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The effects of Awe in Religious Tourism: Can Augmented Reality play an important role?

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Master in Hospitality and Tourism Management

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Department of Marketing, Strategy and Operations

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Resumo

O Turismo Religioso tem sido uma das mais importantes formas de turismo Cultural e de Património, atraindo milhões de visitantes que anualmente visitam locais sagrados, onde normalmente experienciam a emoção AWE (ficar maravilhado, pasmado). Além disso, a Realidade Aumentada (RA) foi identificada como uma tecnologia proeminente que permite a melhoria da experiência do turista.

Assim, esta dissertação explora o impacto do AWE na experiência do turista religioso e o efeito da RA na mesma. Um questionário online foi desenvolvido e apresentado a turistas religiosos que foram expostos/não expostos à RA. Um total de 158 respostas foi recolhido e analisado.

Concluiu-se que experienciar awe no turismo religioso pode ter influência na percepção de autenticidade dos turistas (tanto a autenticidade relacionada com os objetos, como a autenticidade existencial). Além disso, de acordo com os resultados, a experiência de awe está também positivamente relacionada com as emoções positivas do turista religioso e negativamente relacionada com as emoções negativas. A percepção de autenticidade existencial e de emoções positivas relacionam-se positivamente com a intenção de visitar o destino religioso. A percepção de autenticidade relacionada com objetos e autenticidade existencial também apresentam uma relação positiva e significativa com a intenção de recomendar o destino religioso a familiares e amigos. Concluiu-se também que um turista que experiencia emoções negativas não terá intenção de recomendação.

Além disso, concluiu-se que a experiência de RA, não tendo um efeito significativo na experiência do turista, pode ser usada como um complemento da típica experiência turística, especialmente para atrair gerações mais novas.

Palavras-chave: Turismo Religioso, Turismo Cultural e de Património, AWE, Realidade Aumentada, RA

JEL Classification: L830 Sports; Gambling; Restaurants; Recreation; Tourism

JEL Classification: Z310 Tourism: Industry Studies

Abstract

Religious Tourism has been one of the most important forms of Heritage Cultural Tourism, attracting millions of visitors each year to sacred places, where they usually experience the emotion of AWE.

Furthermore, Augmented Reality (AR) was identified as a prominent technology that allows the touristic experience to be enhanced.

That said, this dissertation explores the impact of AWE on religious tourists' experiences and the effect of AR on it. An online survey was developed and presented to religious tourists that were exposed to AR and to religious tourists that weren't. A total of 158 responses were collected and analyzed.

It was concluded that experiencing awe in religious tourism might influence the perception of authenticity from tourists (both object-based authenticity, and existential authenticity). Furthermore, results show that the awe experience is also positively related to the experience of positive emotions by the religious tourist and negatively related to negative emotions. Moreover, the perception of existential authenticity and positive emotions are positively related to the intention of revisiting the said religious tourism destination. The perception of object-based authenticity and existential authenticity also present a significant positive relation to the intention to recommend the touristic destination to friends and family. It was also concluded that a tourist that feels negative emotions will not have the intention to recommend the destination.

Moreover, it was concluded that the AR experience, not having a significant effect on the touristic experience, can be used as a complement to typical touristic experiences, especially to attract younger generations.

Keywords: Religious Tourism, Cultural Heritage Tourism, AWE, Augmented Reality, AR

JEL Classification: L830 Sports; Gambling; Restaurants; Recreation; Tourism

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1 | INTRODUCTION

On the past decades, Tourism has been emerging as a major activity in Portugal (Turismo de Portugal, 2022), representing about 8% of the total GDP in 2018, and employing about 432 thousand people in 2019 (UNWTO, n.d.-b).

Many factors may appeal to a visitor to choose a certain destination; however, cultural heritage, natural resources, and climate have been identified as major influences on destination competitiveness and attraction (Ursache, 2015). Moreover, current trends show that the number of travelers engaging in different cultures, religions, and beliefs has been growing, increasing the number of Religious Tourists (UNWTO, 2016). Furthermore, Eco-tourism has grown in popularity and become one of the fastest-growing segments of the world's tourism (Ban & Ramsaran, 2017).

Augmented Reality (AR) and related technologies have recently emerged as important tools to enhance the tourist experience (Augello et al., 2021). These modern technologies have paid an important role in the development of the tourism sector, allowing a destination to provide a more “attractive, efficient, inclusive, and economically, socially and environmentally sustainable” experience to visitors (UNWTO, n.d.-a).

A Systematic Literature Review was conducted to present the major trends in tourism and their relationship with AR. A gap was then identified in the literature, since there were no relevant papers relating to Religious Tourism, one of the branches of Cultural Heritage Tourism (UNWTO, 2016), and AR technology. Furthermore, the Awe emotion was identified as one of the central parts of religious tourism, which led to the following research questions: “How does Awe influence Religious Tourists?” and “Can AR influence the awe experience of Religious Tourists?”.

This paper is of major importance since it broadens the knowledge of the experience of awe in religious tourism, adding the innovative variable of AR. The literature also connects the Perceived Authenticity of the destination site (cognitions), as well as Positive and Negative Emotions as a result of experiencing awe. Furthermore, authenticity and emotions are also said to influence a tourist's loyalty to that destination. Based on these conclusions, the following research objectives were set:

- To understand the influence of experiencing awe on the tourist's cognitions and emotions
- To understand the impact of tourist's cognitions and emotions on their destination loyalty

- To compare the results overall results of religious tourists to the ones from tourists that were exposed to AR.

This dissertation is divided into 8 chapters. Firstly, the Introduction presents the general topic as well as the background regarding the chosen theme, the research questions, and the objectives. In the following chapter, a Systematic Literature Review is developed, presenting a systematic choice of the articles for analysis, followed by an in dept analysis of the major trends in literature, and the identification of the gap in the literature that is studied afterward. The third chapter has the research hypotheses and the conceptual Framework, where there is a demonstration and discussion of the main concepts and the derivation of hypotheses for the study. The following chapter exposes the methodology that was used for this analysis, including the presentation of the destination chosen for data collection, as well as the sample choice and survey. Next, the Results are stated, including a characterization of the sample and the empirical results of this dissertation. Furthermore, a Discussion regarding the results is made and some recommendations are listed. The Conclusion and Limitations of the dissertation are then exposed. This paper finishes with the list of References cited in the document, as well as the Appendices, used for further comprehension of the analysis.

2 | SYSTEMATIC LITERATURE REVIEW

A systematic literature review was conducted (see Figure 1) to gather and analyze the published articles that could relate the trending types of tourism with AR. This method was based on written literature (Loureiro & Nascimento, 2021). The following query was used for article search on both Scopus and Web of Science: ("eco tourism" OR "eco-tourism" OR "green tourism" OR "green-tourism" OR "nature tourism" OR "nature based tourism" OR "sustainable tourism" OR "cultural tourism" OR "heritage tourism" OR "religious tourism") AND ("technolog*" OR ("augmented reality" OR "AR")). In this last query, the lack of presence of information regarding Augmented Reality was not a condition to exclude articles from analysis.

A total of 1061 papers from Scopus and 1616 from Web of Science (WoS) was presented and then refined to exclude the ones that did not meet the priorly chosen criteria.

Firstly, the non-English ones were eliminated, leading to a remain of 1010 from Scopus plus 1546 from WoS. Secondly, and being technology one of the studied parameters which is constantly evolving, the papers written before 2017 were also excluded from analysis, leaving a total of 673 papers from Scopus and 1017 from WoS. Later, the search was again refined to only include articles, reducing the number of papers to 388 from Scopus and 735 from Wos. The next criterium applied was to only include the articles within the following themes: “Environmental Sciences”, “Social Sciences”, “Environmental Studies”, “Business, Management and Accounting”, “Hospitality, Leisure, Sport, Tourism”, “Green Sustainable Science Technology”, and “Religion”.

The total remaining was 310 from Scopus and 502 from WoS. After merging both lists of articles, and eliminating the duplicates, 648 remained. The journals responsible for publishing each article were then identified, and, based on the SJR index which ranks the journals according to their “research performance, innovation outputs and societal impact” (SCImago, n.d.), the journals with lower classification on this index were excluded, remaining 547 articles. The Titles and Abstracts of these articles were then carefully analyzed, which led to the exclusion of some of the articles, leading to a total of 70 articles that were selected for full-reading and analysis.

To better understand the main research areas and trends in the analyzed articles, the papers were divided into three groups according to the focus of each paper: Eco-tourism, Cultural Tourism, and Smart Tourism.

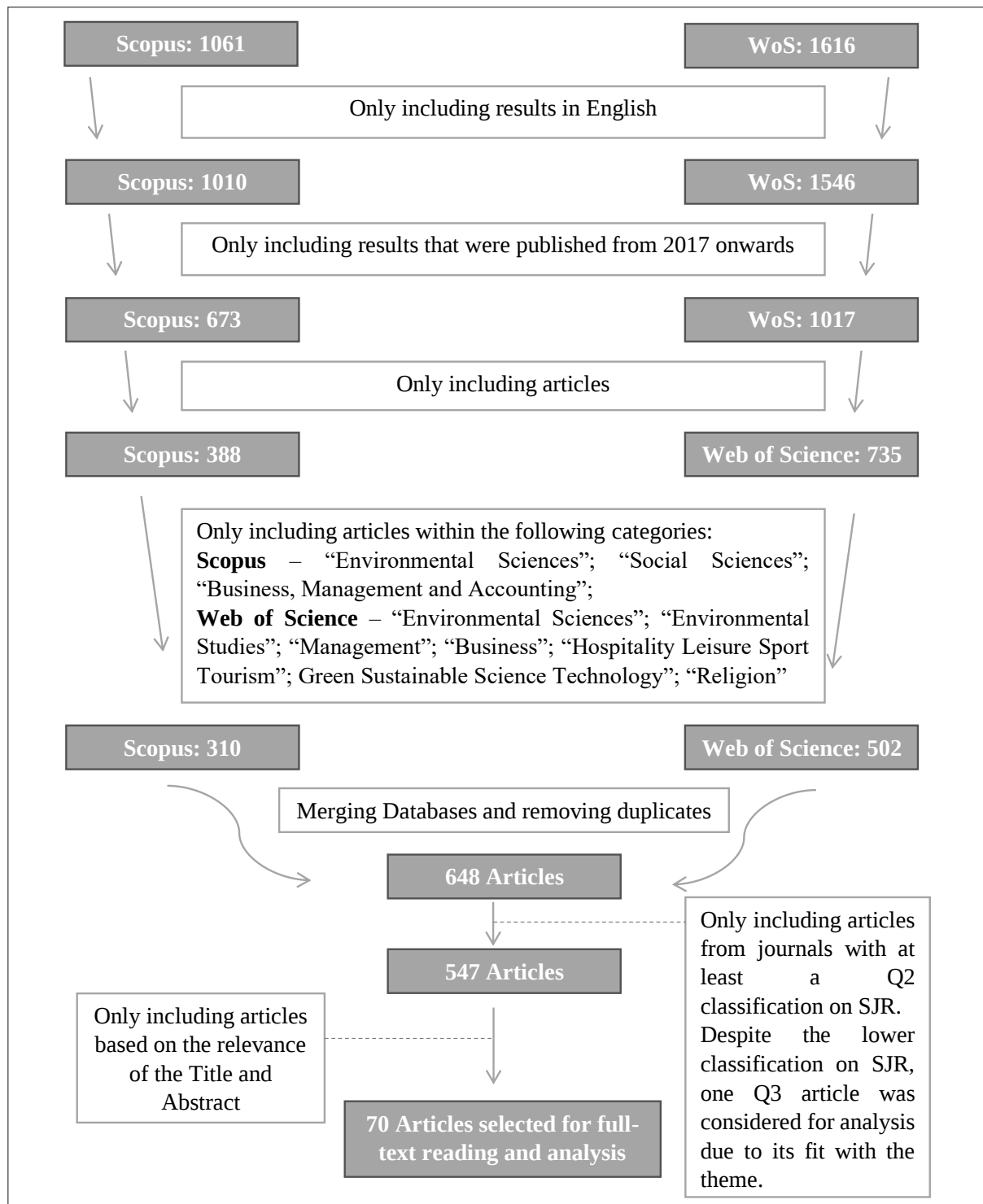


Figure 1 - Systematic Literature Review Diagram

Source: Own Elaboration

2.1 Eco-tourism

Eco-tourism is a nature-based tourism where the tourists' main motivation is to appreciate both the natural and cultural environments (UNWTO, 2002) and should be seen as a form of traveling responsibly and supporting local people (TIES, 2015). According to UNWTO (2002), eco-tourism sites are usually locally owned small businesses, that organize tours for small groups of tourists. Furthermore, this form of tourism should harm neither the community nor the natural surroundings (UNWTO, 2002; TIES, 2019).

This type of experience should allow tourists to learn about and interpret their surroundings (UNWTO, 2002), as well as, increase the awareness of tourists and locals regarding the conservation of the area (UNWTO, 2002; Eddyono et al., 2021). According to Lee and Jan (2018), the interpretation process might result in better appreciation and respect of natural resources and local cultures, which can be enhanced via “talks, audio-visual presentations, signs, etc.” (Hofman et al., 2021). Having found that this knowledge was useful, the tourist's behavioral intentions and behaviors regarding eco-tourism may be influenced (Lee & Jan, 2018).

Fennell (2021) argued that the learning variable is not exclusive to the traditional eco-tourism experience, the author claimed that visitors can still gain knowledge about environmentally responsible behaviors while at home doing a “personalized, interactive, real-time tour”. The vividness of the virtual tour influences the sense of presence the tourist feels, as well as, their emotional involvement, flow state, and enjoyment (Wu & Lai, 2021). Furthermore, regarding the usage of modern technologies in natural settings, Clark and Nyaupane, (2022) stated that millennials desire to reduce the number of virtual distractions, in opposition to the touristic experiences providers (Clark et al., 2021). Contrarily, Sánchez et al., (2021) have proven that eco-tourists are willing to use VR apps to protect the ecosystems of the destinations and improve their visits.

Eco-tourism should be a source of positive and memorable experiences for tourists that allow them to be exposed to the “political, environmental, and social climates” of the host country (TIES, 2019) as well as provide them the opportunity to experience the lifestyles of traditional communities living in the area (Eddyono et al., 2021). These experiences, regularly held in remote areas (Eddyono et al., 2021), are considered multidimensional as they should include not only nature-based activities filled with learning opportunities but also the possibility to interact with the touristic site workers as well as include simple and eco-facilities (Brochado & Brochado, 2019).

Moreover, it should generate financial benefits to preserve the area as well as the creation of employment and opportunities for the local community (TIES, 2019; UNWTO, 2002)

2.2 Cultural Tourism

Another type of tourism with a growing trend would be Cultural Tourism (UNWTO, n.d.-c). The main purpose of a cultural tourist is to consume the tangible and intangible cultural attractions of the tourism destination, which might include features related to local cuisine, lifestyles, music, art, history, spiritual and religious beliefs, and cultural heritage (UNWTO, 2017).

Of the most selected destinations to visit, Heritage Tourism Sites are among the top choices (Chung et al., 2018), representing an important reflection of our history and culture (Bruno et al., 2020) and contributing to the general education of visitors (Dieck et al., 2018). Technology can play an important part in this aspect, helping visitors to learn about the “environment, culture, religion, traditions and historical events” (Dieck et al., 2018).

A Cultural Heritage tourism experience allows tourists to interact with “places, artifacts, and activities” that represent the history of that destination, and that can be transmitted either physically or digitally, both onsite and offsite (Bec et al., 2019). Specifically, Heritage Religious Sites are visited in the search for cultural and historical knowledge, but also to fulfill the desire for spiritual and religious experiences (UNWTO, 2016).

Religion-motivated tourism is the oldest form of tourism (Zamani-Farahani & Eid, 2016), attracting several pilgrims or secular tourists to religious sites (Yan & Jia, 2021). This connotation (pilgrims and secular tourists) given to the Religious Sites visitors has been accepted and mentioned by several scholars (Lu et al., 2017).

When referring to Religious Tourism in sacred mountains, (Lu et al., 2017) mentioned the possible presence of Awe emotion among the visitors. The authors stated that for pilgrims, this emotion might arise from the natural surroundings, whereas for others the awe emotion could be inspired by the religious ambiance.

Recent technologies allow visitors to completely emerge in the history and culture of the touristic site (Chung et al., 2018) and can be used to enhance the memorability of the experience, specifically AR technologies (Jiang et al., 2022). When referring to Cultural Heritage museums, AR and VR have a positive impact on the overall perceived quality of the visit to that museum (Trunfio et al., 2022). Han et al., (2021) proved that the aesthetics of the destination when seen through AR, as well as its enjoyability and entertainment, have a positive

influence on the possibility of seeing that destination as an authentic place of experience. Furthermore, the author also stated that Experiential Authenticity positively affects the willingness to support the conservation of cultural heritage.

Qurashi and Sharpley, (2018) have studied the influence of modern technologies on the pilgrims' experience in Religious Tourism. The author stated that these technologies can negatively impact the religious experience, where pilgrims are expected to “focus on worship and the non-material”, however, the author also added that this negative impact depends on the specific motivations of tourists and how they intend to use these technologies.

2.3 Smart Tourism

Technology is always evolving, and its presence in the tourism sector is becoming more evident. Soon, there will be a noticeable change in the technology used in tourism, which is already present in the disruption of traditional business models (Ferrer-Roca et al., 2021). Smart Tourism is the way to answer this sector's new challenges and demands (European Commission, n.d.), by promoting experience enhancement, efficiency, and sustainability (Vecchio et al., 2018).

Even though there is literature stating that touristic sites should provide experiences beyond technology, creating “disconnected spaces” (Neuhofer, 2016), others state that it is particularly difficult for younger generations, being digital natives, to be without technology while traveling (Floros et al., 2021). Over the last decade, tourists have become more independent and skilled, using now new ways of planning, interacting, evaluating, sharing, and recommending (Shiwei Shen et al., 2020). It is wise that the market itself follows this trend in tourist behavior.

Providing tourists the opportunities to have experiences through Smart Tourism Technology might develop “positive and satisfying impressions” about the touristic site (Balakrishnan et al., 2021) and, consequently, increase the tourists' revisit intention (Pai et al., 2020), as well as loyalty and community awareness (López et al., 2018). Furthermore, Smart Tourism Technologies can also make touristic sites more inclusive, by giving all visitors the same opportunities (UNWTO, n.d.; European Commission, n.d.)

Sutcliffe and Hart (2017) stated that the tourist experience can be enhanced with interactive technology, particularly when using devices comprising some of the most recent technologies, like IoT, location-based services, AI, AR, VR, and blockchain technology (Duy et al., 2020; Vecchio et al., 2018).

Virtual reality (VR) is a type of technology that allows users to emerge in a simulated three-dimensional interactive immersive environment (Chen, 2020), providing a better tourist experience (Sánchez et al., 2021). On the other hand, Augmented Reality (AR) mixes real and virtual environments, allowing users to perceive virtual elements overlaid with reality (Loureiro & Nascimento, 2021).

AR can be defined as a type of technology used to generate objects that complement the real world, by coexisting in the same space (Carmigniani et al., 2011; Özkul & Kumlu, 2019; Pagani et al., 2016; Reitmayr & Schmalstieg, 2003).

This technology can enhance audio or visual perception (Edwards-Stewart et al., 2016), as also smell, and touch (Carmigniani et al., 2011), demanding users to become active players in the scene (Bruno et al., 2020).

Furthermore, the consumer experience can be enhanced with the usage of different accessories such as clothes, helmets, glasses, gloves, and shoes (Duy et al., 2020; Özkul & Kumlu, 2019).

AR is becoming more common in heritage tourism-related literature, for example, an AR app used in Cisneros Market Square's cultural heritage and its surroundings (Hincapié et al., 2021), an AR app used in Badaling National Forest Park of the Great Wall, Beijing (Jiang et al., 2022), wearable augmented reality project at an art gallery in the UK (Dieck et al., 2018). The current importance given to the usage of these technologies for experience re-creation in heritage sites (Jiang et al., 2022) is mainly due to the concern of deterioration that heritage sites are exposed to (Capocchi et al., 2019).

Jiang et al. (2022) proved that the touristic experience in heritage sites can be enhanced by AR, also facilitates learning by creating an enjoyable and realistic learning environment (Dieck et al., 2018), and promotes fast interactions in cultural heritage sites (Graziano & Privitera, 2020). Contrarily, Clark et al. (2021) wrote that these types of technology can diminish it, when referring to nature-based tourism. Also, Lindberg et al. (2019) indicated that the intensity of the experience should also vary according to the type of tourist. The author wrote that higher intensities are more suitable for tourists seeking meaning and significance in their experience, whereas tourists that are looking for leisure rather than educational experiences, should be provided with a lower-intensity experience.

In terms of collective action, modern technology allows stakeholders to become closer and helps build new management practices (Bystrowska et al., 2017), allowing resources, processes (UNWTO, n.d.; European Commission, n.d.), and waste to be efficiently managed (Gavrilović & Maksimović, 2018). It is also important to mention that, when implementing these new

technologies on touristic sites, the need of hiring trained and knowledgeable staff will also arise (Gavrilović & Maksimović, 2018).

Smart Tourism Technologies can also be used as a means to achieve tourism sustainability: economically, socially, and environmentally (Balakrishnan et al., 2021; UNWTO, n.d.; European Commission, n.d.). Innovation and sustainable tourism are two linked concepts (Kuščer et al., 2017), meaning that talking about Smart Tourism is also talking about sustainable development of the touristic site and its surroundings, and it should be one of the main priorities (Gavrilović & Maksimović, 2018).

Exposing employees to sustainable practices inside the company also inspires them and increases their sensibility to environmental issues, leading them to compare the company's practices with others in the field (Kuo et al., 2021). Furthermore, the usage of modern technologies can also lead to a positive environmental impact, by innovating the manufacturing process, usage of smart assets, production of ecologically safe, recyclable, and biodegradable products, conservation of cultural and natural assets, minimizing waste, reduction of pollutive emissions, and usage of sustainable transportation options (Camilleri, 2018; Gavrilović & Maksimović, 2018).

Likewise, a Smart Tourist is also expected to have responsible behavior at the tourist sites, share and make suggestions regarding their experience, and influence other tourists to behave responsibly and in a sustainable manner (Shen et al., 2020). Lee and Jan (2018) stated that the learning experience can influence the tourists' intention to engage in these Pro-Environmental Behaviors.

2.4 Conclusions of the SLR

The analyzed articles were further grouped according to their focus. The results are presented in Table 1.

It is noticeable that most articles focus on Smart Tourism, specifically on topics related to "Sustainability, Green Innovations, and Conservation".

Regarding Eco-tourism, themes like "Experience, Vividness, Emotional Involvement, and Enjoyment", "Interpretation and Education" and "Pro-Environmental Behavior" are less studied.

Concerning Cultural Tourism, there is less research available on "Interactivity, Education and Interpretation", "Religious Tourism", and "AWE". Furthermore, "AR, VR, and Innovation" seems to be the biggest trend in this group.

Having this, a gap was identified, since there were no relevant papers that studied both AR and Religious Tourism, focusing on Awe. Religious Tourism has been already identified as an important branch of Cultural Heritage Tourism, and awe was also stated as a significant emotion when experiencing religious tourism.

Main Topics	References
Eco-tourism	
Sustainable Tourism, Conservation	(Brochado & Brochado, 2019; Bystrowska et al., 2017; Eddyono et al., 2021; Fennell, 2021; Go et al., 2020; Hofman et al., 2021; Kuščer et al., 2017; Loureiro & Nascimento, 2021; Sánchez et al., 2021)
Technology, Innovation, VR, AR, Artificial Intelligence	(Clark et al., 2021; Clark & Nyaupane, 2022; Eddyono et al., 2021; Hardy & Aryal, 2020; Hofman et al., 2021; Kuščer et al., 2017; Loureiro & Nascimento, 2021; Sadiq & Adil, 2021; Sánchez et al., 2021; H. Xu & Li, 2021)
Experience, Vividness, Emotional Involvement, Enjoyment	(Brochado & Brochado, 2019; Lin & Lee, 2020; Wu & Lai, 2021)
Interpretation, Education	(Coghlan, 2020; Lindberg et al., 2019)
Pro-Environmental Behavior	(Lee & Jan, 2018; Lin & Lee, 2020; Sultan et al., 2021)
Cultural Tourism	
AR, VR, Innovation	(Bec et al., 2019; Camarero et al., 2019; Chung et al., 2018; Graziano & Privitera, 2020; Han, Dieck, et al., 2019; He et al., 2018; Jiang et al., 2022; Jung et al., 2018; Punzon, 2021; Qurashi & Sharpley, 2018; Trunfio et al., 2022; Tsai, 2020)
Interactivity, Education, Interpretation	(Bae et al., 2020; Liu & Lin, 2021)
Sustainable Tourism, Conservation of the site	(Bec et al., 2019; Han et al., 2021; Lu et al., 2017; Yeniasır & Gökbulut, 2022)
Visitor experience, Authenticity, Satisfaction	(Bec et al., 2019; Camarero et al., 2019; Graziano & Privitera, 2020; Han et al., 2018; Han et al., 2021; He et al., 2018; Jiang et al., 2022; Jin et al., 2020; Trunfio et al., 2022; Tsai, 2020)

Religious Tourism	(Lu et al., 2017; Qurashi & Sharpley, 2018)
Awe	(Lu et al., 2017; Yan & Jia, 2021)
Smart Tourism	
Experience, Satisfaction, Loyalty	(Balakrishnan et al., 2021; Bec et al., 2019; Camarero et al., 2019; Duy et al., 2020; Han et al., 2018; Han, Dieck, et al., 2019; Han et al., 2021; He et al., 2018; Qurashi & Sharpley, 2018; Rezapouraghdam et al., 2021; Shiwei Shen et al., 2020; Trunfio et al., 2022; Tsai, 2020; Wu & Lai, 2021)
AR, VR, AI	(Bec et al., 2019; Chen, 2020; Chung et al., 2018; Dieck et al., 2018; Graziano & Privitera, 2020; Han et al., 2018; Han, Dieck, et al., 2019; Han, Jung, et al., 2019; He et al., 2018; Hofman et al., 2021; Jiang et al., 2022; Jung et al., 2018; Loureiro & Nascimento, 2021; Lu et al., 2021; Sánchez et al., 2021; Trunfio et al., 2022; Tsai, 2020; Van et al., 2020)
Sustainability, Green Innovations, Conservation	(Bystrowska et al., 2017; Fennell, 2021; Foronda-Robles et al., 2020; Gao et al., 2021; Gavrilović & Maksimović, 2018; Go et al., 2020; Gössling, 2017, 2021; Hofman et al., 2021; Ivars-Baidal et al., 2021; Koo et al., 2017; Kuo et al., 2021; Kuščer et al., 2017; López et al., 2018; Loureiro & Nascimento, 2021; Lu et al., 2017; Lu et al., 2021; Martínez-Graña et al., 2017; Pan et al., 2018; Sánchez et al., 2021; Subawa et al., 2021; Sultan et al., 2021; Vecchio et al., 2018; Vizuite et al., 2021; Yeniasır & Gökbulut, 2022)
Pro-Environmental Behavior	(Gao et al., 2021; Pan et al., 2018; Rezapouraghdam et al., 2021; Shen et al., 2020; Sultan et al., 2021)
Education	(Dieck et al., 2018; Liu & Lin, 2021)

Table 1 - SLR Results

Source: Own elaboration

3 | RESEARCH HYPOTHESIS AND CONCEPTUAL FRAMEWORK

3.1 The AWE Experience and AWE-S

Facing awe is one of the most desirable experiences both for tourists and tourism providers (Coghlan et al., 2012). Awe can be experienced under different situations, being central to religion, politics, nature, and art (Keltner & Haidt, 2003), usually linked to feelings like admiration, inspiration, and elevation (Stellar et al., 2017). Shiota et al. (2007) stated that awe is not provoked by an opportunity for a material reward or social interaction, but instead by stimuli rich in information.

Potentially changing a person's life course, experiencing awe can cause confusion, amazement (Keltner & Haidt, 2003), wonder, fear, curiosity (Yaden et al., 2016), intense pleasure, surprise, connectedness, and vastness (Elk et al., 2016).

When talking about the relationship between people and gods, awe tends to stand out, leading people to “embrace new values, commands, and missions” (Keltner & Haidt, 2003). Other scholars have pointed out awe as a central part of the religious experience (Lomax et al., 2011; Lu et al., 2017; Preston & Shin, 2017; Underwood & Teresi, 2002; Van Cappellen & Saroglou, 2012; Yaden et al., 2019).

The Awe Experience Scale (AWE-S) was developed by Yaden et al. (2019), allowing researchers to measure the awe experience by analyzing six different facets of awe. Being a multi-factorial scale, the AWE-S allows researchers to analyze the impact of each dimension on the following outcomes (Yaden et al., 2019). Each factor is explained below:

- *Vastness*, both in a perceptual (looking at something big) and conceptual sense (e.g., contemplating eternity) (Yaden et al., 2016). Vastness is felt when one experiences something much larger than the self or their normal experience (Keltner & Haidt, 2003; Shiota et al., 2007). It is described as a “powerful force of an emotional stimulus” that may change an individual’s willpower (Lu et al., 2017)
- *Need for accommodation*, meaning the need to change the “existing mental schemas to mentally process and integrate an experience” (Yaden et al., 2019). It happens when the individual isn’t capable of mentally processing (Lu et al., 2017), or even denies, what they are experiencing (Keltner & Haidt, 2003), creating a need for accommodation, but also facilitating the attempts at accommodation, making “awe-prone people” more comfortable with changing their mental representations of the world (Shiota et al., 2007).

- *Time*, in the sense that experiencing awe often leads to the alteration of time perception (Yaden et al., 2019);
- *Self-diminishment*, meaning the feeling of becoming smaller or reduced (Yaden et al., 2019). Experiencing awe, lead people to feel that their body size is smaller than in reality (Elk et al., 2016), showing a change in the focus toward bigger objects/bodies (Piff et al., 2015) and de-emphasizing the individual self (Shiota et al., 2007).
- *Connectedness* to everyone (Yaden et al., 2017) and their surroundings (Shiota et al., 2007). Awe links people together creating more unified groups (Stellar et al., 2017), but can also connect people to culture, humanity, religion, or even to everything (Yaden et al., 2019).
- *Physical sensations*. Awe is known for causing a change in facial expressions, such as widened eyes, raised eyebrows, and slightly drop-jawed (Keltner & Haidt, 2003; Shiota et al., 2003), as well as other physical changes, like goosebumps or chills (Algoe & Haidt, 2009).

3.2 Cognitions

Concerning the cognitive effect of eliciting awe in a touristic activity, one commonly studied outcome is the perception of authenticity regarding the experience and its ambiance.

Gursoy et al., (2022) stated that tourists that experienced awe also felt “heritage feelings” such as the appreciation of history, architecture, heritage, art, and cultural events. A Cultural Heritage tourist (e.g., Heritage Religious Tourist) desires to embrace the culture and values of that destination and have an experience beyond what is typically seen as a touristic experience (Cetin & Bilgihan, 2016), making their stay as authentic as possible. According to Belhassen et al. (2008), the toured objects and all the construction around the touristic experience, cannot be separated from the experience itself, since one of the key attributes that affect the tourist perception of their experience is authenticity or the presence of authentic clues, as proven by (Cetin & Bilgihan, 2016; Gursoy et al., 2022; Jin et al., 2020; Seyfi et al., 2020).

Jin et al. (2020) defined three types of authenticity: Original Authenticity, which represents the need of the tourist to be in the presence of the artifacts and objects displayed; Interactive Authenticity which is about the feelings the tourist has when exposed to staged authenticity, typically performed through recent technologies; and Emotional Authenticity that refers to the

emotions that arise from being exposed to the site, both through the comparison of their own life experience with what is being presented and through the appreciation of the local lifestyle.

Another approach to the definition of authenticity would be the one from Wang (1999) that divided it into two concepts: object-based authenticity and existential authenticity. Kolar and Zabkar (2010) defined object-based authenticity as the desire to visit the original sites or artifacts. On the other hand, when it is not possible to experience the true original artifacts or sites, tourists can still seek a different type of authenticity (existential authenticity) (Wang, 1999). Existential authenticity is the need to get connected with their true selves and escape everyday life and mass tourism (Kolar & Zabkar, 2010). It is not about whether an object is real, but instead about the search for an “existential state of Being” that is initiated due to a specific touristic activity (Wang, 1999).

This last approach from Wang (1999) was chosen for further analysis. Based on the above, the following hypotheses are proposed:

H1: The Awe Experience has a significant positive effect on the tourist's Object-based Authenticity Perception.

H2: The Awe Experience has a significant positive effect on the tourist's Existential Authenticity Perception.

3.3 Emotions

As mentioned previously in this paper, many scholars have described the different emotions that might arise from the awe experience: submission (regarding something more powerful), confusion, surprise, wonder (Keltner & Haidt, 2003), amazement (Piff et al., 2015), admiration, inspiration (Stellar et al., 2017), and connectedness (Yaden et al., 2017).

Overall, awe is often characterized as an experience that is related to positive emotions (Shiota et al., 2007; Stellar et al., 2017) and that increases tourists' satisfaction (Lu et al., 2017), however, it might also lead to negative emotions, when people feel “small, powerless and confused”, or if they feel the need for accommodation (Keltner & Haidt, 2003). In this study, a focus will be given to positive emotions as a derivative of awe. Contrarily, it will be hypothesized that negative emotions have a negative relation with awe.

H3: The Awe Experience has a significant positive effect on the tourist's Positive Emotions.

H4: The Awe Experience has a significant negative effect on the tourist's Negative Emotions.

3.4 Loyalty

In marketing, loyalty can be defined as “a customer’s willingness to continue patronizing a firm over the long term, purchasing and using its goods and services on a repeated and preferably exclusive basis, and voluntarily recommending the firm’s products to friends and associates” (Lovelock, 2001, p. 151). As in most businesses, it is fundamental for business owners to retain clients by making sure they wish to consume the sold product or service again. The tourism industry is no exception, being important for any touristic activity promoter, to induce the possibility of returning to that destination as an option for tourists’ future trips.

As mentioned by Zhang et al., (2018) the delivery of Memorable Tourism Experiences, increase the probability of Revisit Intention of tourists. Two Memorable Tourism Experience components are the tourist’s cognitive evaluation and the affective factors (Kim et al., 2012).

Another study on Memorable Tourism Experiences by Lu et al. (2022) also proved the positive influence that these have on Revisit Intention. The authors focused on nostalgia, and how this feeling can lead to emotion such as “gratitude, joy, comfort, innocence and warmth” when thinking about returning to a specific destination (Lu et al., 2022). Specifically to Religious Tourism, Cifci (2022), has stated that a Memorable experience influences overall satisfaction and the intention to return to that destination. Furthermore, Stanovic et al. (2021) studied the impact of cultural touristic experiences on revisit Intention, concluding that the social and sensory dimensions are the ones that most influence this behavior

In heritage tourism (e.g., Religious Tourism) authenticity is central to the tourist experience (Yeoman et al., 2007; Zhou et al., 2022) and, can positively affect the tourist’s Revisit Intention (Kolar & Zabkar, 2010; Zhou et al., 2022), specifically when referring to existential authenticity (Shen et al., 2014).

H5: Tourists’ Object-based Authenticity Perception has a significant positive effect on their Revisit Intention.

H6: Tourists’ Existential Authenticity Perception has a significant positive effect on their Revisit Intention.

H7: Tourists’ Positive Emotions have a significant positive effect on their Revisit Intention.

H8: Tourists' Negative Emotions have a significant negative effect on their Revisit Intention.

Besides Revisit Intention, Recommendation Intention is also studied as a possible future behavior of tourists. Regarding brand authenticity, Chen et al. (2020) stated that it has a direct impact on the tourist's recommendation intention.

Kim (2018) stated that Memorable Touristic Experiences affect tourists' loyalty (Recommendation and Revisit Intentions). Accordingly, Lu et al. (2021), and Altunel and Erkurt (2015) have also proven that the tourist experience affects recommendation and revisit intentions.

H9: Tourists' Object-based Authenticity Perception has a significant positive effect on their Recommendation Intention.

H10: Tourists' Existential Authenticity Perception has a significant positive effect on their Recommendation Intention.

H11: Tourists' Positive Emotions have a significant positive effect on their Recommendation Intention.

H12: Tourists' Negative Emotions have a significant negative effect on their Recommendation Intention.

3.5 The conceptual Framework

Figure 2 represents the conceptual Framework developed on *IBM SPSS Amos 28 Graphics* based on the hypothesis presented in the previous sub-chapters.

This model shows the relation between the independent variable Awe and the variables Object-based Authenticity (OA), Existential Authenticity (EA), Positive Emotions (PE), and Negative Emotions (NE). Furthermore, Revisit Intention (REV) and Recommendation Intention (REC) are also presented, as well as their influencing variables.

On each path, the corresponding hypothesis name is stated for further comprehension.

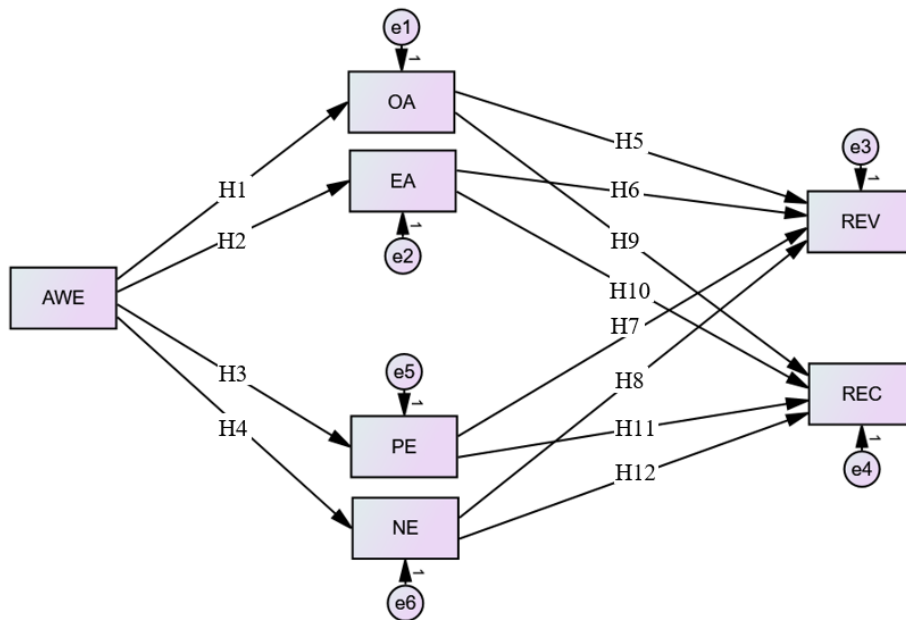


Figure 2 - Conceptual Framework

Source: Own elaboration based on SPSS AMOS outputs

3.6 Augmented Reality

Assuming that the AR experience can be a promoter of a memorable experience for tourists when it works seamlessly, avoiding tourists' disappointment (Graziano & Privitera, 2020), it is hypothesized that the relation presented previously could be amplified for the religious tourists that were exposed to the AR technology. This means that, if an AR religious experience can be made in a flawless way that allows tourists to have a better religious experience, it might imply that tourists experience stronger sensations they would in physical reality.

4 | METHODOLOGY

4.1 The Touristic Destination

The data collection was made in Fátima, Portugal.

Fátima is one of the top destination choices in Portugal for religious tourism. It became known when three shepherd children in 1917 said they saw an apparition of the Virgin Mary (or Our Lady of Fátima), one of the most important figures in Christianity.

A Shrine was built close to the site of the apparitions where about 6,3 million visitors come each year. This value is from 2019, the last year before the pandemic (Santuário de Fátima, 2020).

The data was collected using a survey distributed to visitors at two different sites. The first group was visiting the Shrine. This group represents the typical religious tourism experience, where tourists visit a sacred place. The second group was approached in the Interactive Museum “O Milagre de Fátima”.

The Interactive Museum, located in the center of Fátima, is an innovative museum where visitors are invited to experience the apparitions of Fátima as told by the shepherd children, through AR-technology, as well as other history-related matters of Fátima. This museum offers a seamless experience where visitors can feel what it was to see the apparitions and miracles said to happen in Fátima (visitPortugal, 2013). The experience stimulates the different senses of the visitors, such as eyesight, hearing, touch, and smell.

4.2 Research Design

A research design is an approach through which a researcher answers their research question (McCombes, 2021).

In this paper, Primary Data, that is, data that is directly collected by the researcher was used to access the validity of the proposed hypothesis. This quantitative data was gathered through the development of an Online Survey that was presented directly to tourists through a QR-code. Quantitative data allows researchers to find a mathematical illustration of empirical events (Borgstede & Scholz, 2021).

4.2.1 Sample

As to answer the research questions, a target population was defined: Portuguese and International tourists visiting Fátima. A sample, an observed subset of the population values, was then chosen through a convenience sampling procedure, a nonprobability form of sampling, where the researcher approaches the participants that later self-select if they wish to participate in the study (Stratton, 2021). This sample was composed of two groups: tourists that used AR technology, and tourists that did not use this technology.

The tourists were individually informed about the goal of the survey and asked to be honest in their responses. A total of 157 answers were obtained, 71 from tourists that were exposed to the AR technology, and 86 from tourists that weren't.

4.2.2 Survey

When conducting a survey, the research should foresee what information will be useful to conduct the research (Newbold, 1995). Taking this into account, the survey questions were chosen so that all the analyzed constructs were well represented.

An Online Survey (see Appendix F) was developed through the online platform *Qualtrics* and was available in Portuguese and English. The survey started with a small explanation of its intentions, which completed the oral information given to respondents. It was composed of 4 sections regarding the analyzed constructs: “AWE”, “Cognitions”, “Emotions”, and “Loyalty”; and one last section regarding the personal information of respondents, “Tourist Information/ Demographics”. Even though this section did not contain any sensitive questions, such as the respondent's income, it was intentionally placed at the end of the survey to avoid a possible confrontation regarding personal information at the beginning of the questionnaire.

The scales used to gather the information in the questionnaire are stated in Table 2Table 2. The questionnaire was first translated into Portuguese by the researcher and then retranslated to English by a second party. This method intended to assure that the translations were coherent. Posteriorly, the translation was also revised by a certified English teacher. Finally, the questionnaire was subject to a pre-test by a group of 6 people that spoke both Portuguese and English. The pre-test was made to assure that the introduction given to the respondents was sufficient and to ensure that the content of each item was clear and representative of the desired outcome.

The first section was dedicated to the Awe Construct. The goal of this section was to analyze the impact that the tourist experience had on tourists. This scale was composed of 30 questions, 5 for each of the 6 dimensions of Awe (Time, Self-Loss, Connectedness, Vastness, Physiological, and Accommodation).

The second section focused on Cognitions and was composed of 5 questions. These items were related to the authenticity perceived by the tourists regarding objects (architecture and peculiarities of the destination Monuments) and regarding existential matters, such as history, culture, and religiosity. Object-based Authenticity was measured with the first two items, as per the option of the author (Kolar & Zabkar, 2010), followed by 3 more items dedicated to Existential Authenticity.

The next section was comprised of 17 questions and intended to access which emotions were felt by the respondents, being the first 7 about the Positive Emotions Construct, and the last 10 about Negative Emotions.

The fourth Section was dedicated to Loyalty to the studied destination. It included 3 questions that accessed the possible revisit intention of respondents, followed by 3 more questions whose goal was to comprehend if the tourists intended to recommend the destination to their friends and family.

The survey was presented to tourists in two different locations: the Fátima's Shrine, where one could find tourists that did not use the AR technology, and the Interactive Museum "O Milagre de Fátima", after the tourists' visit and exposure to AR. The data collection started on June 2nd and ended on September 30th, leading to a total of 158 answers, all considered valid.

Section	Construct (s)	Scale	Authors
Awe	Awe	7-point Likert scale (Strongly Disagree – Strongly Agree)	(Yaden et al., 2019)
Cognitions	Object-based Authenticity		(Kolar & Zabkar, 2010)
	Existential Authenticity		
Emotions	Positive Emotions Negative Emotions		(Perugini & Bagozzi, 2001)
Loyalty	Revisit Intention		(Zhang et al., 2018)
	Recommendation Intention		(Olya, 2019)

Table 2 - Scales used in the Survey

Source: Own elaboration

5 | RESULTS AND DISCUSSION

The data was collected for analysis through the online survey platform *Qualtrics* and was then imported to *IBM SPSS Statistics 28* and then to *IBM SPSS Amos 28 Graphics* where the needed outputs for analysis were extracted.

5.1 Sample Characterization

The sample was composed of 158 people that were divided into two groups: the ones that experienced AR and the ones that didn't (see Appendix A).

The following graphics intend to characterize the sample and present the differences between these two groups.

As presented in Figure 3, 40.8% of people that were exposed to AR technology were visiting Fátima for the first time, and 59.2% had already visited this destination. Regarding the respondents that were not exposed to AR, the majority (63.2%) were visiting the shrine for the first time. This contrast might show that people that had already visited the destination before the data collection, wanted to experience something different, such as the AR immersion in the museum.

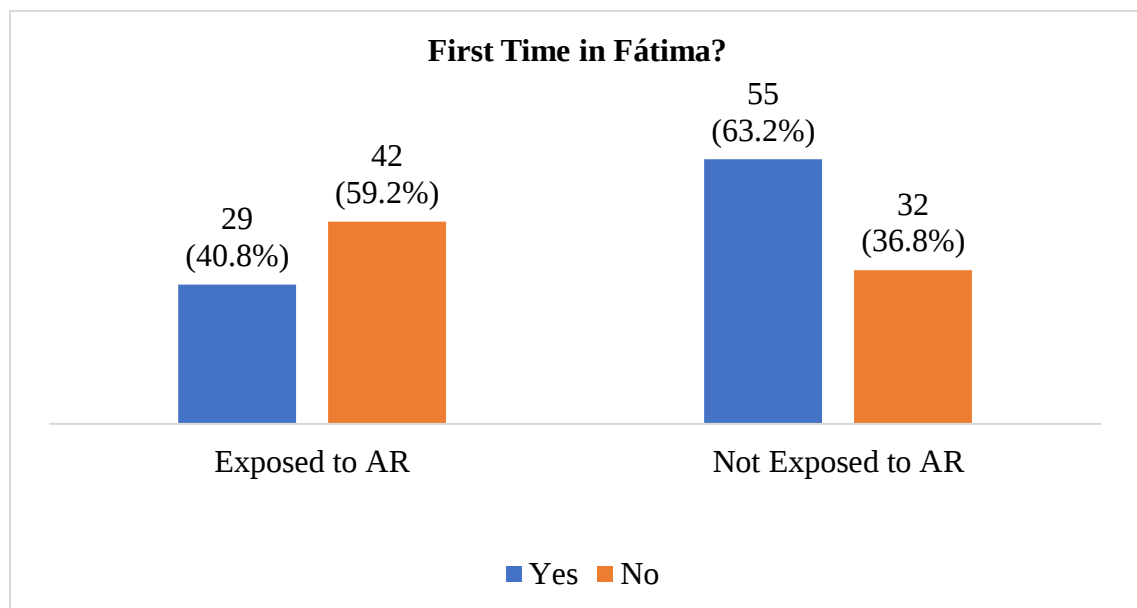


Figure 3 - Sample: First time in Fátima?

Source: Own elaboration

Concerning the type of visit experienced by the tourists analyzed in Figure 4, it is interesting to realize that about half of the inquiries from both groups came from their relatives. About 20% came alone and about 30% came in an organized touristic group, both from the ones exposed and non-exposed to AR.

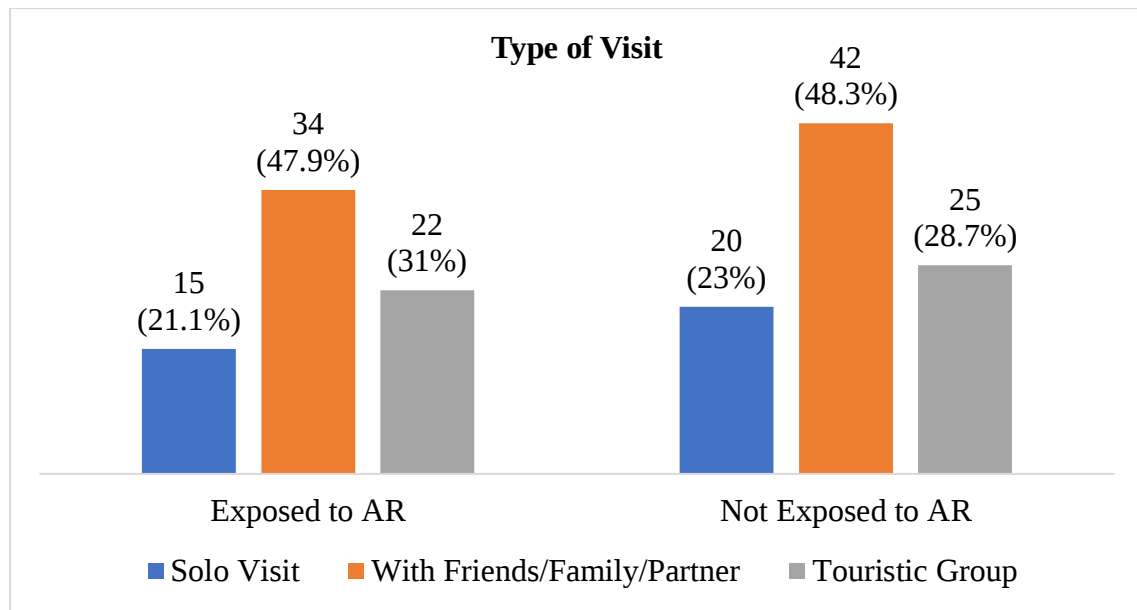


Figure 4 - Sample: Type of Visit

Source: Own elaboration

Focusing on the age groups (see Figure 5), younger people, with ages lower than 45, were the ones that chose to participate in the immersive experience of AR, representing a total of about 80.3% of the inquiries. Contrarily, the same age group only represents 37.9% of respondents that were not exposed to AR. In this group, more than half of the inquiries were between 46 and 65 years old.

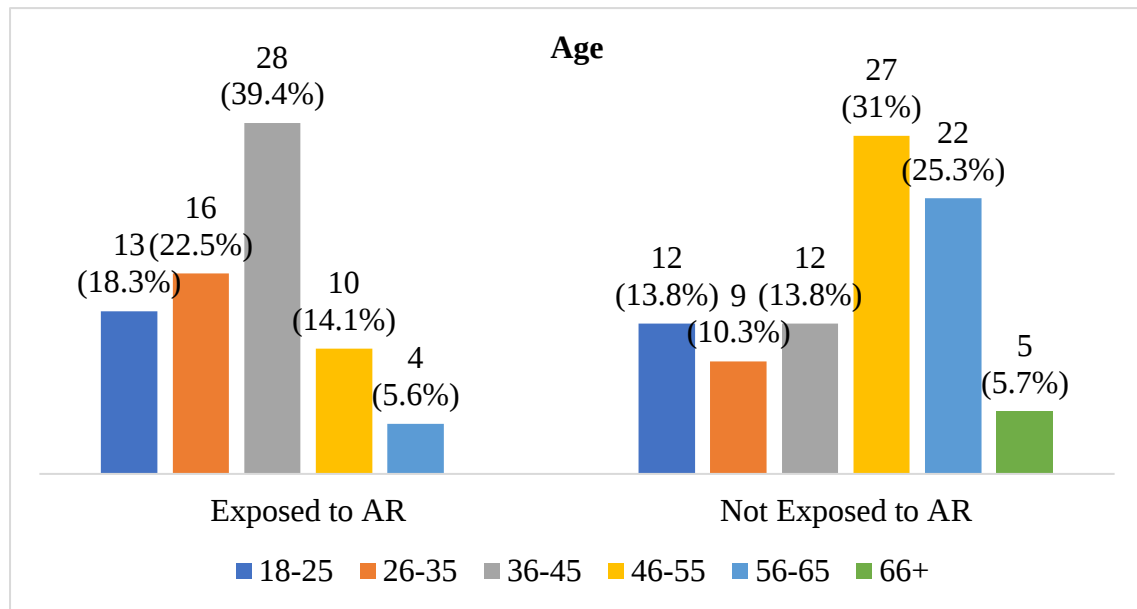


Figure 5 - Sample: Age

Source: Own elaboration

Regarding the gender (see Figure 6) of people that visited the AR museum, it is quite balanced between male and female inquiries. However, concerning respondents that were not exposed to AR, 41.4% were men, and 58.6% were women.

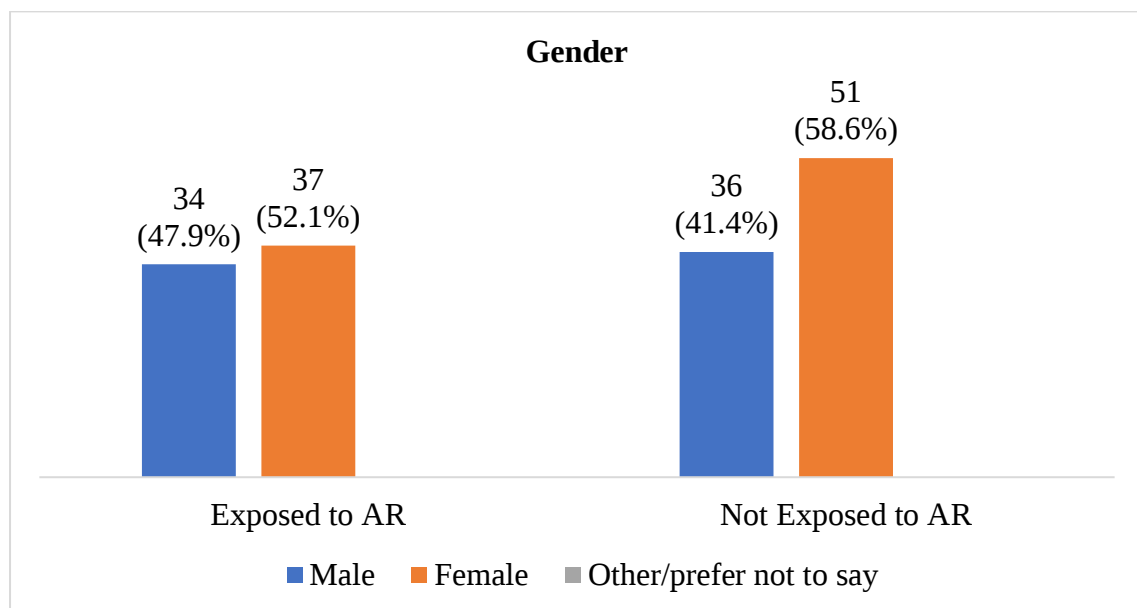


Figure 6 - Sample: Gender

Source: Own elaboration

Analyzing the nationality (see Figure 7) of the people that answered the survey, it was asked to specify what was their nationality. They were then divided between national and international tourists. It is noticeable that mostly Portuguese tourists were approached. This difference is higher among the visitors that were not exposed to AR, where 69% were Portuguese, and regarding the ones that experienced AR, Portuguese visitors represented 56.3% of respondents.

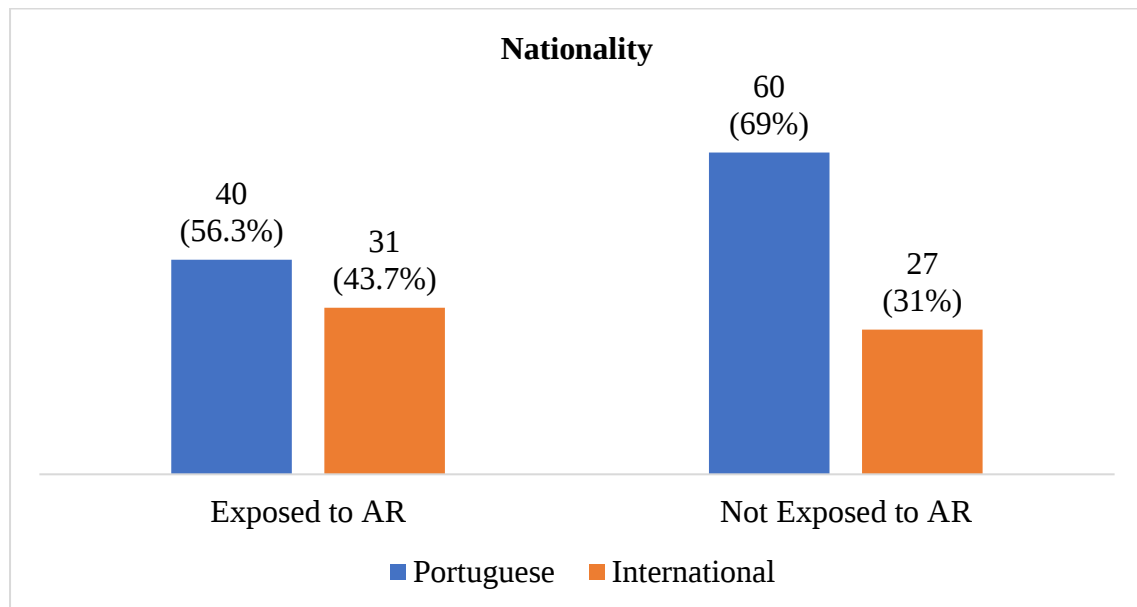


Figure 7 - Sample: Nationality

Source: Own elaboration

Concerning the educational background (see Figure 8) of the group that chose to do the AR experiment, one could say that people with higher education are the ones more open to engaging in these experiences since more than 70% had completed at least a bachelor's degree. Contrarily, about 50% of respondents that were not exposed to AR had completed high school or less.

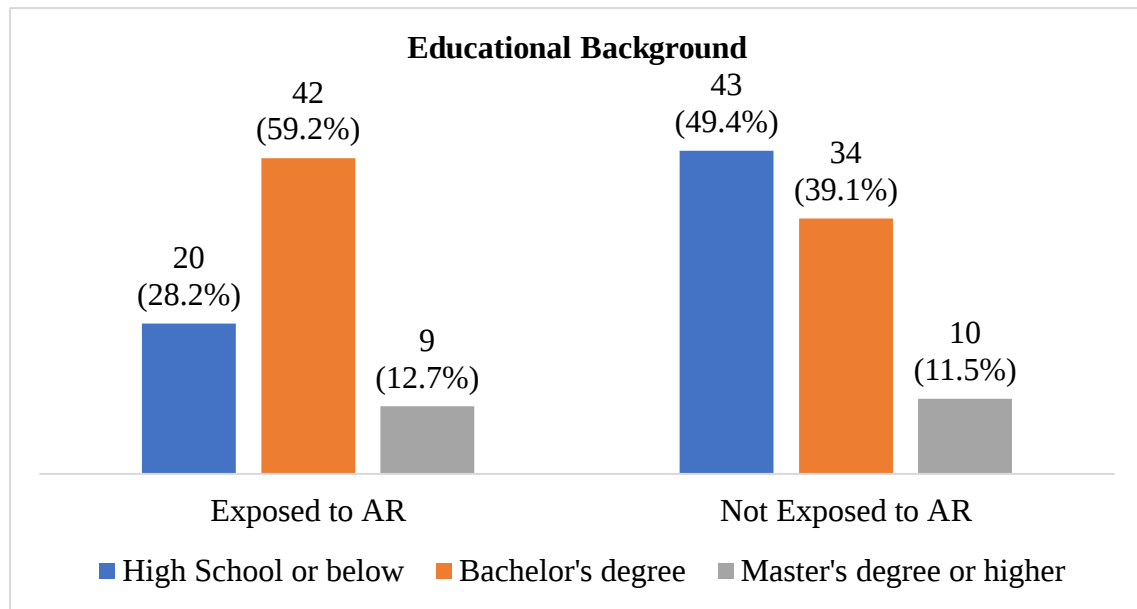


Figure 8 - Sample: Educational Background

Source: Own elaboration

5.2 Assessing the Measurement Model Validity

A Structural Equations Model (SEM) is estimated to show the relationships between variables and constructs that are represented by the measurement model (Hair et al., 2014). To assess construct validity, convergent and discriminant validities were examined.

5.2.1 Convergent Validity

As suggested by Wright et al. (2012) the constructs with several dimensions should first be analyzed as unidimensional constructs. Secondly, the superordinate construct should be seen as a second-order factor and each dimension as a first-order factor. A comparison of both good-of-fit analyses should be done to determine if the dimensions should be accounted for. In this paper's model, one construct presented multiple dimensions: AWE (Time, Self-loss, Connectedness, Vastness, Physiological, and Accommodation).

Starting by analyzing all the items of AWE as if it was a unidimensional model (see Appendix B), resulting in the following results: $\chi^2 = 3269.077$, d.f. = 377; $\chi^2/\text{d.f.} = 8.671$; CFI = 0.579; RMSEA = 0.221. The analysis was repeated, now treating each dimension as a first-order variable, resulting in the following results $\chi^2 = 1844.716$, d.f. = 390; $\chi^2/\text{d.f.} = 4.730$; CFI

= 0.795; RMSEA = 0.154. The chi-square value has decreased in the second analysis, the chi-square/degrees of freedom ratio as also decreased, the CFI has increased and the RMSEA has decreased, proving that a multidimensional model with 6 freely correlated first-order factors is better than a unidimensional first-order factor model.

To ensure construct validity, Hair et al. (2014) state that the factor loadings should be at least 0.5, and ideally 0.7. Furthermore, the authors state that the Average Variance Extracted (AVE) should be equal to or higher than 50%. Moreover, Reliability is also a way to indicate convergent validity (Hair et al., 2014). Internal Consistency Reliability is assured by accessing Cronbach's alpha, where the value expected should be greater than 0.7 (Bagozzi & Yi, 2012), also, to assure good reliability, the Composite Reliability values should be over the threshold of 0.7 (Hair et al., 2014),

Convergent Validity was accessed for the second-order construct AWE (see Appendix C). All the loadings were above the 0.7 threshold and the AVE was over 50%. Furthermore, the Composite Reliability was also above its threshold, 0.7, as well as the 0.7 minimum of Cronbach's alpha. This suggests that there is convergent Validity within the Dimensions of AWE.

Table 3 shows the Convergent Consistency and Reliability analysis for each construct.

Concerning the constructs representing Cognitions, the following value was first obtained: 1.060 corresponding to the link between OA_2 and Object-based authenticity. This value was above 1, which could be solved with the elimination of the offending item, however, since this variable only has two indicators, tau-equivalence was assumed, meaning that both loadings were assumed to have the same values (Hair et al., 2014). Another issue was presented, with the value of EA_2, that didn't follow within the threshold, being, therefore, eliminated. All the other items showed convergent validity and reliability.

The loadings for Positive and Negative Emotions were analyzed afterward. Some of the items showed standardized loadings under 0.5 or close to this value. To guarantee the 0.7 ideal threshold of Hair et al. (2014), all the items with loadings under rounded 0.7 were eliminated. NE_2 showed a value for the standardized loading under 0.7 on the second analysis, however, since it is above 0.5, it was not eliminated. Overall, the items show convergent validity. Regarding Cronbach's alpha and Composite Reliability, all the values for the Emotions Constructs were above 0.7.

As for Revisit Intention, REV_3 was eliminated. All the other items were within the established limits for Convergent Validity. The construct also showed good reliability.

Regarding Recommendation Intention, the loadings were also computed, showing values over 0.7 for AVE, and loadings of at least 0.7 which means convergent validity. Good Reliability was also proven.

Construct	Item	Convergent Validity		Reliability	
		Loadings	AVE	Composite Reliability	Cronbach's Alpha
AWE	T	0.761	68.20%	0.927	0.931
	SL	0.809			
	C	0.943			
	V	0.947			
	Ph	0.715			
	A	0.749			
Object-based Authenticity (OA)	OA_1	0.907	75.33%	0.859	0.856
	OA_2	0.827			
Existential Authenticity (EA)	EA_1	0.9	77.05%	0.870	0.861
	EA_2	eliminated			
	EA_3	0.855			
Positive Emotions (PE)	PE_1	eliminated	70.19%	0.904	0.892
	PE_2	0.907			
	PE_3	0.778			
	PE_4	eliminated			
	PE_5	eliminated			
	PE_6	0.842			
	PE_7	0.819			
Negative Emotions (NE)	NE_1	0.752	61.51%	0.864	0.862
	NE_2	0.682			
	NE_3	eliminated			
	NE_4	0.835			
	NE_5	eliminated			
	NE_6	eliminated			
	NE_7	eliminated			
	NE_8	eliminated			
	NE_9	0.856			
	NE_10	eliminated			
Revisit Intention (REV)	REV_1	0.877	87.07%	0.931	0.924
	REV_2	0.986			
	REV_3	eliminated			
Recommendation Intention (REC)	REC_1	0.925	87.30%	0.954	0.953
	REC_2	0.934			
	REC_3	0.944			
	PPEB_2	0.934			
	PPEB_3	0.798			

Table 3 - Convergent Validity and Internal Consistency analysis of the constructs

Source: Own elaboration based on SPSS AMOS outputs

5.2.2 Discriminant Validity

A Discriminant Validity analysis intends to show that a construct represents a phenomenon that others don't, being unique and different from other constructs.

5.2.3 Fornell-Larcker criterion

To assess discriminant validity through the Fornell-Larcker Criterion, one should compare the AVE estimates and the squared inter-construct correlations. Discriminant Validity is suggested when the AVE estimates are higher than the correlations between constructs (Hair et al., 2014).

As for Convergent Validity, the dimensions of AWE were first analyzed (see Appendix D). Discriminant validity within the dimensions was achieved.

Table 4 shows the inter-construct squared correlations, as well as the AVE for each construct. It is noticeable that the Constructs AWE and PE do not show Discriminant Validity, the AVE for AWE (and for PE) is higher than the squared Correlations between these two constructs. However, further analysis was made using the HTMT Ratio, as shown in the next subchapter.

For the remaining constructs, all the inter-constructs squared correlations are lower than the construct's AVE, which shows Discriminant Validity.

	AWE	OA	EA	REV	REC	PE	NE
AWE	0.682						
OA	0.567	0.859					
EA	0.343	0.046	0.771				
REV	0.599	0.229	0.736	0.871			
REC	0.637	0.309	0.637	0.805	0.873		
PE	0.767	0.615	0.094	0.389	0.444	0.702	
NE	0.564	0.261	0.200	0.350	0.476	0.521	0.615

Table 4 - Squared Inter-construct Correlations and AVE

Source: Own elaboration based on SPSS AMOS outputs

5.2.4 The Heterotrait - Monotrait (HTMT) Ratio of the Correlations

The Fornell-Larcker Criterion has been proved to have an “unacceptably low sensitivity” when used to assess Discriminant Validity (Henseler et al., 2015). Henseler et al. (2015) proposed the HTMT Ratio, which is the average of the correlation between the items of different constructs, relative to the correlation of items from the same construct and proved it to be superior to the Fornell-Larcker Criterion.

The dimensions of AWE were analyzed first (see Appendix E). Table 5 presents the HTMT Ratios for all the constructs. Discriminant Validity is achieved when the HTMT Ratio is lower than 0,9 (Gold et al., 2001; Henseler et al., 2015), which is the case for this analysis. Even though some of the items show values close to the threshold, Discriminant Validity was proven.

	AWE	NE	REC	REV	PE	EA	OA
AWE							
NE	-0,753						
REC	0,799	-0,691					
REV	0,777	-0,594	0,899				
PE	0,878	-0,724	0,667	0,625			
EA	0,588	-0,448	0,799	0,860	0,306		
OA	0,755	-0,512	0,557	0,481	0,785	0,215	

Table 5 - HTMT Ratios for all the constructs

Source: Own elaboration based on SPSS AMOS outputs

5.3 The Structural Model

After assessing the Constructs' Validity and Reliability, it is now presented the analysis of the Structural Model, where the structural relationships between constructs are examined. These structural relationships between constructs are represented by path estimates, a single pointed arrow that suggests that a construct influences another construct (Hair et al., 2014).

A Structural model includes Exogenous and Endogenous Constructs. An Exogenous Construct is the equivalent of an independent variable, meaning that it is not being influenced by other constructs in the model (Hair et al., 2014). Visually, it is easy to identify an Exogenous Construct, since it does not have any arrow pointed directly at it.

On the other hand, an Endogenous Construct would be the equivalent of a dependent variable, that is being influenced by an Exogenous Construct or by another Endogenous Construct (Hair et al., 2014). This influence is represented by an arrow pointing to the Endogenous Construct.

In this dissertation structural model, the AWE Construct is the Exogenous Construct, and the other Constructs are Endogenous. This model is considered to be a recursive model since no Construct influences and is simultaneously being influenced by another Construct (Hair et al., 2014).

5.3.1 Hypothesis Testing for the whole sample

Twelve hypotheses were formulated and, after being analyzed, were either accepted or rejected (see Table 6).

Starting with the hypothesis regarding the exogenous construct, AWE, results show that AWE has a positive influence on the Object-based Authenticity Perception (OA) of tourists ($\beta = 0.791$; C.R. = 16.202; $p < 0.001$), on Existential Authenticity Perception (EA) ($\beta = 0.615$; C.R. = 9.761; $p < 0.001$), and on Positive Emotions (PE) ($\beta = 0.899$; C.R. = 25.732; $p < 0.001$). The H1, H2, and H3 hypotheses were then accepted. AWE was shown a significant negative effect on predicting Negative Emotions (NE) ($\beta = -0.802$; C.R. = -16.816; $p < 0.001$). H4 was supported.

Focusing now on the predictors of Revisit Intention (REV). EA appears to have a significant positive effect on REV ($\beta = 0.734$; C.R. = 29.691; $p < 0.001$), as well as PE ($\beta = 0.408$; C.R. = 11.987; $p < 0.001$), meaning that H6 and H7 were accepted. OA has no significant effect on REV, with ($\beta = -0.009$; C.R. = -0.303; $p = 0.762$). H5 was rejected. Regarding NE, it was hypothesized that it would have a negative significance on REV, but it was not the case ($\beta = 0.074$; C.R. = 2.426; $p = 0.015$), H8, was, thus, rejected.

Regarding the predictors of Recommendation Intention (REC), the results show that OA has a positive significant effect on it ($\beta = 0.207$; C.R. = 5.967; $p < 0.001$), also EA ($\beta = 0.635$; C.R. = 22.12; $p < 0.001$), meaning H9 and H10 were supported. NE has a negative significant effect on REC ($\beta = -0.207$; C.R. = -5.883; $p < 0.001$). H12 was also supported. H11 was rejected since PE has a nonsignificant effect on REC ($\beta = 0.062$; C.R. = 1.572; $p = 0.116$).

Direct Effect	Estimate	Standard Error	Critical Ratio	P value	Test Results
AWE → OA	0,791	0,044	16,202	<0,001	H1: Supported
AWE → EA	0,615	0,068	9,761	<0,001	H2: Supported
AWE → PE	0,899	0,038	25,732	<0,001	H3: Supported
AWE → NE	-0,802	0,027	-16,816	<0,001	H4: Supported
OA → REV	-0,009	0,035	-0,303	0,762	H5 Not Supported
EA → REV	0,734	0,024	29,691	<0,001	H6: Supported
PE → REV	0,408	0,032	11,987	<0,001	H7: Supported
NE → REV	0,074	0,055	2,426	0,015	H8: Not Supported
OA → REC	0,207	0,039	5,967	<0,001	H9: Supported
EA → REC	0,635	0,027	22,12	<0,001	H10: Supported
PE → REC	0,062	0,037	1,572	0,116	H11: Not Supported
NE → REC	-0,207	0,063	-5,883	<0,001	H12: Supported

Table 6 - Hypotheses results for the entire sample

Source: Own elaboration based on SPSS AMOS outputs

5.3.2 R-square and Model Fit

R-square is used to determine the percentage of the total variance of an endogenous construct that is explained by the regression model (Hair et al., 2014). A high percentage means that a large amount of variance of the target variable is being explained by the model.

As presented in Table 7, 93.6% of Fátima's Revisit Intention and 90.6% of tourists' Recommendation Intention of this tourist destination can be explained by this model. Regarding the Tourists' Cognitions, 62.6% of the Object-based Authenticity is explained by this model, whereas for Existential Authenticity only 37.8% is explained. Furthermore, the Emotions Constructs also present a high percentage of variance explained, having 64.3% for Negative emotions and 80.8% for Positive Emotions.

To access the validity of the Structural Model, the chi-square value, as well as at least one absolute (e.g. SRMR) and one incremental (e.g. CFI) index should be presented (Hair et al., 2014). To achieve a good model fit, the SRMR, that is, the average standardized residual should be lower than 0.08, and the CFI (Comparative Fit Index) should be close to 0.95 (Hu & Bentler, 1999), which is the case of the obtained results, showing the good fit of the model.

	<i>R</i>²
NE	0.643
PE	0.808
EA	0.378
OA	0.626
REC	0.906
REV	0.936
Model Fit	
X ²	102.473
SRMR	0.0599
CFI	0.938

Table 7 - R-square and Model Fit Indexes

Source: Own elaboration based on SPSS AMOS outputs

5.3.3 Hypothesis Testing for AR exposed tourists

In this section, the hypotheses concerning the tourists that were exposed to AR technology were analyzed (see Table 8).

Regarding AWE, it was proven that AWE has a positive influence on OA ($\beta = 0,635$; C.R. = 6,873; $p < 0,001$), on EA ($\beta = 0,764$; C.R. = 9,913; $p < 0,001$), and PE ($\beta = 0,891$; C.R. = 16,456; $p < 0,001$). The H1, H2, and H3 hypotheses were then accepted. AWE has a significant negative effect on predicting NE ($\beta = -0,619$; C.R. = -6,592; $p < 0,001$). H4 was also supported.

Analyzing REV, EA has a significant positive effect on it ($\beta = 0,732$; C.R. = 13,95; $p < 0,001$), as well as PE ($\beta = 0,293$; C.R. = 5,063; $p < 0,001$), meaning that H6 and H7 were accepted. OA has a nonsignificant effect on REV, with ($\beta = 0,017$; C.R. = 0,363; $p = 0,717$). H5 was rejected. Regarding NE, H8 was rejected since it was hypothesized that it would have a negative impact on REV ($\beta = 0,029$; C.R. = 0,631; $p = 0,528$).

Focusing on REC, the results show that OA has a positive significant effect on this construct ($\beta = 0,223$; C.R. = 3,924; $p < 0,001$), also EA ($\beta = 0,657$; C.R. = 10,217; $p < 0,001$), meaning H9 and H10 were accepted. NE has a negative significant effect on REC ($\beta = -0,174$; C.R. = -3,101; $p < 0,001$). H12 was also supported. H11a was not supported since PE has a nonsignificant effect on REC ($\beta = 0,043$; C.R. = 604; $p = 0,546$).

Direct Effect	Estimate	Standard Error	Critical Ratio	P value	Test Results
AWE → OA	0,635	0,088	6,873	<0,001	H1: Supported
AWE → EA	0,764	0,081	9,913	<0,001	H2: Supported
AWE → PE	0,891	0,054	16,456	<0,001	H3: Supported
AWE → NE	-0,619	0,05	-6,592	<0,001	H4: Supported
OA → REV	0,017	0,057	0,363	0,717	H5: Not Supported
EA → REV	0,732	0,058	13,95	<0,001	H6: Supported
PE → REV	0,293	0,067	5,063	<0,001	H7: Supported
NE → REV	0,029	0,1	0,631	0,528	H8: Not Supported
OA → REC	0,223	0,067	3,924	<0,001	H9: Supported
EA → REC	0,657	0,068	10,217	<0,001	H10: Supported
PE → REC	0,043	0,079	0,604	0,546	H11: Not Supported
NE → REC	-0,174	0,117	-3,101	0,002	H12: Supported

Table 8 - Hypotheses results for AR-exposed tourists

Source: Own elaboration based on SPSS AMOS outputs

5.3.4 T-test

A t-test (see Table 9) was performed to assess the statistical significance of the difference between the means of the participants that were not exposed to AR and the ones that were, for the dependent variables.

The results of the independent samples t-test shows that there is a significant difference in PE between the AR exposed and not exposed groups ($t(150.272) = 2.299$ $p = 0.023$). Respondents that were not exposed to AR ($M = 4.893$, $SD = 1.485$) perceived more positive emotions than the ones that were exposed to it ($M = 4.439$, $SD = 0.988$). Regarding EA, there is also a significant difference between groups ($t(155.753) = -6.379$ $p < 0.001$), implying that tourists that were exposed to AR ($M = 5.097$, $SD = 1.038$) perceive more Existential Authenticity than the ones that were not ($M = 3.946$, $SD = 1.23$). Concerning OA, ($t(155.753) = 3.426$ $p = 0.001$) one could state that the tourists that did not experience AR ($M = 6.487$, $SD = 1.1$) valued more this type of authenticity than the ones that did ($M = 5.931$, $SD = 0.936$). Focusing on Revisit Intention, ($t(150.119) = -2.997$ $p = 0.003$), there is a significant difference between the group that was not exposed to AR ($M = 4.947$, $SD = 1.128$) and the group that was ($M = 5.485$, $SD = 1.119$). Finally, regarding the Rec construct, ($t(153.459) = -2.417$ $p = 0.017$), the group that was exposed to AR has higher values for Recommend Intention ($M = 5.148$, $SD = 1.07$) than the group that wasn't ($M = 4.719$, $SD = 1.155$).

	t	df	Sig. (2-tailed)	Mean Difference
AWE	0.094	154.651	0.925	0.017
PE	2.299	150.272	0.023	0.454
NE	0.040	150.949	0.968	0.0042
EA	-6.379	155.811	<0.001	-1.151
OA	3.426	155.753	0.001	0.556
Rev	-2.997	150.119	0.003	-0.538
Rec	-2.417	153.459	0.017	-0.428

Table 9 - t-test

Source: SPSS output

5.4 Discussion

This dissertation was developed to answer the research questions: “How does Awe influence Religious Tourists?” and “Can AR influence the awe experience of Religious Tourists?”

Initially, a Systematic Literature Review was done to expose what are the main research topics in the current literature. 2677 papers were collected from which 70 articles were selected for full-text reading and analysis. Three main trends were identified: Eco-tourism, Cultural Tourism, and Smart Tourism. An analysis of the content of the recent literature allowed the researcher to identify a gap in the literature. There were no relevant papers that studied the relation between AR and Religious Tourism, one of the branches of Cultural Tourism. Further investigation revealed the awe experience as a central part of religiosity in tourism, which lead to the development of twelve hypotheses regarding the consequences of experiencing this sensation.

A survey was then made to gather quantitative data for the empirical analysis, where a sample of 158 was collected. This sample was comprised of people that were exposed to AR and people that weren't. The survey, aimed at visitors of Fátima, allowed the studied constructs to be measured. The model was then structured and revealed a good consistency of the constructs, which were all above 0.8.

As hypothesized, Awe impacts both cognitions and emotions of religious tourists. It seems that tourists who experience awe tend to value more their surroundings regarding the appearance and ambiance of the touristic site. Furthermore, and regarding the appreciation of the authenticity of the site, the tourists that experience religiosity through AR appear to focus more on the existential part of the experience than the ones that were on site. Even though it is understandable that tourists only visiting the Shrine would pay more attention to object-related

authenticity, it is unexpected that tourists using AR would be the ones that valued more the existential related authenticity. Even inside the museum, away from the typical places where tourists are expected to be amazed by the religious experience, the respondents seem to appreciate what represents existential authenticity, such as the state of Being (Rickly-Boyd, 2013) or to be connected with one's own identity (Steiner & Reisinger, 2006).

Regarding Positive Emotions, the results are quite similar between the tourists that used AR and the ones that did not. There is a strong relation between these two constructs as expected. Many scholars have already proved the positive relation between experiencing awe and feeling good emotions, such as (Algoe & Haidt, 2009; Coghlan et al., 2012; Yaden et al., 2019).

Focusing on Revisit Intention, the results show that a tourist that perceives a religious tourism destination as authentic, specifically when it comes to existential authenticity, will be more likely to revisit that destination. This conclusion is similar to the ones from the past (Kolar & Zabkar, 2010; Yi et al., 2017; Zhou et al., 2022). However, when it comes to Object-based authenticity Kolar and Zabkar (2010); Zhou et al. (2022) have proven that Heritage tourists will have a higher intention to revisit a certain destination if they had perceived it as authentic, object wise, which is not the case in the present study. The results show that for religious tourists there is no significant relation between their perception of the object-based authenticity of that destination and their intention to revisit. These results might be related to the purpose of a religious tourism experience, where tourists might prefer to experience existential matters than acknowledge the greatness or beauty of the touristic site.

Not as relevant as existential authenticity, positive emotions experienced by tourists also increase their desire to return to the destination, which has been already confirmed by other scholars (Ko et al., 2022; Tsai, 2016). This relation was present for tourists that experienced religion both through and without AR. However, it is stronger in tourists that were not exposed to this technology. Surprisingly, positive emotions and recommendation intention don't seem to have a significant relation, contrarily to the papers of the following authors (Nawijn & Fricke, 2015; Xu et al., 2019).

Regarding the effects of authenticity, tourists will be more prone to recommend a religious touristic site if they perceived that site as authentic. However, this is only true if one is referring to existential authenticity. Object-based authenticity seems to not influence the intention to recommend a religious touristic destination. Stepchenkova and Belyaeva (2021) have also studied the influence of existential authenticity on recommendation intention and achieved the same conclusion. Likewise, Chen et al. (2020) concluded the same regarding the relation

between brand authenticity and recommendation intention. Chen et al. (2022) have also stated that authenticity influences tourism support behavior intentions, which includes recommendation intentions.

Overall, from the 12 hypotheses, 9 were supported, showing that experiencing awe has a significant impact on the religious tourist cognitions and emotions, which posteriorly have an influence on their future behaviors regarding the recommendation and revisit intentions.

5.5 Main Contributions and Recommendations

This dissertation intended to understand how facing awe influenced the experience of religious tourists and the influence of AR on it. Overall, awe has an impact on tourists' cognitions and emotions. Furthermore, these emotions and cognitions also influence the tourists' future intentions. Moreover, it seems that there is no significant ampliation of the effects of awe, cognitions, and emotions of religious tourism when a tourist is exposed to AR. This proves that a seamless AR experience might complement a traditional religious touristic experience, however, it might not result in a better experience.

Taking this into consideration, some suggestions were developed. There should be an effort made regarding the conservation of heritage tourist sites. This could be possible through the offer of AR experiences to tourists. The experience was similar for tourists that were exposed to this technology, meaning that Heritage site owners could figure out which parts of the exhibition/monument could be replaced by AR, avoiding unnecessary degradation of the site. Furthermore, the inclusion of this technology might even increase the overall satisfaction of tourists, especially when aiming to target different segments. The younger generation tends to be more open to trying AR technologies than the older ones.

Moreover, the main difference identified between the two studied experiences was concerning the importance given to existential authenticity when referring to its relation to awe. This could be of significant impact on tourist places where the meaning or mysticism of the place is greater than the actual architectural features. Meaning that, if a touristic site doesn't have that much to offer in terms of object-related experiences, it could focus on storytelling through AR.

Concerning available literature about religious tourism, it was acknowledged that it is quite scarce. The same applies to literature that combines religious tourism and technology. It is recommended that this form of tourism, one of the most relevant forms of tourism that attracts large amounts of visitors to sacred places, should be more investigated.

6 | CONCLUSION AND LIMITATIONS

Overall, there is no statistical evidence of improvement when using AR in religious tourism, however, visitors are willing to participate in this type of experience. Also, by providing the possibility of living religion through AR, the younger generations can be targeted, and the revisit intentions of tourists might increase.

While developing this study, some implications were identified.

Concerning the religious tourism-related literature that was used as a base for this study, there might be some information that was not considered as it has not been studied yet. Meaning that most papers used as a foundation for this dissertation were about Cultural Tourism or Cultural Heritage Tourism, which might represent a limitation regarding the applicability of the chosen literature.

Another limitation concerns the size and representativity of the sample. It was not considered the motivation of the tourists that were visiting Fátima. There might be a difference between the effect this experience has on pilgrims and secular tourists. Furthermore, most of the respondents were Portuguese which can also bias the study.

These limitations should be used as a way to improve the available literature.

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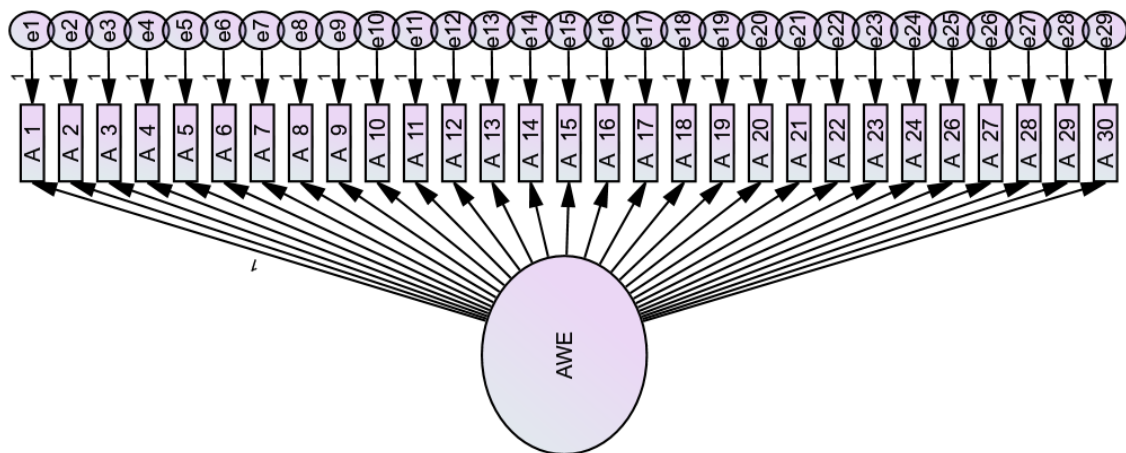
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8 | Appendices

8.1 Appendix A - Sample Characterization

		Exposed to AR?	
		Yes (71)	No (86)
First time in Fátima?	Yes	29	55
	No	42	32
Type of visit.	Solo visit	15	20
	Visit with friends/ family/ partner	34	42
	Visit with a touristic group	22	25
Age	18-25	13	12
	26-35	16	9
	36-45	28	12
	46-55	10	27
	56-65	4	22
	66+	0	5
Gender	Male	34	36
	Female	37	51
	Other/ I prefer not to say	0	0
Nationality	Portuguese	40	60
	International	31	27
Educational Background	High school or below	20	43
	Bachelor's degree	42	34
	Master's degree or higher	9	10

8.2 Appendix B - Unidimensionality test for AWE



8.3 Appendix C - Convergent Validity and Internal Consistency analysis for AWE

Construct	Item	Loadings	Average Variance Extracted	Composite Reliability	Cronbach's Alpha
Time (T)	T_1	0,918	81,14%	0,956	0,955
	T_2	0,896			
	T_3	0,922			
	T_4	0,896			
	T_5	0,871			
Self – Loss (SL)	SL_6	0,814	77,53%	0,945	0,943
	SL_7	0,887			
	SL_8	0,942			
	SL_9	0,933			
	SL_10	0,818			
Connectedness (C)	C_11	0,954	89,62%	0,977	0,977
	C_12	0,925			
	C_13	0,952			
	C_14	0,94			
	C_15	0,962			
Vastness (V)	V_16	0,905	82,26%	0,959	0,954
	V_17	0,919			
	V_18	0,95			
	V_19	0,942			
	V_20	0,812			
Physiological (Ph)	Ph_21	eliminated	78,71%	0,917	0,909
	Ph_22	eliminated			
	Ph_23	0,924			
	Ph_24	0,958			
	Ph_25	0,768			
Accommodation (A)	A_26	0,876	73,86%	0,934	0,932
	A_27	0,804			
	A_28	0,83			
	A_29	0,857			
	A_30	0,925			

8.4 Appendix D - Squared Inter-construct Correlations and AVE for the AWE's Dimensions

	T	SL	C	V	Ph	A
T	0,811					
SL	0,496	0,775				
C	0,434	0,738	0,896			
V	0,464	0,454	0,785	0,823		
Ph	0,109	0,323	0,540	0,534	0,787	
A	0,701	0,402	0,432	0,479	0,104	0,739

8.5 Appendix E - HTMT Ratios for the dimensions of AWE

	T	SL	C	V	Ph	A
T						
SL	0,704					
C	0,659	0,859				
V	0,682	0,675	0,887			
Ph	0,330	0,570	0,737	0,733		
A	0,837	0,635	0,658	0,693	0,323	

8.6 Appendix F – Survey

Thank you for participating in this study. This form is anonymous and the collected information will only be used for research purposes and will not be shared with any institution external to ISCTE- Instituto Universitário de Lisboa.

Please select one of the options below regarding your experience in Fátima.

I sensed things momentarily slow down.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I noticed time slowing.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I felt my sense of time change.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I experienced the passage of time differently.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I had the sense that a moment lasted longer than usual.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I felt that my sense of self was diminished.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I felt my sense of self shrink.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I experienced a reduced sense of self.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I felt my sense of self become somehow smaller

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I felt small compared to everything else.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I had the sense of being connected to everything.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I felt a sense of communion with all living things.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I experienced a sense of oneness with all things.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I felt closely connected to humanity.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I had a sense of complete connectedness.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I felt that I was in the presence of something grand.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I experienced something greater than myself.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I felt in the presence of greatness.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I perceived something that was much larger than me.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I perceived vastness.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I felt my jaw drop.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I had goosebumps.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I gasped.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I had chills.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I felt my eyes widen.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I felt challenged to mentally process what I was experiencing.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I found it hard to comprehend the experience in full.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I felt challenged to understand the experience.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I struggled to take in all that I was experiencing at once.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I tried to understand the magnitude of what I was experiencing.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

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Please select one of the options below regarding your experience in Fátima.

The overall architecture and impression of Fátima and its buildings (eg. Sanctuary, chapels) inspired me.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I liked the peculiarities about the various buildings (eg. Sanctuary, chapels) associated with Fátima.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

During the visit I felt the history and historical personalities of Fátima.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I enjoyed the unique religious and spiritual experience of Fátima.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I felt connected with human and religious history and civilization.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

Please select one of the options below regarding your experience in Fátima.

While visiting Fátima, I feel excited.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

While visiting Fátima, I feel delighted.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

While visiting Fátima, I feel happy.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

While visiting Fátima, I feel glad.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

While visiting Fátima, I feel satisfied.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

While visiting Fátima, I feel self-assured.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

While visiting Fátima, I feel proud.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

While visiting Fátima, I feel angry.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

While visiting Fátima, I feel frustrated.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

While visiting Fátima, I feel guilty.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

While visiting Fátima, I feel ashamed.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

While visiting Fátima, I feel sad.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

While visiting Fátima, I feel disappointed.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

While visiting Fátima, I feel depressed.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

While visiting Fátima, I feel worried.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

While visiting Fátima, I feel uncomfortable.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

While visiting Fátima, I feel fearful.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

Please select one of the options for each question.

I intend to visit Fátima again.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I'd love to come to Fátima again

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I think I will come back to Fátima in the near future.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I will recommend Fátima to my friends when they are travelling.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I will say positive things about Fátima.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

I will encourage my relatives to select Fátima for their travels.

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Neither agree nor disagree
- ☐ Somewhat disagree
- ☐ Disagree
- ☐ Strongly disagree

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Please select your answer for the questions below.

Did you visit the Interactive Museum "O Milagre de Fátima"?

- ☐ Yes
- ☐ No

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Is this your first time visiting Fátima?

- ☐ No
- ☐ Yes

Please select your type of visit.

- ☐ Solo visit
- ☐ Visit with friends/ family/ partner
- ☐ Visit with a touristic group

Please indicate your gender

- ☐ Male
- ☐ Female
- ☐ Other/ I prefer not to say

Please indicate your age.

- ☐ 18-25
- ☐ 26-35
- ☐ 36-45
- ☐ 46-55
- ☐ 56-65
- ☐ 66+

Please indicate your educational background.

- ☐ High school or below
- ☐ Bachelor's degree
- ☐ Master's degree or higher

Please indicate your Nationality.