associated with memorable experiences have received limited attention. To the best of our knowledge, no research has examined these aspects using an integrative approach. Hence, knowing the underlying emotions of memorable cycling experiences can help scholars develop a comprehensive framework for understanding the memorability of travellers' experiences. Although previous studies have explored memorability as a significant determinant of the cycling experience and of peer-to-peer, local-guided bike tours, the literature still lacks research on memorable cycling experiences across both positive and negative aspects, as well as the underlying emotions.

### *2.2. Memorable travel experiences through photos*

MTE refers to "positively remembered and recalled after the event has occurred" (Kim *et al.*, 2012, p. 13). The tourism literature widely acknowledges the importance of memorable experiences by focusing on different types of tourism, such as gastronomy tourism (Björk & Kauppinen-Räisänen, 2016), rural tourism (Ye *et al.*, 2020) and adventure tourism (Jan Fui *et al.*, 2020). Prior studies have employed various techniques (i.e., interviews, focus groups, surveys) to understand MTE. Nonetheless, there is limited work exploring the determinants, components, and dimensions of such experiences using alternative data collection methods, such as photo-elicitation.

In this research, MTE is defined as a psychological process rather than a static destination attribute (Kim *et al.*, 2012). It is important to note that although the environmental setting is seen as the external stimulus, the actual MTE is the 'internalisation' of the experience (Larsen, 2007). Photos function as a bridge between the external setting and the traveller's psychological state, capturing cues that trigger memory reconstruction (Muñoz *et al.*, 2025). Framing MTEs this way clarifies why photo-elicitation is appropriate: it reveals how travellers' internal resources and external offerings interact to produce memorable experiences.

Understanding individuals' reactions through conventional methods is considered insufficient for comprehending certain phenomena in the tourism field (Pullman & Robson, 2007). Thus, visual methods are suggested to help researchers focus on specific contexts. Nearly all travellers capture photos during their visits to any destination and store them for future reference. A professional photographer, Sontag (2005) states about photos in her book that "it seems positively unnatural to travel for pleasure without taking a camera along. Photographs will offer indisputable evidence that the trip was made, that the program was carried out, that fun was had" (p.6). Pullman and Robson (2007) highlighted that photography-based research approaches are the most effective way to explore individuals' experiences in hospitality settings, particularly visitor-employed photography (i.e., photo-elicitation). Matteucci (2013) also emphasised this technique as an effective tool for studying tourists' embodied experiences.

Several tourism studies have utilised the photo-elicitation technique to explore topics such as residents' perceptions of tourism (Janusz *et al.*, 2017), meanings of cultural heritage settings (Bapiri *et al.*, 2021),

kids-related studies (Dresler, 2024), community solidarity within cross-border tourism (Clark & Nyaupane, 2024) and tourist experiences (Matteucci, 2013; Scarles, 2010). The visual materials used in previous studies can be produced and gathered by researchers or participants (Matteucci, 2013). Although various scholars have examined these topics, memorable experiences captured in visual materials have been largely neglected, even though photographs taken during travel can evoke past moments in travellers' minds.

For example, Sthapit *et al.* (2021) utilised photo-elicitation to reveal negative memorable experiences of sharing-economy users by showing participants photographs and asking them to share brief stories. Skavronskaya *et al.* (2020) proposed collecting photos as secondary data and conducting interviews as primary data to investigate MTE. Wan *et al.* (2023) introduced memorable and meaningful tourism experiences through a strengths-based approach rather than exploring such experiences from a dimensional perspective. According to previous work, using photos taken by participants to understand MTE is crucial. This approach is becoming increasingly important in cycling tourism activities that were previously not investigated using the photo-elicitation technique.

Based on the aforementioned knowledge, the complexity of the experience is most evident in the affective dimension. Whereas traditional approaches place emotions on a positive–negative valence axis, recent research emphasises that "tourist experiences include complex and context-specific 'discrete emotions' in their content, rather than general positive and negative valence" (Miao *et al.*, 2025). Accordingly, cognitive and emotional aspects should be considered holistically to identify what is remembered and to assess how environmental stimuli can elicit complex emotions through diverse cognitive appraisals. Also, the current research seeks to transcend static approaches based solely on positive and negative memories of cycling tourists. Using the photo-elicitation technique enables the capture of the dynamic character of memories and the in-depth examination of the complexity of the cycling tourism experience, focusing on both positive and negative MTEs.

## 3. Methodology

This paper explores travellers' MTE using the photo-elicitation technique, which enables researchers and interviewees to discuss study issues by considering the photos the interviewees have taken (Harper, 1986). By doing so, research units (i.e., the sample) can remember moments and provide deeper insights into the knowledge studied (Bates *et al.*, 2017). Some researchers (Bapiri *et al.*, 2021) use it to explore tourists' experiences, perceptions, and emotions, uncovering meanings that may remain hidden. Unlike word-only interviews, the photographs aim to tap into participants' cognitive and affective worlds.

Semi-structured interviews were conducted through photographs (Appendix 2) taken by participants. This interview technique provides researchers with flexibility in asking participants questions (Kozak, 2014). Since the photographs revive the memories of the participants, the questions can be asked accordingly. This situation provides the opportunity to obtain in-depth information about the memorable experience. Before the actual research, this article selected cyclists as the research units and targeted them using purposive sampling and snowball sampling. Researchers put forward three major criteria to select cycling travellers to start interviews: (i) being an active cycling traveller, (ii) having experience visiting a destination outside of their country (international experience) in the last two years, and (iii) having at least two photos (of at least one positive and one negative memorable experience) taken during their cycling traveling to any destination. However, we requested up to 3 photos of each memorable experience type from each volunteer cyclist-traveller.

Based on the research criteria, questions that depict the research context were developed from the literature (Appendix 1). Research questions were sent to two scholars familiar with the terminology and working on tourism studies to check their suitability. Based on expert feedback, minor meaning

corrections were made to the research questions, and they did not suggest removing any questions. Following, the researchers discussed and reached a consensus on the final version of the questions. In addition, a small-scale study or pretest should be conducted with potential participants to assess the efficacy of the data gathering and analysis (Ismail *et al.*, 2017). Hence, one of the researchers conducted a semi-structured interview with two participants. After this stage, the authors transcribed the two interviews into Microsoft Word and assessed whether the participants' responses aligned with the research aims and questions. Then, minor changes were made, and 18 in-depth semi-structured interviews were conducted (see Table 1 for travellers' profiles).

**Table 1.** *Profile of Participants.*

| | Gender | Age | Country | Education Level | Employment status | The number of countries visited by bicycle |
|---|---|---|---|---|---|---|
| 1. | Male | 55 | Türkiye | College | Retired | 5 |
| 2. | Female | 44 | Italy | Bachelor | Project Expert | 25 |
| 3. | Female | 56 | United States | College | Software Consultant | 8 |
| 4. | Female | 45 | Switzerland | Bachelor | Account Manager | 3 |
| 5. | Male | 38 | Poland | Bachelor | Freelance Marketing Strategist | 10 |
| 6. | Male | 42 | Germany | PhD | Engineer | 12 |
| 7. | Female | 43 | Türkiye | Master | Engineer | 20 |
| 8. | Male | 53 | Türkiye | College | Management Consultant | 18 |
| 9. | Male | 31 | Türkiye | Master | Tourism employee | 6 |
| 10. | Female | 28 | United States | PhD Std. | Student | 3 |
| 11. | Male | 43 | Switzerland | Master | Journalist | 7 |
| 12. | Female | 67 | United States | Highschool | Translator | 6 |
| 13. | Male | 59 | Canada | PhD | Not working | 7 |
| 14. | Female | 24 | Turkiye | Highschool | Student | 14 |
| 15. | Male | 69 | United States | Bachelor | Retired | 9 |
| 16. | Male | 73 | United States | Master | Retired | 10 |
| 17. | Male | 57 | United Kingdom | Secondary School | Security | 3 |
| 18. | Female | 66 | United States | Bachelor | Semi-retired | 10 |

The interviews averaged 45 minutes, with durations ranging from 36 minutes to 1 hour and 40 minutes. Since participants were active cycling travellers from various countries, conducting face-to-face interviews with them was challenging. In this regard, the authors conducted online interviews via two platforms (i.e., Zoom and Google Meet). One of the authors of this research is a cyclist and a member of different cycling communities. Before the interviews, the author attempted to compile a list of potential participants using bicycle platforms, as well as his own network and social media contacts. The author then sent an email inviting them to participate in our research. After explaining the research aims, the author scheduled interviews with cycling travellers who volunteered to participate in the study and share photos of memorable experiences. Next, the author conducted interviews with those who accepted the invitation. During the research process, the authors placed importance on obtaining

participants' consent. Accordingly, participants who accepted our invitation and consented to the creation of digital records were included in the interviews. The participants also shared their photos and permitted the authors to use them in the study, as the perceptions are based on these photos.

This research involved transcribing all data into Microsoft Word, resulting in 133 pages for content analysis. Subsequently, all researchers employed a coding strategy to identify meaningful themes and subthemes across both positive and negative memorable cycling experiences. Thus, the participation of all authors in the data investigation was important. Before coding the raw data, the authors read all the pages from beginning to end. Applying this process first provides coders with insight into the data. Following this stage, each independent coder applied line-by-line coding to generate initial codes. Afterwards, the codes were brought together and transformed into meaningful sub-themes. Common or similar sub-themes were gathered around the main theme and finalised. Each coder followed this process, and the themes and sub-themes were then brought together and discussed to establish intercoder reliability by consensus. Furthermore, researchers practised reflexivity during these meetings by continually challenging their own preconceptions to ensure that the themes accurately reflected the raw data. Final codes for positive and negative memorable experiences were put forward. To ensure content validity, an external scholar was asked to evaluate the codes. During this phase, minor modifications were made, and the final versions of the themes were determined, as shown in Table 2.

## 4. Findings and discussion

The findings include two main categories (see Table 2): (i) positive memorable experiences and (ii) negative memorable experiences. For the quotes, "P" refers to a cycling traveller who participated in this study. We identified five distinct dimensions that shape cyclists' memorable travel experiences: (1) accomplishments (refers to pride, empowerment, identity effects), (2) discovery of landscape, history, and rural settings (referring to sensory/aesthetic immersion), (3) local and authentic aspects (refers to hospitality, cuisine, cultural encounters), (4) infrastructure and amenities (refers to route signage, shelters, bicycle-friendly transport), and (5) socialising and support (refers to shared rituals, mutual aid). Infrastructure and weather also functioned as sources of negative memorable experiences (e.g., flooded roads, poor signage, transport barriers, mechanical failures, illness). These dimensions extend tourism and cycling literature by highlighting rural settings, cycling-specific infrastructure effects, and social support as central to MTEs.

**Table 2.** *Dimensions of positive and negative memorable experiences of cycling travellers.*

| Categories | Themes and Sub-themes |
|---|---|
| **Positive Memorable Experiences** | **1. Accomplishments**<br>**The challenging parts of the tours**<br>(i) Passing high mountains<br>(ii) Reaching a significant point or a destination<br>(iii) Successfully setting up tents for camping<br><br>**The related emotions**: *Accomplishment, freedom, pride, empowerment, relaxation, self-reliance, relief, perseverance, independence, and unstoppability*<br><br>**2. Discovery of landscape, history, and rural settings**<br>(i) Connection with nature<br>(ii) Discovering unexpected beauty and stunning landscapes<br>(iii) Birdwatching in the countryside<br>(iv) Exploring historical and scenic beauty |

| | | |
|---|---|---|
| **Positive Memorable Experiences** | (v) | Appreciating rural settings |
| | (vi) | Preserving historical architecture and heritage |
| | (vii) | Exploring art and culture |
| | **The related emotions**: *Peace, joy, serenity, happiness, enjoyment, appreciation, awe, relaxation, excitement, relief, freedom, independence, and refreshment* | |
| | **3. Local and authentic aspects** | |
| | (i) | The warm hospitality of locals |
| | (ii) | Local food |
| | (iii) | Interaction with locals |
| | (iv) | Local culture |
| | (v) | Generosity of locals |
| | (vi) | Shared meals with locals |
| | **The related emotions**: *Sincerity, warmth, happiness, blissfulness, excitement, freedom, empowerment, fascination, amazement, good fortune, joy, connection to history, passion, and friendship* | |
| | **4. Infrastructure and amenities** | |
| | (i) | Well-developed cycling infrastructure |
| | (ii) | Detailed route information |
| | (iii) | Widespread campgrounds |
| | (iv) | Bicycle-friendly trains |
| | (v) | Well-maintained bike paths |
| | (vi) | Well-developed shelter system |
| | (vii) | Helpful tourism office employees |
| | (viii) | Healthcare system |
| | (ix) | Road signs |
| | (x) | Bicycle repair station |
| | **The related emotions**: *Safety, respect given to cyclists, value given to cyclists, appreciation, freedom, enjoyment, convenience, comfort, independence, and relief* | |
| | **5. Socialising and support** | |
| | (i) | Socialising with other cyclists during trips |
| | (ii) | Support from other cyclists during trips |
| | **The related emotions**: *Excitement, freedom, empowerment, happiness, luckiness, friendship, helpfulness, generosity, and kindness* | |
| **Negative Memorable Experiences** | **1. Infrastructure and amenities of destinations** | |
| | (i) | Transportation and logistics<br>*Examples of transportation: the challenges of train travel with bicycles (P11-Photo 1, P12-Photo 4, P18-Photo 3); the language barriers in a train station, the lack of an elevator in a train station, not accepting bicycles*<br>*Examples of logistics: lost luggage and damaged bikes, delayed baggage, the challenge of packing a bicycle for air travel* |
| | (ii) | Lack of shelters |
| | (iii) | Flooded roads |
| | (iv) | Poor cycling signage |
| | (v) | Lack of adequate safety lanes |
| | (vi) | Lack of suitable campsites |

| | | |
|---|---|---|
| **Negative Memorable Experiences** | (vii) | Bicycle security concerns against theft |
| | (viii) | Lack of proper accommodation establishments for cyclists |
| | (ix) | Bureaucratic delays |
| | (x) | Navigation errors |
| | **The related emotions**: *Disappointment, feeling trapped, displeasure, worry, fear, discomfort, itchiness, insecurity, helplessness, panic, risk, tiredness, anger, annoyance, demotivation, and dependency* | |
| | **2. Other aspects** | |
| | (i) | Challenging weather conditions<br>*The results: health issues, changes of plans, not being able to set up a tent, and damaged electronic equipment* |
| | (ii) | Personal issues: *getting lost (P2-Photo 2, P9-Photo 4), an unexpected health issue (P16-Photo 5), physical and mental exhaustion (P4-Photo 4), the feeling of loneliness as a challenge of solo travel (P5-Photo 3) and disappointment with the cycling partner (P10-Photo 2)* |
| | (iii) | Mechanical failures: *gear failure (P3-Photo 3), flat tyre (P9-Photo 5), and brake failure (P11-Photo 2)*<br>*The results: anxiety, time loss, and disruption of plans* |
| | **The related emotions**: *Pain, pity, helplessness, frustration, defeat, hardship, disappointment, loneliness, and misfortune* | |

To add conceptual clarity to the analysed themes, it should be noted that all elements presented above, ranging from psychological states to environmental factors, are considered from a unified experiential perspective. In this context, MTE is understood as a psychological state evoked by specific destination properties. For example, although 'infrastructure' is understood as a physical setting factor, it is considered part of the MTE only in terms of its interrelation with the emotional state of the cyclist.

### *4.1. Positive Memorable Experiences*

Five main themes and related sub-themes form positive memorable experiences of cyclists: (i) accomplishments, (ii) discovery of landscape, history, and rural settings, (iii) local and authentic aspects, (iv) infrastructure and amenities of destinations, and (v) socialising and support.

#### ***4.1.1. Accomplishments***

The findings revealed that 13 photos of 8 cyclists relate to accomplishments. These photos recall the cyclists' positive memorable experiences during their cycling tours to other countries. The study participants considered the challenging parts of their tours that could not be easily passed, such as crossing high mountains, reaching significant points or destinations, and successfully setting up tents for camping, as accomplishments. The underlying emotions revealed are accomplishment, freedom, pride, empowerment, relaxation, self-reliance, relief, perseverance, independence, and unstoppability.

One of the cyclists (P1-Photo 1) stated that he had passed a 12-kilometre ramp and reached sea level, which he considered an accomplishment. According to his statements, this was a great reward and a source of relaxation for him. Another cyclist (P2-Photo 4) explained, "I had already climbed that hill while taking this photo…It is one of the most difficult hills in the world…It is a really hard hill to pass…After passing this hill, I saw that there is no hill in my life that I cannot do…achieving this gave me a lot of self-confidence, not only in terms of bicycle touring but also gave me something about my attitude towards life." Her statements emphasise the extreme physical difficulty of the climb, setting the stage for the remarkable achievement, which led to increased self-confidence and a broader sense of personal empowerment.

In addition, P8 (Photo 3) indicates, "Because this is the farthest tip of South America…you're going all the way to the southernmost part of South America, and you're doing it by bicycle…in that sense, it was a significant moment for me…it is a significant geographical achievement…it makes me proud—especially as someone who spent most of their time in a professional career until the age of 40, without dedicating much time to these kinds of pursuits". Additionally, according to P10's statements about one of his photos (Photo 5), there is a sense of accomplishment, independence, unstoppability, and empowerment associated with conquering a challenging mountain pass. All these emotions helped her to have a positive memorable experience during her cycling tour (P10-Photo 5).

Although no studies have been found in the existing literature on cyclists' positive and negative memorable experiences, a recent study found that achievement is a significant factor in fostering the road cycling experience (Uesugi *et al.*, 2024). Accordingly, this experience gives road cyclists a deep sense of pride in their dedication, which can contribute to identity-building (Uesugi *et al.*, 2024). Furthermore, the study of Nickerson *et al.* (2014) highlighted that traversing mountain passes and steep climbs significantly contributed to creating memorable experiences for cyclist travellers. Cyclists expressed pride in their achievements in conquering mountain passes and enjoyed the thrilling downhill rides that followed their successful climbing.

Although MTE frameworks often focus on positive hedonistic feelings and relaxation, our findings expand this perspective by showing that physical hardship, such as gruelling climbs and utilitarian struggle, can lead to higher-order positive memories in cycling tourism. For active tourists, memorability stems from mastery and achievement (e.g., conquering mountain passes), rather than passive consumption alone, emphasising the importance of challenge and self-efficacy in creating lasting positive MTEs.

#### *4.1.2. Discovery of landscape, history, and rural settings*

The discovery of landscape, history, and rural settings is the most crucial dimension of cyclists' memorable travel experiences. Eleven cyclists conveyed indicators, such as the landscape, history, and rural settings of the destinations, through fourteen photos, which shaped their positive, memorable experiences. Central to this theme is the connection with nature, where one can discover unexpected beauty and stunning landscapes, engage in birdwatching in the countryside, explore historical and scenic beauty, appreciate rural settings, preserve historical architecture and heritage, and delve into art and culture. The underlying emotions of cyclists emerged as peace, joy, serenity, happiness, enjoyment, appreciation, awe, relaxation, excitement, relief, freedom, independence, and refreshment.

P4 linked the discovery of a peaceful natural landscape setting to feelings of peace and serenity. P6 also shared his memorable experience, emphasising the overwhelming beauty of the landscape and the relief and excitement he felt at the start of his solo cycling journey. Moreover, a cyclist (P7-Photo 2) underlined thoughtful urban planning by stressing the beauty and refreshing quality of the tree-lined street. She appreciated the urban planning of one of the cities in Italy, which incorporates green spaces. She believes this improves the quality of life and provides respite from the heat. The positive, memorable experience of a cyclist (P12-Photo 1) includes enjoying unexpected wildlife encounters and appreciating the peace found in rural settings while cycling. She found birdwatching in the countryside exciting and unexpected. She considered this experience a positive aspect of cycling in rural areas, which helped her feel a sense of freedom, independence, and peace. Additionally, P15 expressed his appreciation for art and culture, which created a positive, memorable experience.

Another cyclist (P16-Photo 2) mentions the memorable experience of appreciating well-preserved urban spaces with these words: "It's just a beautiful little village…the whole centre of the village is this canal that goes through there, and it's all pedestrian…it symbolises what an urban landscape should be

like…very relaxing…It represents the values of preservation, of appreciation for just the beauty of the built environment."

In a study conducted by Uesugi *et al.* (2024) on road cyclists' experiences in Thailand, the landscape emerged as a key component of their experiences. Cyclists particularly valued the visible aspects of the landscape, such as mountains, forests, rivers, and wildlife, that significantly enhanced their overall experience. In the context of memorable experiences, enjoying the landscape, scenery, and historical attractions is considered an indicator of memorable experiences for cyclist travellers in Montana, Canada (Nickerson *et al.*, 2014). However, our findings make a new contribution to the literature: rural settings can create positive, memorable experiences for cycling tourism.

#### *4.1.3. Local and authentic aspects*

Local and authentic aspects, such as warm hospitality, interactions with locals, regional culture, local cuisine, generosity, and shared meals, contributed to cyclists' positive and memorable experiences during their tours. Eight photos of seven cyclists who participated in this study highlight local and authentic aspects through positive, memorable experiences. The associated emotions in this context are sincerity, warmth, happiness, blissfulness, excitement, freedom, empowerment, fascination, amazement, good fortune, joy, connection to history, passion, and friendship.

A cyclist (P5-Photo 1) described his local experiences as authentic and noted that local hospitality made them memorable. He further explained, "When I was on a trip, I stopped at a very beautiful campsite…they ran a beautiful, incredibly like, homely local store that was selling farm products…everything was delicious, and the smell was like it was in the kitchen of my grandma's house…the level of hospitality was impeccable…how nice people were, how prompt everything was, and how easy it was to connect with everybody." P12 expressed the enjoyment of local food she experienced during her European cycling trip (P12-Photo 2) as part of her positive memorable experiences. P10 (Photo 4) mentioned warm hospitality and shared meal experiences with locals. She cooked and ate with locals in a warm and welcoming atmosphere, providing positive and memorable experiences. Furthermore, P15 (Photo 2) participated in a small-town festival in France during his cycling trip. This experience was described as one of enjoying spontaneous encounters and positive interactions with locals. Also, the traveller emphasises the ease of connecting with locals, even without a shared language.

Although no empirical findings have shown that local and authentic aspects are significant indicators of positive, memorable experiences for cycling travellers, some findings are partly supportive. According to a study by Nickerson *et al.* (2014), locals' friendly characteristics and hospitality led touring cyclists to have memorable experiences. However, this study highlighted other local and authentic aspects, such as local culture and cuisine, as contributors to positive, memorable experiences. The literature suggests that the local cuisine, lifestyle, and culture of a destination contribute to creating memorable experiences (Seyitoğlu, 2021). Additionally, local people's interaction enables travellers to increase their knowledge of local culture, which creates memorable experiences (Lončarić *et al.*, 2021).

#### *4.1.4. Infrastructure and amenities of destinations*

Six cyclists shared their experiences related to infrastructure and amenities through nine photos, which contributed to their positive and memorable experiences during cycling trips to other countries. Cyclists emphasised the importance of various aspects of infrastructure and amenities, including well-developed cycling infrastructure, detailed route information, widespread campgrounds, bicycle-friendly trains, well-maintained bike paths, a well-developed shelter system, helpful tourism office staff, a comprehensive healthcare system, clear road signs, and bicycle repair stations. Experiences related to these aspects helped them have positive, memorable experiences. Further, the underlying emotions of

cyclists have emerged as safety, respect (for cyclists), value (for cyclists), appreciation, freedom, enjoyment, convenience, comfort, independence, and relief.

A cyclist traveller (P2-Photo 5) indicated that there was good cycling infrastructure during her trip to Finland. She specifically explains the ease of navigation, which is possible without the use of any technology, thanks to road signs. She adds that the sense of safety provided by the good infrastructure made her feel valuable. P7 (in Photo 1) highlights an important aspect of infrastructure and amenities that contributed to a memorable experience: bicycle-friendly trains that provide convenient, comfortable bicycle transport in Italy. She adds, with another photo (P7-Photo 3), that the bicycle repair station is an example of better cycling infrastructure. A traveller found the shelter system in Denmark well developed (P13-Photo 1). He (P13) interpreted the shelter system as reflecting broader societal attitudes towards cyclist travellers. His related explanation is given below.

> *"I discovered that Denmark has this amazing system of shelters…It was a lot easier than pitching my tent somewhere…I felt a great sense of relief…Sometimes, they were in unexpected places…one was in a children's playground…Some shelters were located in suburban neighbourhoods…I'm going to be sleeping here, and people are going to be walking by with their dogs, but they must be OK with this…These shelters were all over the country. It was amazing. It gave me a sense of the people of Denmark and how Denmark has structured its society—not just its traveller system, but its society as a whole. This illustrates how Denmark has established various institutions and reflects the social attitudes prevalent there…They make it easy for people to travel by bike."* P13-Photo 1

Eventually, P16 reports positive interactions with helpful tourism office employees (P16-Photo 6) and a positive experience receiving medical care in the Netherlands (P16-Photo 5). He (P16-Photo 5) indicated,

> *"…I had such a positive experience at the emergency room that this photo is a plus for me. It is unfortunate that I had to go to the emergency room, but it reminds me of how positive the experience was once I arrived there…Furthermore, it was affordable. It didn't cost me that much…"*

While few studies have examined the role of infrastructure and amenities in cycling travellers' memorable experiences, transport policy literature indicates these features are central determinants of destination attractiveness (Wilco *et al.*, 2024). The findings of this study show that deficiencies in infrastructure and amenities can produce negative MTEs tied to loss of autonomy and dependency: cyclists reported frustration and reduced independence when inadequate bike lanes, poor signage, or limited bicycle-friendly transport forced reliance on others or alternative modes, adding a psychological dimension to negative memorable experiences.

#### *4.1.5. Socialising and support*

Socialising with (P10-Photo 6, P13-Photo 3, P14-Photo 2, P17-Photo 2, P18-Photo 2) and receiving support from other cyclists (P9-Photo 1, P16-Photo 1, P18-Photo 3) are also significant aspects of positive, memorable experiences for cyclist travellers. The cyclists expressed their emotions in response to the photos in this theme, including excitement, freedom, empowerment, happiness, luck, friendship, helpfulness, generosity, and kindness. P10 asserted that he established social connections with fellow cyclists during his trip to California. She explained, "Yeah, this is in California. I started my bike trip across the United States with my friend Casey. And so, we were in the California desert, and it was very dry, and we got to this place called the Desert Tower, which is in the middle of the desert. This place seemed like an oasis when we arrived. People in a drum circle played music, like peacocks walking around in hammocks and lights. It was very weird but cool and probably one of the most memorable places I've ever been on tour. Ever. Like, I'll never forget this place." P13 also described his meeting and socialising experiences during his trip and how these interactions helped create memorable experiences.

The findings also illustrate that some cyclists' photos of positive, memorable experiences include support from other cyclists during their trips. For example, P9 (Photo 1) asserted the valuable support from fellow cyclists during his trip:

> *"It immediately makes me smile because Erik had tried so hard. He really put a lot of effort into helping me. It wasn't just Erik; there were other cyclists, too. Some American friends also helped—they dressed my wounds and played music for me. I could not even get on my bike for three days, actually for five days. During that time, they provided me with a lot of support. They prepared meals for me…helpfulness and generosity of other cyclists…they were all from different countries, yet without considering colour, religion, or race, they rushed to help…"*

In tourism research, socialising is a well-established concept, particularly within the context of motivation studies (Seyitoğlu & Atsız, 2024). It is an important motivational factor that enhances the quality of travel experiences (Yeap *et al*., 2020). However, in the context of cycling travellers, our study reveals new findings: socialising and social support as experimental dimensions, as well as the creation of positive, memorable experiences.

The literature on MTE has emphasised destination attributes and infrastructure as drivers of traveller satisfaction, but our data challenge this infrastructure-centric view by showing that social solidarity can transform negative infrastructural incidents into peak positive memories. This emergence of social support as a dimension of MTE relates to the vulnerability inherent in cycling tourism: as Ciascai *et al*. (2022) note, vulnerability reveals the transformative potential of resilient, authentic travel experiences. Support from strangers, therefore, does more than provide aid. It fulfils needs for social integration and shared values (Asan & Aksoz, 2022), can catalyse long-term social bonds, and converts situational risk into higher-order positive memories, consistent with Tiwari *et al*. (2023) on the emotional drivers of MTEs.

### *4.2. Negative Memorable Experiences*

The negative memorable experiences category includes two main themes: (i) infrastructure and amenities of destinations, and (ii) other aspects.

#### ***4.2.1. Infrastructure and amenities of destinations***

Most factors contributing to negative memorable experiences for cyclists are related to the infrastructure and amenities of destinations. The main challenges cyclists face that lead to negative, memorable experiences fall under the transportation and logistics sub-theme. Further negative aspects emerged as a lack of shelters (P10-Photo 1), flooded roads (P8-Photo 1), poor cycling signage (P16-Photo 6), lack of adequate safety lanes (P1-Photo 3), lack of suitable campsites (P15-Photo 4, P17-Photo 1), bicycle security concerns against theft (P1-Photo 4, P15-Photo 3), lack of proper accommodation establishments for cyclists (P7-Photo 4, P11-Photo 3), bureaucratic delays (P8-Photo 6), and navigation errors (P8-Photo 6). The emotions experienced by cyclists in this theme include disappointment, feeling trapped, displeasure, worry, fear, discomfort, itchiness, insecurity, helplessness, panic, risk, tiredness, anger, annoyance, demotivation, and dependency.

Regarding transportation and logistics, the significant issue is the challenge of transporting bicycles on trains (P11-Photo 1, P12-Photo 4, P18-Photo 3). In this line, one of the cyclists (P11-Photo 1) pointed out the difficulties and frustrations in using train transportation to return home after a cycling trip with these words: "It was always easier to go on a bicycle than to return with public transport…the trains and the European lines do not accept mostly bicycles…I had to rent a car…it is always a bit of a stressful moment coming back with public transport…when you are on your bicycle, you control your

environment…now you are again dependent on something which doesn't work…" P12 also highlighted the difficulties of travelling with bicycles on trains, attributing them to a lack of bicycle-friendly infrastructure. She stated that there were language barriers at a train station due to a lack of information in other languages (P12-Photo 4).

Furthermore, the negative experience of a cyclist (P18-Photo 3) is caused by the lack of an elevator in a train station to carry her bicycle. Logistical failures in air travel, along with issues with infrastructure and amenities, led to negative, memorable experiences for travellers on their cycling trips. Lost luggage and damaged bikes (P2-Photo 1), delayed luggage (P13-Photo 6), and the challenge of packing a bicycle for air travel (P13-Photo 6) are issues cyclists face.

A cyclist considers the lack of suitable shelter a critical issue due to severe weather, such as thunderstorms and heavy rain (P10-Photo 1). P8 encountered an unexpected road closure due to flooding during his cycling trip (P8-Photo 1), which contributed to his negative, memorable experiences. P16 got lost due to poor cycling signage during his cycling trip to France (P16-Photo 6). Moreover, a participant (P15-Photo 3) emphasises the importance of taking security precautions when visiting museums by bicycle, specifically highlighting concerns related to bicycle theft.

A single cyclist (P6-Photo 1) reported navigation errors during his cycling trip. He stated that inaccurate navigation caused delays and negatively affected his overall cycling experience. Another cyclist (P8-Photo 6) talked about the bureaucratic delays and how these issues caused financial and time losses. He emphasised the significant financial and scheduling consequences of the border delays. In addition, two cyclists (P7-Photo 4, P11-Photo 3) asserted that the lack of proper accommodation establishments for cyclists was the reason for their negative memorable experiences. In this regard, P11 had poor sleep, lacked a heating system other than floor heating, did not have an indoor place to leave the bicycle, and had difficulties drying wet clothes in the room during his hotel stay.

As stated in positive, memorable experiences, the infrastructure and amenities of destinations play a critical role in shaping the experiences of cycling travellers. For tourism destinations, offering a range of amenities for cycling travellers is more crucial than catering to those travelling by vehicle, because cyclists are slow-moving travellers and are inclined to invest their time and money in rural areas during downtime and overnight stays (Nickerson *et al.*, 2014). Therefore, for example, offering affordable and comfortable accommodation options for cyclists can encourage them to spend even more time exploring and enjoying local attractions, which can significantly contribute to the destination's appeal.

#### *4.2.2. Other aspects*

Other aspects include three sub-dimensions: (i) challenging weather conditions, (ii) personal issues, and (iii) mechanical failures. This theme refers to the dimensions of negative, memorable experiences for cyclists that are not related to tourism destination management and are mainly due to uncontrollable factors, such as weather and personal and mechanical issues. The cyclists illustrated their emotions as pain, pity, helplessness, frustration, defeat, hardship, disappointment, loneliness, and misfortune.

Weather conditions and their negative impact on the experience are the most frequently highlighted by cyclists. They clarified that they experienced health issues (P3-Photo 2), had to change their plans (P4-Photo 4, P7-Photo 4), were unable to set up a tent (P8-Photo 1), and their electronic equipment was damaged (P8-Photo 1) due to the weather conditions.

Personal issues as the reasons for negative memorable experiences were revealed as getting lost (P2-Photo 2, P9-Photo 4), an unexpected health issue (P16-Photo 5), physical and mental exhaustion (P4-Photo 4), the feeling of loneliness as a challenge of solo travel (P5-Photo 3) and disappointment with

the cycling partner (P10-Photo 2). In this aspect, for instance, P9 (Photo 4) expressed, *"It was the photo when I got lost in the mountains…I got lost, but I believed I would find the way…I said, Let there be a memory."* Furthermore, P10 (Photo 2) expresses her disappointment with her cycling partner, stating, *"She left the cycling trip for the day to take a train…how negative she was during this day…how much she brought down our moods."*

Eventually, the mechanical failures (P3-Photo 3, P9-Photo 5, P11-Photo 2) were revealed as challenges that led to negative, memorable experiences. Mechanical failures, such as gear failure (P3-Photo 3), a flat tyre (P9-Photo 5), and brake failure (P11-Photo 2), resulted in anxiety, time loss, and disruption of plans. For example, P11 emphasised the importance of having well-maintained equipment to prevent the loss of independence and freedom while cycling.

Although personal issues and mechanical failures appear underexplored here, prior research has confirmed the strong negative impact of challenging weather on cyclists' experiences (e.g., Nickerson *et al.*, 2014). The memorability of these negative events, including transport problems, poor signage, and equipment failure, stems from their sudden disruption of cyclists' sense of autonomy and control. As independent agents who regulate speed and engage closely with their environment, cyclists experience frustration and helplessness when external constraints force dependency. This dynamic aligns with locus-of-control reasoning: loss of agency provokes greater psychological distress (Spindler *et al.*, 2018), and when uncontrollable environmental or systemic factors thwart basic psychological needs for autonomy and competence, those negative episodes become enduring cognitive markers in long-term travel recall.

## 5. Conclusion and implications

The present research contributes to the tourism literature by exploring cycling travellers' positive and negative memorable experiences abroad through participants' photos and by revealing their underlying emotions. Five positive dimensions emerged: accomplishments; discovery of landscape, history, and rural settings; local and authentic encounters; destination infrastructure and amenities; and socialising/support. Two negative dimensions were identified: infrastructure/amenities shortfalls and other uncontrollable factors (weather, personal issues, mechanical failures). Positive experiences produced emotions such as pride, freedom, awe, connection, and safety, while negatives elicited disappointment, fear, helplessness, and frustration.

While the findings contribute to the body of knowledge in cycling tourism and memorable experiences, the implications will help destination managers, policymakers, and service providers globally understand the crucial factors and underlying emotions that contribute to travellers' memorable cycling experiences, and to develop future policies, actions, and strategies for designing destinations and services.

### *5.1. Theoretical implications*

The theoretical contributions include the introduction of a dimensional framework that illustrates the various components of memorable cycling experiences from a comprehensive perspective, integrating both positive and negative aspects. More specifically, the present study contributes to the literature beyond the generic 'valence models' by pointing to the existence of 'discrete emotions' that act as cognitive markers for long-term memory. For example, the shift from 'extreme physical difficulty' to 'personal empowerment' experienced by the participants indicates that cycling MTEs is not only about the 'pleasure' of it all but is also closely linked to 'self-efficacy' and 'identity building' in managing hardships. The study contributes to the theoretical framework of MTE by identifying themes associated with positive and negative cycling tourism experiences. This can enhance understanding of the multidimensional nature of travel memories and the factors that influence them. Besides, identifying

themes reflects a holistic perspective on memorable cycling experiences, emphasising the interconnections between personal, environmental, and social factors. This can inform future research on experiential learning and memory in the contexts of cycling tourism, outdoor adventure tourism, and related fields.

Although the existing literature (Nickerson *et al.*, 2014) emphasises the physical environment, the present study adds a 'social solidarity' factor to the experimental design. The study documents the theoretical importance of social solidarity in cycling MTEs: mutual aid from strangers of different cultural backgrounds emerges as a distinct mechanism that transforms adverse experiences into durable positive memories, adding a humanistic, social-relational dimension that most prior research in the existing literature on cycling tourism has not foregrounded.

The present study also contributes to the literature by revealing the underlying emotions associated with the positive and negative memorable aspects of cycling experiences. In this regard, the literature indicates that the most intense positive or negative emotions experienced during a particular event, and the emotional state at its conclusion, are essential in shaping the overall assessment and memorability (or recall) of that event (Bastiaansen *et al.*, 2019).

The outputs of this study enrich the methodological aspect of the research by revealing hidden or overlooked memorable moments of travellers, rather than relying solely on traditional oral interviews. Incorporating supporting materials (e.g., photos) into semi-structured interviews to explore memorable-related concepts will provide valuable insights for scholars. More specifically, the photo elicitation approach demonstrates how visual prompts reveal emotional detail (felt authenticity, sensory cues) that standard interviews may overlook, offering a replicable approach for future empirical tests of the taxonomy.

This study found that formation of MTEs in cycling tourism is driven by the interaction between physical/environmental challenges and cyclists' psychological needs. Cycling, as a high-involvement activity, requires tourists to confront environmental vulnerabilities: when cyclists overcome difficulties (e.g., traversing high mountains or reaching key destinations), MTEs emphasising empowerment, pride, and self-confidence are generated; when efforts are thwarted by external factors (e.g., infrastructure failure or severe weather), negative MTEs characterised by helplessness and frustration result. Hence, MTEs are not only destination attributes but also tests of personal mastery. A cyclist's memory encodes destination information through cognitive appraisals of events; consequently, the memorability of cycling tourism is closely linked to how tourists overcome hardships on the path to greater independence.

### *5.2. Practical implications*

This study can help destination managers, policymakers, and service providers understand the key factors shaping travellers' memorable cycling experiences. First, insights from the study can help destination managers design and promote cycling routes and amenities that enhance positive, memorable experiences. By focusing on aspects such as local culture, authenticity, and infrastructure, destinations can attract more cycling travellers and improve their overall satisfaction.

The findings highlighted specific challenges that cyclists face, including infrastructure issues and adverse weather conditions. Service providers can utilise these findings to tailor their offerings, enhance support systems, and improve amenities specifically for cycling travellers, thereby improving their overall experience. In this regard, facilitating public-private partnerships that foster investment in cycling infrastructure and services can also benefit local communities and visitors.

Destination managers should invest in and maintain high-quality cycling infrastructure, such as dedicated bike trails and convenient amenities, to ensure safe, satisfying, and memorable experiences for cycling travellers. Incorporating wayfinding signage and providing resources that enhance navigation and exploration of scenic landscapes, historic sites, and local culture can also help improve destinations and attract cycling travellers. Additionally, offering diverse accommodation options that cater to cyclists' needs, from secure bike storage to repair facilities, will enhance overnight stays and visitor satisfaction, providing positive and memorable experiences. Service providers at destinations should offer robust support services, such as bike repair and emergency assistance, to ensure cyclists feel secure and well supported throughout their visits.

The positive experiences related to healthcare in the Netherlands suggest that DMOs should include 'Cycling-Specific Insurance' and 'Emergency Support Networks' in their branding efforts. Informational materials on emergency medical access at trailheads can turn a potentially traumatic experience into a positive, memorable one during recovery. Destination managers and key stakeholders may also consider expanding and improving camping sites for cycling travellers. Moreover, establishing shelters and rest areas along popular cycling routes is crucial for protecting cyclists from adverse weather and providing places to rest and recuperate. Based on the successful "*shelter system*" in Denmark and in light of the negative "*theft concerns*", European DMOs should focus on investing in a "*Network of Smart Shelters*" that, in addition to providing shelter from the elements, should also offer a secure "*app-based*" locking system and charging facilities, directly addressing the "*insecurity*" and "*disappointment*" of solo travellers in rural areas.

Additionally, the distinct themes of memorable experiences can inform marketing strategies for cycling tourism. By emphasising unique landscapes, local culture, and authentic aspects in promotional materials, stakeholders can better resonate with potential cyclists and foster interest in cycling tourism. Regarding marketing strategies, it can be beneficial to utilise digital platforms and social media to showcase the unique aspects of the destination that appeal to cyclists, such as scenic routes, cultural attractions, and local hospitality.

Transportation authorities are recommended to develop bicycle-friendly trains and buses. Providing designated bicycle spaces and facilities on trains and buses is important. To address the negative experiences identified regarding transit in Europe, transport authorities should not just provide 'bike spaces.' Specific measures need to be taken, such as the mandatory provision of elevators and ramps at all cross-border stations, to avoid the 'feeling of dependency' and 'frustration' experienced by cyclists carrying heavy equipment. In this regard, it is also important to ensure that train and bus stations are equipped with elevators or ramps to facilitate the safe and convenient transport of bicycles.

Moreover, developing standardised procedures for handling bicycles may help address logistical barriers in air travel. Eventually, streamlining bureaucratic processes may simplify and expedite transport-related procedures involving bicycles, reduce travellers' reliance on convoluted processes, and decrease frustration. Destination managers and policymakers seeking to develop their destinations to attract cycling travellers can contribute to sustainable destination development and enhance competitiveness in the tourism market, as cycling tourism is associated with lower environmental impacts (Carvalhinho *et al*., 2024).

### *5.3. Limitations and future research directions*

While the findings are valuable and provide important guidance for destination managers, practitioners, and policymakers, the study has limitations that may inspire future researchers interested in cycling travel experiences. For instance, the themes and sub-themes can be formulated through a scale that measures overall memorable cycling experiences in the tourism context. Testing indicators

and their themes using a quantitative research method will be extremely helpful in providing sound evidence for the literature. Furthermore, given the identified emotions associated with positive and negative cycling experiences, further research could investigate how these emotions interplay with the dimensions of experience to shape overall travel satisfaction.

Future research can investigate the intensity and duration of emotions, as well as their subsequent effects on memory recall and experience evaluation. Investigating how cultural contexts shape perceptions of memorable cycling experiences and the emotions they evoke can offer valuable insights. Furthermore, this study focuses on identifying core MTE dimensions; however, future research could perform a more detailed analysis by considering how different cycling styles and travel groups might determine the experience concept itself. Finally, understanding cultural variations can improve destination marketing strategies and enhance visitor experiences by aligning with cultural expectations.

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The paper was submitted before Faruk Seyitoğlu was appointed Deputy Editor of the journal. He had no involvement in the peer review of this manuscript and had no access to information regarding its peer review.

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**Appendix 1: Question Form**

*Demographic questions:*

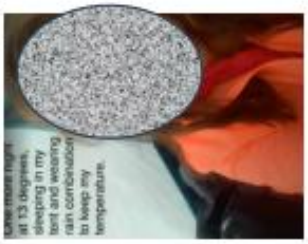
Age: Gender: Nationality: Education level:
Employment status:
How many countries have you visited by bicycle?

Photo-related questions:

-Please choose the most memorable photos of your travel experience to a destination abroad. It can be a positive or negative memorable experience. Please choose up to 3 pictures of positive, memorable experiences and up to 3 of negative, memorable experiences.
-Why did you choose this photo?
-Why did you take this photo?
-What does it mean to you? Or how does this photo make you feel?
-What do you remember most about this photo?
-What does this photo show?
-What aspects of experiences does this photo help you to remember?

**Appendix 2. Participants and their photos related to positive and negative memorable experiences**

| PARTICIPANTS AND THEIR PHOTOS | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| P1 | | | | | | |
| P2 | | | | | | |
| P3 | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| P4 | | | | | |  Like most nights at 13 degrees, sleeping in my tent and wearing rain combination to keep my temperature. |
| P5 | | | | | | |
| P6 | | | | | | |

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| P7 | P8 | P9 | | | |

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|---|---|---|---|---|---|---|
| P10 | | | | | | |
| P11 | | | | | | |
| P12 | | | | | | |

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|---|---|---|---|---|---|---|
| P13 | | | |  | | |
| P14 | | | | | | |
| P15 | | | | | | |

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|---|---|---|---|---|---|---|
| P16 | | | | | | |
| P17 | | | | | | |
| P18 | | | | | | |