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The relation between the museum experience and the individual psychological well-being of museum-goers. Two studies.

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Abstract

The museum has now been recognized as a powerful resource for local development, both from an economic and a social point of view. Museums can support local economic development through their backing of creative economic activities, in addition, their creation of job opportunities. The role of museums has also been emphasized in dimensions such as education, the creation of social capital and, recently, well- being and health. This does not mean that museums have to change their mission in favour of an extrinsic function, but rather that they must be aware of their intrinsic power, respecting the nature of the institution while also developing behaviours to catalyze the emergence of such effects. The knowledge of their potential impacts helps museums themselves to avoid being exploited by governmental organizations, which would move them away from their core values and mission. That is why we need to study the relationship between museums and their impacts.

Contrary to what is happening within education and visitor studies, the museum as an environment related to well-being is not recognized around the world. Even with the growing interest in the relation between culture and health, the attention paid to the rapport between museum experience and the subjective well-being of visitors remains limited. The majority of existing studies are focused on measuring the well- being outcomes of museum activities that are specifically designed for people in care in a clinical setting. Furthermore, they are almost all conducted in the United Kingdom, while the Mediterranean region is neglected.

This thesis aims to expand our understanding of the relation between museum experience and the psychological well-being of museum-goers in the Mediterranean region by focusing on two basic questions: 1) is there a relation between museum experience and the psychological well-being of museum users? 2) if there is, how can the museum foster it? This research is composed of two different papers on two different case studies carried out in the Mediterranean region. The museums where I conducted the studies differ from one to another in context, museology and activities offered. In the first study, I analyse the rapport of a participatory museology experience and the psychological well-being of museum users in a rural area. In the second one, I explore the relationship between museum experience and the subjective psychological well-being of visitors in an urban context.

The studies develop a theoretical framework explaining three elements of the phenomenon: the user's characteristics and background, the museum experience, and the determinants of psychological well-being, from a comprehensive perspective that integrates the well-being approach in visitor studies. The two empirical studies are conducted on the basis of this theoretical development, with conclusions drawn from surveys and statistical approaches.

On the one hand, both the studies reveal that there is indeed a relation between the museum experience and the subjective perception of museum-goers' psychological well-being. On the other hand, each study underlines different relevant aspects in this relationship, which in turn depend on the context, the particular museology and the audience. These conclusions have important implications for the academic studies, the museum sector, as well as for policy development in relation to culture and health.

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INTRODUCTION

1. Background of the research

The museum has now been recognized as a powerful resource for local development, both from an economic and a social point of view (OECD, 2017). In the time of a creative society, the production of knowledge through knowledge has become the main lever of development.

Within such a context, museums can support local economic development through their backing of creative economic activities, in addition to their creation of job opportunities.

At the same time, the role of museums has also been emphasized in dimensions such as education, the creation of social capital and, recently, well-being and health.

Museums are part of wider cultural ecosystems embedded in a societal space, whose influence on the city, community life and individuals is manifold and profound.

The museum is a lively, essential part of the social and institutional infrastructure of the city (Bradburne, 1999; Gustafsson & Ijla, 2016). They can be relevant actors when dealing with a variety of different problems of different natures, be they related to the economy, education, public health, social cohesion, etc.

Museums enrich the cultural life of the community and cultural participation is associated with various kinds of positive spill-overs that combine social and economic objectives, from reinforcing social sustainability and respect for human values to reaching objectives of innovation, entrepreneurship, lifelong learning, well-being, soft-power and so on (Sacco, Ferilli & Tavano Blessi, 2018).

Ever since the introduction of contemporary cultural policies, access and participation in culture have been placed among them a primary goal (Tomka, 2013). The theme of participation applied to cultural heritage and its institutions is a topic of great current interest in the European context (Sani, 2010).

There was an evolution in the relationship between economics and culture, that has brought the social function of the museum to the forefront (Lazzeretti, & Capone, 2008).

Developing on ideas introduced in the '80s by the "new museology", and in particular on the works by Hughes De Varine and Georges-Henri Rivière, at the beginning of the 21st century, the International Museum Council (ICOM) fully recognized the social role of museums in our society. As stated definitively in the XXII General Assembly of the ICOM, held in Vienna in 2007: *"A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment"* (ICOM Statutes, Article 3, Section 1).

What the International Council of Museums emphasizes is the need for the museum to respond responsibly to society and individuals: the need to approach its audience. As Cerquetti (2015) points out, what is being asked

of museums in the 21st century is to understand the context in which they operate, engage with communities and create value for all the potential stakeholders, becoming an instrument that improves life for citizens.

In these circumstances, the museum needs to involve and reach the largest possible audience, both in terms of numbers and inclusivity. For this reason, different forms of approaching the public have emerged. Various audience development and participatory strategies, in their different shades and degrees, allowed museums to approach a community, so as to produce a favourable social impact.

Indeed, in the last decades, the museum field has started paying attention to the impact of visiting experiences on individuals, for this determines the long-term effect that a museum has on visitors and that they take home with them.

As shown by several scholars in the field of visitor studies, museum experience begins long before the visitor arrives and continues long after the visit is finished (Falk & Dierking, 2013; Hooper-Greenhill, 2000; Kirchberg & Tröndle, 2012; Pearik, Doering & Karns, 1999).

Among authors, in the long-term, the most recognized impact of the museum experience on visitors is the "learning" one (Falk & Dierking, 2013; Hooper-Greenhill, 2004). Some scholars have also investigated aims and benefits of visiting a museum which go beyond that of learning and approach the concept of well- being (Kaplan, Bardwell & Slakter, 1993; Packer, 2008; Packer & Bond, 2010).

Yet drawing the concept of the museum closer to that of well-being remains something rather new, and even revolutionary.

It is beginning to occur also due to the increasing recognition of health as a social issue.

Nowadays, in fact, health and well-being are linked to multiple and complex factors, such as lifestyle and social and economic circumstances. As underlined by the "rainbow model" of Dahlgren and Whitehead, many health issues can be determined by social factors (Dahlgren & Whitehead, 1991). In a socially-influenced health model, individuals are placed at the centre while surrounding them are various layers of factors that influence health –like individual lifestyle choices, community influences, living and working conditions, and more general social conditions. In sum, over the last decades, the concepts of health and well-being have become more holistic. Cultural practices and consumption have started to be considered important elements in the determination of well-being and the health of individuals.

Related to this, a growing literature is demonstrating the effects of cultural practices on health and well-being at personal and societal levels.

The link between the arts and health has a long history, ranging from the clinical use of creativity and artistic techniques to the recreational and environmental use of the arts (Matarasso, 1997). The most rigorous research into the health benefits of the arts was conducted with a focus on individual health and well-being in a clinical and therapeutic setting (Staricoff, 2004, 2006; Chatterjee, Vreeland & Noble, 2009; Daykin, Byrne Soteriou & O'Connor, 2008; Hacking, Secker, Spandler, Kent & Shenton, 2008), in which artistic activities were put beside medicinal therapies. Other studies evidence that participation in cultural activities is beneficial for health in various ways, improving, for instance, longevity (Hyyppä, Mäki, Impivaara & Aromaa, 2006;

Konlaan, Bygren & Johansson, 2000), mortality due to cancer (Bygren et al., 2009), and psychological well-being (Grossi, Blessi, Sacco & Buscema, 2012; Wheatley & Bickerton, 2017).

Museums, as social agents for cultural enlightenment, may have an important role to play in this process.

In the postmodern era, the importance of the extrinsic conception of museums emerged.

Beyond the more internal functions of investigating, exposing and disseminating knowledge, this institution's mission responds also to external logic (Asuaga & Rausell, 2006). Nowadays, museums' objectives are to reach, on the one hand, the individual user, and, on the other, the symbolic and collective dimension of the territory.

This approach has inevitably generated negative reactions, which often refer to the subjugation of the arts and cultural institutions to government policy and control, diverting the museum from its primary aims and objectives. Thus, the accusation is that culture is being instrumentalized to focus on social impact rather than being intrinsically valued (Appleton, 2002). These extrinsic values can change the horizons of museum management. Unable to find the financial resources necessary for producing intrinsic values, they could decide to produce extrinsic values in order to more easily find them.

However, to prevent a utilitarian and instrumental sense of culture from defining policy at the expense of other dimensions (Matarasso,1996; Belfiore, 2002), the paradigm has shifted towards a more holistic vision of the value generated by museums that highlight its multidimensionality (Holden, 2006; Scott, 2008).

As Holden points out, there are three different but complementary perspectives, from which to look at cultural value: the intrinsic value, the instrumental value and the institutional value. Intrinsic value is closely linked to the artistic content and therefore to the cultural experience in itself. It describes the intellectual, aesthetic, spiritual and emotional effects that art has on an individual. The museum becomes a candidate for being a container of artistic experience. With instrumental value, we refer to situations in which culture is used as an instrument for social and economic purposes. In this sense, museums can be evaluated in order to guide new welfare policies. Finally, the institutional perspective concerns the broader strategies of cultural organizations, and in particular their interaction with the public. Museums are in a position to the visitors' opportunity to grow, learn and become part of the larger community. Within a cultural institution, the triple categorization studied by Holden must be constantly brought to a state of equilibrium in order to avoid the preponderance of one aspect over the other. In his footsteps, Scott (2008) identifies a *use value,* which is direct consumption; an *institutional value*, which is accrued when well-managed institutions generate trust in the public realm; and an *instrumental value*, which describes governments' expected return on public investments based on evidence of achieving social and economic policy objectives:

"*the recipients are (i) the economy – through civic branding, tourism, employment and the multiplier effect on local economies; (ii) communities – through increased social capital, social cohesion, tolerance for cultural diversity, urban regeneration and civic participation; and (iii) individuals – through benefits such as learning, personal well-being and health*" (Scott, 2008: 34-35).

The museum's instrumental value as described by Scott (2008) cannot be realized without first having determined its use value.

Cultural consumption includes symbolic, aesthetic and hedonistic dimensions that involve consumer subjectivity in both the cognitive and emotive spheres. The intrinsic value of cultural experience extends the cognitive and intellectual abilities of the subject and allows individuals to find meaning, pleasure and emotional stimulation; these intrinsic effects are satisfying in themselves and allow the development of a cultural experience that impacts individuals and the larger community.

Museums, therefore, do not have to change their mission, for they already have the intrinsic power to generate a positive impact. The perspective here is certainly not to transform museums into hospitals or health centres. It is to help museums become aware of their favourable effects on health and to develop behaviours that catalyse the emergence of these effects while respecting the nature of the institution. Knowledge of such potential impacts helps museums themselves avoid being exploited by governmental organizations. If Matarasso was right when he concluded that "*rather than the cherry on the policy cake to which they are so often compared, the arts should be seen as the yeast without which nothing will rise*" (Matarasso, 1997) arts and cultural experience are vital to achieving government policy goals but remain largely invisible. That is why we must study the relationship between museums and well-being.

Firstly, because, at the organizational level, museums should begin to know and measure their impact in terms of the well-being of their visitors; and secondly because, at the societal level, appropriate cultural policies should be on the agenda that recognize museums as agents of well-being, both because of their intrinsic value specificity, and their ability to facilitate corresponding partnerships with other social institutions.

2. Theoretical development

The relation between museum experience and the psychological well-being of the individuals has raised particularly attention in recent years.

The museum experience isn't to be confused with the exhibition experience. The exhibition experience is merely a part of the museum experience. A museum experience combines the spatial, chronological and causal dimensions of visiting a museum (Falk & Dierking, 2013; Hooper-Greenhill, 2000; Kirchberg & Tröndle, 2012; Pearik et al., 1999).

In any museum, visitors come with different backgrounds, expectations, prior experiences and interests that may influence their visit; then, a museum has its physical environment, its particular characteristics, its exhibitions and contents that can have an impact on these different human dimensions; together, these factors lead to post-visit consequences, the impacts.

In museum studies, the experiences of museum visitors rarely are a focus of interest (Kirchberg & Tröndle, 2012) and when they are, even more rarely is well-being discussed. In the context of museum visitor studies, the museum as an environment related to psychological well-being is not recognized by local governments from all over the world. Contrary to what is the case for the impacts on learning of the museum experience, the number of studies that have analysed the impact on visitors' well-being is still low.

Indeed, the first studies in this direction were born while investigating the aims and benefits of visiting a museum which go beyond that of learning. For example, Kaplan (1993) identifies the museum environment as a restorative environment both from a cognitive and an emotional point of view. Packer (2008) identifies among the benefits of a museum visit psychological well-being, subjective well-being and mental restoration. She adopts a deductive qualitative approach to investigate the meaning and value of a museum visit from the visitors' perspective and finds that the satisfaction derived from museum experience impacts psychological and subjective well-being and mental restoration.

In a follow-up article, Packer and Bond (2010) expand the concept of restoration as an important museum function for visitors. They stress the effects of restorative attributes, like fascination, being away, and compatibility, on the psychological well-being of museum visitors. They underline the importance of the physical environment of the museum in arousing a satisfactory experience that impacts well-being. Binnie (2010) demonstrates the reduction in the anxiety of visitors and museum staff following the viewing of an art exhibition. As can be seen, the studies in this field are sporadic, and there is no real consistent line of study on the topic within museum studies. Furthermore, as scholars have shown, the impacts of a museum experience may depend on many different variables, like visitor interests and backgrounds (Falk & Dierking, 2013; Pearik et al., 1999), the activities carried out by the museum and the visitors' engagement with the museum (Ander, Thomson, Noble & Chatterjee, 2011), but also on the social context (Ferilli, Grossi, Sacco & Tavano Blessi, 2017) of the museum. Ferilli et al. show how in a museum collocated in a low cultural attendance context, the relationship between cultural participation and psychological well-being is weaker than if it is

situated in a high cultural attendance context. Therefore, more studies are needed that go deep into exploring the relationship between museum experience and the psychological well-being of visitors.

In the literature that does not concern museum visitor studies, most of the research that interests the relationship between museums and well-being focuses on measuring outcomes of activities specifically designed to promote the well-being of certain categories of people or to accompany them through care.

This research has happened especially in England, where, in 2008, "health and well-being" appeared as a label in the Generic Social Outcomes, a national framework developed and piloted in 2005 by the Burns Owen Partnership (BOP) and financed by the Museums, Libraries and Archives Council (MLA) to measure the social impact of museums. The GSOs together with the Generic Learning Outcomes are part of Inspiring Learning for All, an initiative launched by the Arts Council of England to help museums, libraries and archives describe and measure the impact of their work on communities. Four aspects are identified under the health and well-being label: *encouraging healthy lifestyles and contributing to mental and physical well-being, supporting care and recovery, supporting older people to live independent lives, helping children and young people to enjoy life and make a positive contribution* (MLA, 2010). It was the first time that well-being and health were officially recognized as among the social impacts of museums.

As a result, an increasing body of museum practices addressing community health and well-being, health promotion and education were born (Dodd & Jones, 2014; H+C, 2012) and subsequently studied.

For example, Chatterjee and her research group studied how various museum activities influenced the physical and mental well-being of several hospital patients. They uphold that handling objects in a museum has a positive impact on hospital patients' well-being (Chatterjee et al., 2009), noting an increase in self- reported measures of life satisfaction and health status. The study was conducted within the pilot project "Heritage in Hospitals", coordinated by University College London Museums & Collections and University College London Hospitals Arts. In a follow-up study, they demonstrated how creative museum activities resulted in greater levels of confidence, sociability and well-being in participants that were in recovery (Morse, Thomson, Brown & Chatterjee, 2015). Todd et al present research findings that help elucidate how museum programs create opportunities to enhance well-being and health and change experiences of social isolation in older adults (Todd, Camic, Lockyer, Thomson & Chatterjee, 2017). Precisely because of the nuances of well-being and health and the different ways in which museums can increase and provoke these effects, Ander et al. suggest a tentative *Wellbeing Outcomes Framework* for a museum from the point of view of personal, social, cultural and physical well-being and health and the activities that can increase these (Ander et al., 2011).

The last study from this group of scholars consists of a review focused on the evaluation of social prescribing schemes in the United Kingdom that were published in peer-reviewed journals and reports. (Chatterjee, Camic, Lockyer & Thomson, 2018). The schemes included the use of the arts, books, education and exercise "on prescription" for patients with mental and/or physical health issues. Outcomes included an increase in self-esteem and confidence; improvement in mental well-being and positive mood; and a reduction in anxiety, depression and negative mood. Outside of the UK, some other isolated studies on museums and well-being

have been carried out. For example, in 2014 McGuigan evaluated a six-week programme at the Auckland Museum for people living with dementia and their carers.

Even with this growing interest in the ties between culture and health that sees museums as potential partners in the treatment of infirmity in the UK (Camic & Chatterjee, 2013), few studies are dedicated to the impact of museum experience on the psychological well-being of museum-goers.

Thus, a more in-depth analysis is needed on the different impacts museum experience can have in terms of well-being. Furthermore, when we talk about museums and well-being, most of the studies and projects have been carried out in the United Kingdom, but they are still lacking in Mediterranean countries.

In conclusion, the existing literature has three limitations: 1) the lack of evidence-based, quantitative analysis on the topic of the impact of museum experience on the psychological well-being of museum-goers; 2) the lack of consideration, in existing studies, of the context in which a museum is located, conventionally museum visitor studies don't consider the social environment, which, however, is important for determining the impact of the experience on visitors; 3) the neglect of the Mediterranean region in this field, particularly in the museum sector, as many of the existing studies were conducted in the United Kingdom.

Indeed, in Mediterranean area, the main studies on subjective well-being consider the general cultural attendance (Tavano Blessi, Grossi, Sacco, Pieretti & Ferilli, 2016; Grossi et al., 2012; Grossi, Sacco, Blessi & Cerutti, 2011) or the leisure time (Ateca-Amestoy, Serrano-del-Rosal & Vera-Toscano, 2008).

3. Objects of research

To overcome the above limitations, this thesis has two main objectives:

1) exploring evidence-based relationship between museum experience and the psychological well-being of museum-goers, in Mediterranean Region;

2) identifying enabling factors to achieve individual psychological well-being by optimizing museum experience.

To achieve these objectives, this research develops a new theoretical model explaining the three elements of the phenomenon: the user's characteristics and background, the museum experience, and the determinants of psychological well-being, from a comprehensive perspective that integrates the well-being approach in visitor studies. Precisely because the relationships in question vary depending on the museum, the context in which it is located and the visitors who populate it, the research is composed of two different papers on two different case studies.

In the first study, I analyse the rapport between a participatory museology experience and the psychological well-being of museum users in a rural area. The case study is the Costume Museum of São Brás de Alportel, a rural area in the Algarve region, Portugal. The museum adopts a socio-museology approach fostering the active participation of its users' community. The strong relationship with the visitors transforms the museum experience into a particular case. Indeed, to measure the museum experience, between the variables taken into consideration there are also the users' active participation and engagement.

In the second one, I explore the relationship between museum experience and the subjective psychological well-being of visitors in an urban context. The second paper has as a case study the Ethnology Museum of Valencia, the third largest city in Spain. The museum has permanent and temporary exhibitions and offers many special events that involve the local community. I focus on users' characteristics and cultural interests and their perception of the museum experience, measuring motivation, perceived impacts and satisfaction.

The museums where I carried out these studies differ from one to another in context, museology and activities offered.

These exploratory studies differ from the studies conducted so far taking into consideration the museum experience as a whole in two different museum environments. They enrich the literature, contributing to the investigation regarding the possible connection between cultural attendance and well-being, and the recognition of the museum as an agent contributing to local welfare. Mediterranean region is rich in cultural heritage, which may be a strategic asset to be leverage to improve regional development. Moreover, the research aims to lay the foundations for the development of future longitudinal studies that investigate the causality of the relationship between participation in museums and the subjective well-being of individuals.

4. Methodology

To investigate the relationship between the museum experience and the psychological well-being of visitors, for each study the empirical research has been designed on the basis of prior theoretical development. The museum experience, with its features and phases, is the unit of research. A case study methodology and various statistical tests are applied to empirical data collected from both studies. Detailed methodologies can be described within the three dimensions of research design, data collection and data analysis. The flow chart of the research methodology is illustrated in figure 1.

Figure 1. Flow chart of research methodology
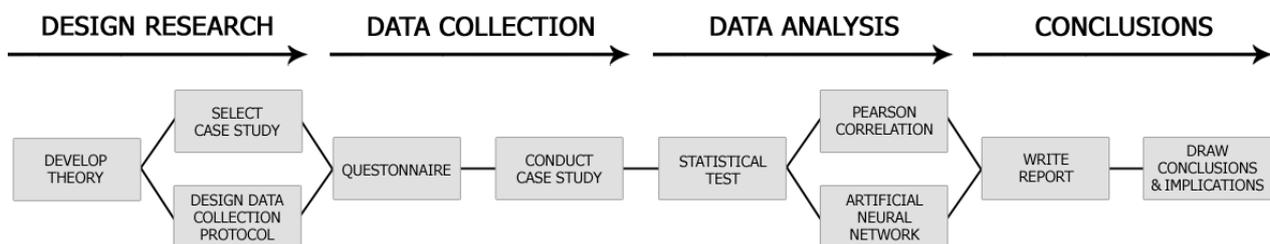
Design research

Research design depends on the question being researched. My questions can be characterized by the two attributes of "is there" and "how" and thus, they both can be associated with the strategy of analysis of case study and statistical analysis. Case study methodology is widely recognised in many social science studies especially when in-depth explanations of social behaviour are sought after. It is an explorative study that allows the formulation of new hypotheses in the crossover between culture and health.

Both the museums selected for the studies belong to the field of ethnology and ethnography and are located in the Mediterranean region. Both respond to the criterion of being mainly visited by the local community. This criterion was selected to verify the frequency of repeated visits that maintain a certain continuity with the museum experience. They have been specially chosen to be in different contexts, one rural, other urban, so as to explore different scenarios.

The study in the first paper was conducted in the Costume Museum of São Brás de Alportel, in Algarve Region, Portugal. The museum is situated in a rural context and adopts *sociomuseological* practices. In 2014 the museum joined the SoMus network, a research project (SSH - RRI) led by Dr Lorena Sancho Querol of the Centro de Estudios Sociais of the University of Coimbra, co-funded by the European Social Fund through the Operational Program of Human Potential and the Portuguese National Fund through the Foundation for Science and Technology, to investigate the epistemological framework of the emerging museum function of participation. The museum has been selected because of its deep integration with the local community, that

allows breaking down the access' psychological barriers that characterize most of the cultural institution. Therefore, it is an atypical case.

The second investigation was carried out in the Ethnologic Museum of Valencia, Spain. The museum offers a permanent exhibition as well as some temporary one and many special events that involve locals and facilitate the investigation. The museum is a more classical institution inserted in an urban context. Despite it has a good relationship with the community, it keeps active the psychological barriers to access.

The two case studies represent two different museum environments which interact in a different way with the visitors. This allows me to make a comparison emphasizing the common elements and differences.

Data collection

Collecting data on the impacts of museums is a challenge. Firstly, there is neither common data elements and definitions nor the habit of data collection in museums (Wharton & DeBruin, 2005); secondly, many museums are reluctant to share their data; thirdly many museum directors are averse to permitting the conduction of surveys on psychological well-being, which would mean asking personal questions to visitors in their museums.

In order to overcome the limitation of data collection, multiple processes of data collection have been designed to make good use of the existing accessible data sources in both the case studies, including interviews, archived records, direct observation, questionnaires and official statistics.

Interviews as the archived report and the direct observations have been used to explore the ethnographic and territorial aspect in which the museums are located, while the questionnaire was used to collect the data subsequently analyzed with statistical tests.

- Interviews

  Interviewing is the main method of collecting qualitative data. Interviews usually consist of several key questions that help define the context to explore and then allow the interviewer to diverge from these questions in order to pursue an idea or response in more detail. All interviews with directors and staff were conducted in the selected museums so as to offer the interviewer the chance to observe the subjects on site. All interviews usually began with some questions about museum context, museology, museum activities and visitors.

- Archived report

  Some archived records such as work summaries and internal reports were supplied by museums during the interviews; they also constituted supplemental material the author used to understand certain specific cases studies.

- Direct observation

  During the research, direct observations were conducted throughout the period of submission of the questionnaires. They were quite an effective way to verify objectively the validity of the information offered by directors in the interviews.

- Questionnaire

  A questionnaire is one of the most widely used methods to collect quantitative data from a large number of respondents. Here, a questionnaire was designed on the basis of the developed theoretical framework; then it was revised after several discussions with the researcher's tutors and colleagues until two final questionnaires were personally submitted to the visitors on site for the two case studies. The questionnaires were specifically prepared for the two different case studies. Both the questionnaires are composed of four sections: sociodemographic data, cultural interests/habits, museum experience and psychological well-being. The psychological well-being is measured by the Psychological Well-Being Index in its short version (Grossi et al., 2006, see dedicated section below).

Data analysis

Detailed analysis approaches are based on the nature of the data, the type of questions and the particular objectives of the research. More specifically, to answer the central questions, case study technique and statistical analysis are used.

- Case study

  The case study approach is a research strategy entailing an empirical investigation of a contemporary phenomenon within its real-life context using multiple sources of evidence, and it is especially valuable when the boundaries between the phenomenon and its context are blurred. The case study approach is particularly relevant to this general study for two reasons on the one hand, the relation between museum experience and psychological well-being is a contemporary phenomenon, and on the other, it involves complex behaviour and the interaction between multiple agents (Falk & Dierking, 2013; Pearik et al., 1999).

- Statistical tests

  A statistical test is a quantitative technique that provides information from which we can judge the significance of an increase (or decrease) in any result (Kanji, 2006). The data were analysed using the statistical analysis of *Pearson correlation*[1] and Artificial Neural

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[1] See Pearson, K. (1901). On lines and planes of closest fit to systems of points in space. Philosophical Magazine 2:559-572

Network analysis[2]. The *Pearson correlation* measures the linear correlation between t h e two variables. It is the most appropriate classical statistical methodology to establish the initial rapport between two variables that belong to such different field as culture and health. I also adopt the *Permutation Test* to evaluate the significance of the correlation ($p < 0.05$)[3]. Furthermore, the complexity of the relationship between the possible socio-demographic users' variables and museum experience variables that may influence individual psychological well-being, makes the linear statistic not enough in determining the possible full panorama of all variables' relations. For this reason, the experimental data has also been analysed by means of the auto-CM Artificial Neural Network, to detect more elusive relations among variables, and develop a comprehensive global picture of the complexity. Auto-CM is a special kind of Artificial Neural Network that, through specific data mining and a learning algorithm, is able to find consistent patterns and/or systematic relationships, and hidden trends and associations, among variables. This matrix of connections preserves non-linear associations among variables and captures connection schemes among clusters. As a final result, a semantic connectivity map was created, using a mathematical approach based on an artificial adaptive system called Auto Contractive Map-Auto-CM algorithm (Semeion©) (Buscema & Grossi, 2008).

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[2] An artificial neural network (ANN) is a mathematical/computer model of calculation based on biological neural networks. In practical terms, neural networks are non-linear statistical data structures organized as modelling tools. NN can be used to simulate complex relationships between inputs and outputs that other analytical functions cannot represent. An artificial neural network receives external signals on a layer of input nodes (processing units), each of which is connected to numerous internal nodes, organized on several levels. Each node processes the received signals and transmits the result to successive nodes. The ANN was developed by a series of researches started with the work of W.S. McCulloch and Walter Pitts of 1943: "A logical calculus of the immanent ideas in nervous activity", which constituted the artificial neuron. See van Gerven, M., Bohte, S., eds. (2018). Artificial Neural Networks as Models of Neural Information Processing. Lausanne: Frontiers Media.

[3] The level of significance 5% is adopted very frequently because it is believed that the ratio 1/20 (ie 0.05) is small enough to be able to conclude that it is "rather unlikely" that the observed difference is due to the simple case.

4.1 Psychological Well-Being Index

The Psychological General Well-Being Index (PGWBI) is a measure of the level of subjective psychological well-being. It was developed in 1990 by Harold Dupuy, a scholar and psychologist at the National Center for Health Statistics. It assesses in detail self-representations of intrapersonal affective or emotional states that reflect a sense of subjective well-being or distress and thus captures what we could call a subjective perception of well-being. The index provides subscales to assess the following domains: anxiety, depression, positive well-being, self-control, general health and vitality. The original questionnaire consists of 22 self-administered items that assess the psychological and general well-being of respondents. Each item has six possible scores (from 0 to 5) and refers to the last 4 weeks of the subject's lifetime. The scores for all domains can be summarized into a global summary score, which reaches a theoretical maximum of 110 points, representing the best achievable level of well-being (Dupuy, 1990). The PGWBI was adapted in many languages and cross-culturally validated for use in several countries under the coordination of the MAPI Research Institute.

The short version adopted for the study has been validated in a long-term project carried out from 2000 to 2006 in Italy (Grossi et al., 2006). This short form of the PGWBI that was subsequently developed, consists of a subset of six items that generally explain more than 92 % of the global variance of the full questionnaire. The six-item short version of the PGWBI was developed in 2000 as part of the MiOS project, a multidisciplinary initiative to study different kinds of subjective outcome measures for health assessment in depth, on a representative sample of 1,129 Italian citizens above 15 years of age. The main objective of this study was to reduce the number of items of the original 22-item PGWBI while keeping the validity of the instrument. The validation of the PGWBI-S was conducted in 2006 by Grossi et al. (Grossi et al., 2006).

The Psychological General Well-Being Index (PGWBI) has been validated by decades of clinical practice and is also used in relation to the cultural field. The Grossi et al. research group used this index to investigate the relationship between cultural attendance and psychological well-being. The first study was conducted in 2011 and explored the relationship between cultural access and individual psychological well- being in order to provide a possible estimation of the impact of cultural participation upon subjective perceptions of well-being (Grossi, Sacco, Blessi & Cerutti, 2011). In 2012 Grossi et al. shows how, among various potential factors considered, cultural access unexpectedly ranked as the second most important determinant of psychological well-being, immediately after the absence or presence of diseases. Their findings show that cultural participation tends to be oriented preferentially toward relatively sociable activities, thereby contributing to the production of relational goods and social capital. In 2016, a comparative analysis suggested that the impact of culture on subjective well-being in a context of high cultural supply and substantial cultural participation is much more relevant with respect to contexts with low endowment and low participation, thus suggesting the possibility of culture/well-being positive feedback dynamics leading to urban "cultural poverty traps" (Tavano Blessi, Grossi, Sacco, Pieretti & Ferilli, 2016). The last study by the group provides an experimental evaluation of the impact of aesthetic experiences in terms of stress reduction (cortisol levels) and increases in well-being (Grossi, Tavano Blessi & Sacco, 2018).

5. Structure of papers

This thesis is structured around two main studies.

The first section of each paper is composed of the literature review on the existing studies on museum experience and psychological well-being, oriented to the specific case study in question.

The first study is addressed to a particular kind of museum: a participatory museum in a rural area. As a case study, I consider a small local museum in Portugal, The Costume Museum of São Brás de Alportel (MuT).

The literature review underlines the recognition of rural areas as contexts where cultural policies are oriented towards participation and community-building initiatives and how and why this approach can contribute to psychological well-being.

The second study was conducted in the Ethnology Museum of Valencia (MUVAET).

The literature review is on the impact of museum experience on the psychological well-being of museum visitors, reflecting the status quo of the research, followed by a critical conclusion that summarizes the limitations of the existing studies.

The second part of each paper is dedicated to the description of the case studies and the research methodology. Subsequently, the results are presented and discussed.

The last part of the thesis is dedicated to the general conclusion and implications that these studies lead to.

PAPERS

6. The relation between a participatory museum experience and the individual psychological well-being of the visitor in a rural area. A case study.

Abstract

Rural areas have been recognized by recent literature as contexts where cultural policies are oriented towards participation and community-building initiatives, as well as towards the scenario of local and eco-museums. Principles from the new museology and the social museology foster active cultural participation and relational goods. This setting then provides a particular case of strong interaction between individuals and museums that allows for in-depth investigation of the relation between cultural heritage and psychological well-being.

A growing literature is demonstrating the effects of cultural participation and museum engagement on the well-being of individuals, but there is still an absence of thorough research in this field in rural areas, especially in Mediterranean countries.

This article focuses on data collected using the Psychological General Well-Being Index (PGWBI) as well as through semi-structured interviews to measure the level of participation and involvement in museum activities at the Costume Museum of São Brás de Alportel (MuT) in the Algarve region, Portugal.

The results show a significant statistical correlation between a positive subjective perception of psychological well-being and engagement with the museum.

Introduction

The rapidly growing creative economy has become one of the most plausible vectors of European specialization in global competitiveness. This trend brings new opportunities and comparative advantage to those countries and regions that possess rich cultural and creative resources but relatively weak industrial bases, as is the case for many countries in the Mediterranean region.

Recent studies have investigated this perspective also in rural areas, demonstrating the important role of culture and creative activities there in increasing economic, social, human and symbolic capital (Bell & Jayne, 2010; NEA, 2017, Wojan & Nichols 2018). Alongside urban contexts, areas that are naturally disadvantaged from a geographical standpoint, such as remote, mountainous or sparsely populated areas, will benefit from cultural and creative organizations.

Museums are important institutions of cultural heritage, social agents and economic engines for regional growth and local development (OECD, 2017). In recent years, the social impact of museums has become key values enabling museums to be in line with twenty-first-century objectives (Cerquetti, 2015).

Rural areas were transformed by the new museology into scenarios with eco-museums and community museums. The new museology underlined the urgency of transforming the "museum-showcase" dominated by asymmetrical power relations and representative hegemonic projects into an active and integral territorial actor able not only to preserve and exhibit areas' widespread heritage but also, and above all, to produce culture and social capital through participatory protection and valorisation.

This has fostered a bottom-up approach around cultural organizations. It means that most cultural and creative activities are voluntarily born from the local community (Beel et al., 2017; Gibson & Gordon, 2016; Mayes, 2010; Waitt & Gibson, 2013). The dimension of proximity between the museum and community allows the in-depth investigation of the effect of the museum experience on visitors.

Given the few studies in this direction, especially in rural areas, I wanted to investigate the relation between museum participatory experience and the psychological well-being of museum-goers.

In the last years, health and well-being have become more holistic concepts related also to social and economic dimensions and individual lifestyle. In fact, a growing literature is demonstrating the effects of cultural practices on health and well-being at personal and social levels. However, only a few studies are oriented towards museum practices outside of a clinical environment and even fewer are made in rural areas of the Mediterranean region.

Furthermore, the existing studies don't take into consideration the context where the museum is located, even if it is important for the in-depth understanding of the museum experience and its impacts (Ferilli, Grossi, Sacco & Tavano Blessi, 2017).

To overcome these limitations, this article concentrates on the exploration of the relation between users' characteristics, backgrounds and cultural habits; museum experience and context; and the psychological well-being of museum-goers.

Literature review

Arts, creativity and cultural activities are increasingly viewed as facilitators for regional development, also in rural areas (Bell & Jayne, 2010). Recent studies reveal impacts from both economic and social points of view. Artistic and cultural organizations have become progressively more important elements in rural areas in order to increase innovation (NEA, 2017), economic dynamism (Wojan & Nichols, 2018) and resourcefulness (Gibson & Gordon, 2016; Mayes, 2010). Cultural organizations enrich one's cultural life (Waitt & Gibson, 2013), develop a sense of belonging, foster social capital (Edwards, 2012) and contribute to the community's empowerment and resilience (Anwar McHenry, 2011; Beel et al., 2017). Many studies among those that demonstrate the contribution of artistic and cultural organizations in rural areas highlight a policy approach oriented towards ideas of participation, mobilization and social coherence (Lysgård, 2016). In rural areas, art and culture have become instruments for civic participation and, at the same time, they are often the results of voluntary activities and are born from the grassroots (Beel et al., 2017; Gibson & Gordon, 2016; Mayes, 2010; Waitt & Gibson, 2013). This bottom-up approach is also recognizable in the new

museology, which was born in the seventies when rural areas become the setting for eco-museums, local museums and community museums. The new museology evolved from the perceived failings of the original museology, and it was based on the idea that the role of museums in society needed to change.

In a rural area, museological theories and museographic methods and techniques moved from the classical model of *building-collection-public* to that of *territory-heritage-community* (De Varine, 1996), bringing museums closer to the communities they serve. According to Kelly (Kelly, 2006), local communities appreciate the value of museums and understand that museums benefit the local community in a reciprocal relationship of mutual benefit, also because they are often born out of the will of the local community itself. Community museums are a tool to manage heritage from the grassroots (Camarena Ocampo & Morales Lersch, 2010). Despite the fact that some museums born with this function in the '70s are nowadays much more focused on benefitting tourists rather than locals (Howard, 2002), others keep an approach focused on the local dimension with the aim of strengthening collective processes and defining identities through the participation of inhabitants, who take part in decision-making processes. This becomes a new alternative management model, especially now as many community museums are motivated by the pursuit of financial autonomy and full sustainability (Kelly, Cook & Gordon, 2006; C. Kreps, 2015; C. F. Kreps, 2008; Querol, 2015).

The nature and ethics of art organizations' everyday practice seem important in a discussion of the intrinsic value of culture and power relations in rural places in which access to art takes place (Scott, Rowe, & Pollock, 2016).

Beyond the instrumental value that culture has in rural areas, a participatory approach allows individuals to challenge themselves to expand their capacity of expression, to renegotiate their expectations and beliefs, to reshape their own social identity (Sacco, Ferilli & Tavano Blessi, 2018).

As Scott shows, a capabilities approach (Sen, 2010; Nussbaum, 2000) offers the opportunity to discuss cultural value within the conceptions of a *good life* in rural areas. Access to culture allows individuals to find meaning, pleasure and emotional stimulation, and these intrinsic effects are satisfying in themselves. Thus, cultural experience in rural areas can become a capability experience that contributes to the growth of human capital, social capital and well-being.

Ideas of health and well-being have become increasingly holistic in recent years.

Health is recognised as a social issue, linked to multiple and complex factors like lifestyle and social and economic circumstances. A growing literature is demonstrating the effects of cultural practices on health and well-being at personal and societal levels.

The most rigorous research into the health benefits of the arts was conducted with a focus on individual health and well-being in a clinical and therapeutic setting (Staricoff, 2004, 2006; Chatterjee, Vreeland & Noble, 2009; Daykin, Byrne, Soteriou & O'Connor, 2008; Hacking, Secker, Spandler, Kent & Shenton, 2008), in which artistic activities were put beside medicinal therapies.

Other studies evidence that participation in cultural activities is beneficial for health in various ways, improving, for instance, longevity (Hyyppä, Mäki, Impivaara, & Aromaa, 2006; Konlaan, Bygren, & Johansson, 2000) and mortality due to cancer (Bygren et al., 2009).

As to the relationship between culture and individual psychological well-being, recent studies have provided some interesting insights. Wheatley and Bickerton (Wheatley & Bickerton, 2017) show that positive leisure experience is derived from participation in the arts, culture and sport, evident in greater satisfaction with life and leisure, and general happiness. Furthermore, they reveal that while the frequency of engagement is central for some activities, like the active participation in artistic activities, it is not for others, like attending cultural events.

Grossi et al. (2012) found a strong association between cultural access and psychological well-being in their Italian population sample, and they also demonstrated that socially oriented forms of cultural participation play a particularly prominent role in this relation (Tavano Blessi, Grossi, Sacco, Pieretti & Ferilli, 2014).

In the museum's field, some scholars identify museums as a restorative environment from emotive a cognitive points of view (Kaplan, Bardwell & Slakter, 1993), stressing the effects of restorative attributes on the psychological well-being of museum visitors through deductive qualitative approach (Packer, 2008; Packer & Bond, 2010).

Binnie (2010) demonstrates the reduction in the anxiety of visitors and museum staff following the viewing of an art exhibition. Fenton (2013) argues that learning and participation in artistic activities within a museum have an impact on social and individual well-being.

Ander et al. (2011) show that museum engagement can affect the dimension of well-being and health in a personal, social, cultural and physical way. They suggest a tentative *Wellbeing Outcomes Framework*. Speaking on personal well-being, the authors identify aspects like a satisfying life, vitality, positive functioning, resilience and self-esteem, and emotional well-being. They also underline different museum activities that can have an impact on these aspects, like audience development strategies, learning and education program, social inclusion and volunteering activities.

In rural areas, this topic has been left relatively unexplored and has mainly been addressed in the context of the relationship between participating in arts activities and social well-being (Anwar McHenry, 2005, 2009, 2011; Scott et al., 2016). Anwar McHenry (2005) conducted a quantitative survey on arts participation and well-being in a rural community in Western Australia's Great Southern region. The study combined social capital, life satisfaction and happiness indicators to gauge a measure of subjective well-being and correlated the responses on these factors with participation in both the arts and other community-related groups and activities. Significant relationships were found with both arts and community participation in relation to general positive and negative effects, personal attitudes and traits, and trust and solidarity within the community. Arts participation was more strongly associated with the direct cognitive measure of *"satisfaction with the quality of life"* than community participation was. Furthermore, in a subsequent study,

McHenry (2011) shows how participation in the arts encourages civic participation and provides an opportunity for social interaction that is essential to the health and well-being of rural residents.

Both social psychology and economic literature have extensively shown the extent to which interpersonal relationships may be regarded as a key determinant of subjective well-being (Diener et Seligman, 2002; Ariely, 2011). As Becchetti et al. show, cultural participation is a powerful platform for the production of relational goods (Becchetti, Trovato & Bedoya, 2011). The social element of cultural value is important from the point of view of well-being not only because it facilitates the establishment of non-instrumental relationships, but also because it allows the sharing of identity values and the creation of a sense of place and belonging. As Throsby (2001) argues, cultural value is a macro-set composed of aesthetic, spiritual, social, historical, symbolic and educational value. Each of these meanings depends on a different aspect of the overall value subsistent in an object, an institution or experience.

Theoretical model and hypothesis development

Following the argumentations of the literature review, we can hypothesize that a participatory museum experience within a rural area can have a relationship with the well-being of museum-goers.
To verify this, I start from the assumption that the museum experience is a complex phenomenon composed of different elements that interact with each other.
In this case, there is a special bidirectional rapport between visitor and museum, so what I want to study is whether the strong active rapport that visitors have with the museum has a relation with their psychological well-being, and how. At the same time, as subjective well-being literature shows (Tavano Blessi, Grossi, Sacco, Pieretti & Ferilli, 2016; Grossi et al., 2012; Grossi, Sacco, Blessi & Cerutti, 2011), the socio-demographic characteristics of individuals affect their psychological well-being.
So, I combine these elements:

- Users' sociodemographic characteristics and cultural habits
- The elements that characterize the user-museum rapport in a participatory museum in a rural area: active participation, engagement, frequency, satisfaction
- Museum-goers' psychological well-being

Figure 1. Theoretical model
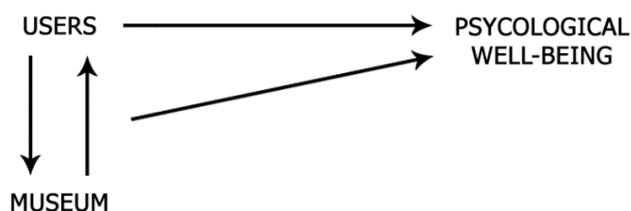
Methodology

The methodology used is the case study approach. I choose this methodology because I am investigating a complex contemporary phenomenon in a particular specific case (Yin, 2009). As a case study, I consider a small local museum in Portugal: The Costume Museum of São Brás de Alportel (MuT).

MuT is chosen for four main reasons: a) it is a participatory museum, integrated into its community, this means that does not have the psychological barriers of access that characterize many cultural institutions; b) it has a small community of museum-goers that permits the development of a population study; c) it offers many special events that involve the local community and facilitate my investigation; d) it is located in a rural area of the Mediterranean region where no such study has been carried out about museum experience and well-being.

Data collection and data processing

The first part of the research was characterized by the exploration of the ethnographical and territorial aspect of the case study by interviews with museum's director and staff, the archived report provided by the museum and direct observations on site.

Afterwards a questionnaire was submitted to a random sample of 75 subjects predominantly inside the museum in February 2017. The small sample represents almost the full population of local museum users repeating their visit throughout the year.

The questionnaire contained 36 questions divided into 4 sections: 1) sociodemographic data of users; 2) active participation and engagement in the museum; 3) general cultural consumption level; 4) psychological general well-being index.

The first part covered the demographic and social characteristics of the respondent: gender, age, birthplace, schooling, civil status, profession, monthly income level. I collected data on socio-demographic variables which have usually been taken into consideration in studies on perceived psychological well- being (see Tavano Blessi et al., 2016; Grossi et al., 2012, 2011), except the number of diseases, which was not possible to investigate in this context.

In the second part, I wanted to analyse the relationship between the museum and its visitors. Here I investigated active participation and engagement. Active participation refers to cases when individuals do something in the museum when they do not limit themselves to passively absorbing cultural stimuli but are motivated to put their skills at work. I gave the definition for cultural participation as direct involvement either creatively or by helping to organise or promote any arts activity as a volunteer or more amateur participant in the museum (organization of activities and/or projects within the museum; collaboration in museum activities and/or projects; attendance in museum activities and/or projects; none of the previous, see Simon N, 2010). The variable of active participation is built attributing 1 point for each aforementioned activities.

Also, I ask about the satisfaction of visitors' interests and needs through museum activities (does the community see its interests, needs and expectations met by the museum? See Falk, J. 2009, C. F. Kreps, 2008;

Wood & Wolf, 2008). Along with the participation variable, this describes the visitors' engagement with the museum. Finally, in this section, the frequency of visits in one month was measured.

The third part explored the cultural consumption habits of the respondent during the past six months, in terms of a structured questionnaire on the frequency of attendance to various categories of cultural activities: reading books; going to the cinema; going to the theatre; attending classical, jazz , traditional, pop or rock concerts; attending art exhibitions, talks, activities, classes or workshops; engaging in local community social activities; practicing sports and watching live sport events. The frequency of access was measured on a scale ranging from 0 (no access on a half-yearly basis) to 180 (constant daily access). The different cultural variables covered by the survey, in wide accordance with the literature (see Ferilli, Grossi, Sacco & Tavano Blessi, 2017) were taken as a proxy of individuals' levels of "cultural attendance", which I called the Global Cultural Attendance Index. The Global Cultural Attendance Index is composed by Cultural Index, Sports Index and Social Index, based on the activities taken into consideration.

The fourth part of the questionnaire measured the level of subjective well-being experienced by the respondent during the last four weeks, as measured by the Psychological General Well Being Index (PGWBI; Dupuy, 1990). The Psychological General Well-Being Index (PGWBI) has been validated by decades of clinical practice. PGWBI was developed as a tool to measure self-representations of intra-personal affective or emotional states reflecting a sense of subjective well-being or distress, and thus captures what we could call a subjective perception of well-being. The short version adopted for the study has been validated in a long-term project carried out from 2000 to 2006 in Italy (Grossi et al., 2006).

The statistical analysis adopted was the *Pearson correlation* with the *Permutation Test* ($p < 0.05$), as is appropriate, in order to test the associations between variables and their significance respectively. The experiment's data has also been analysed by means of the Auto-CM Artificial Neural Network, constructing a semantic connectivity map (Semeion©) (Buscema & Grossi, 2008), so as to detect more elusive relations among variables and develop a comprehensive global picture of the complexity.

Case Study

The Costume Museum of São Brás de Alportel (MuT) was born as a space for exhibitions and ethnographic research in São Brás de Alportel, a small town of about 10,000 inhabitants in Algarve, in the south of Portugal. It is located in a predominantly rural context characterized by the cork industry and the production of dried fruit. Far from the main tourist destinations of the region, this territory has managed to maintain a certain authenticity in its traditions, rituals and customs thanks to the dynamic activity of local associations and groups. 15% of residents are from Northern European countries; they are mostly retired, having moved to São Brás in the last 20 years. This intercultural mix has slowly influenced the local population in organizing cultural and artistic activities in the museum, and it has helped create new practices within the institution's more traditional activities like thematic exhibitions and conservation of the collection. MuT currently counts on the participation and involvement of the local population as volunteers. The inhabitants organize and collaborate

on different museum activities (Tab.1). The concept of participation in the museum extends to decision-making and content producing.

In 2014 the museum joined the SoMus network, a research project (SSH - RRI) led by Dr. Lorena Sancho Querol of the Centro de Estudios Sociais of the University of Coimbra, co-funded by the European Social Fund through the Operational Program of Human Potential and the Portuguese National Fund through the Foundation for Science and Technology, to investigate the epistemological framework of the emerging museum function of participation.

The museum is characterized by participatory management, based on the daily interactions between museum staff and local agents in the shared construction of projects and initiatives. The museum's management model is based on "layers of cultural participation" (Sancho Querol & Sancho, 2015), motivated by the pursuit of financial autonomy and full sustainability in order to reach full freedom in its actions. We are faced with a traditional museum that has opened up to the principles of Sociomuseology and is aware of the role of culture in integrated territorial development (Sancho Querol & Sancho, 2015). The museum becomes a collective project. In this museum, we are not just talking about people as public visitors, but also, and above all, as constructors of the museological process. In fact, the number of occasional visitors and users in 2016 was respectively 6,834 against 29,743 visits from users that came at least 80 times per year (*source: internal archived report provided by museum's director during the interview*). MuT is a cultural space for sharing value, expanding visitor capacity of expression and creating relational goods. It is a museum and it works also as social backing.

Table 1. Ongoing activities in MuT in February 2017. *(Source: direct observations).*

Museum Activities
Exhibitions
Inventory and Conservation
Potography storytelling project
Photography club
Theatre
Jazz concerts
Classical concerts
Blues concerts
Fado concerts
Portuguese folk music
Ukraine folk music
Choir
Books presentations
English letterature course
Portuguese lessons
Painting lessons
Mosaic workshop
Yoga
Taichi
Zumba
Pilates

Findings

The sample consists of 50 females and 25 males, of which 37 are from Portugal and 38 from other countries, predominantly (21) from Northern Europeann. The sample is almost completely composed of residents of São Brás de Alportel or the surroundings. Tourists are only 2 subjects out of 75.

The sample's main characteristics are summarized in Table 2. The majority of the sample (32%) is over 65 years old. 17% is retired, 8% is students and 29% is working in the cultural or educational field. Regarding the educational level, the majority of the sample (43%) has a high school diploma and 35% has a University degree. The majority of respondents claimed to earn in the range of 500 - 1000 euros per month (32%), 27% did not answer the question. Among the others, the second most frequent level of income is in the range of 1000-1500 euros (17%). These numbers agree with the monthly wage average in Portugal.

The average frequency of visits to the museum is about 7 times per month. 40% of the sample has organized at least one activity in the museum, 59% has actively collaborated in the museum's activities and 88% has attended events or activities. 29% has done all 3 things. Furthermore, the great majority of the sample (92%) states that the museum responds to his interests (Table 3).

We are faced with a population that is very involved in the museum activities and also in its decision-making. So, most of the sample is engaged with the museum.

Table 2. Sample description.

Sog		75	100%
1.1 Gender	F	50	67%
	M	25	33%
	tot	75	100%
1.2 Age	< 15	0	0%
	15 - 24	11	15%
	25 - 34	5	7%
	35 - 44	15	20%
	45 - 54	9	12%
	55 - 64	11	15%
	65 +	24	32%
	tot	75	100%
1.3 Country	U.K.	15	20%
	Netherlands	5	7%
	France	2	3%
	Germany	4	5%
	Switzerland	1	1%
	Finland	1	1%
	Ucraina	5	7%
	Canada	1	1%
	USA	1	1%
	Portugal	37	49%
	New Zeland	1	1%
	Mozambico	1	1%
	Angola	1	1%
	tot	75	100%
1.4 Studies	Elementary/Middle school diploma	8	11%
	High school diploma	32	43%
	Degree	26	35%
	Master degree	7	9%
	PhD	0	0%
	ND	2	3%
	tot	75	100%
1.5 Marital Status	Single	21	28%
	Married	36	48%
	Divorced/Separeted	14	19%
	Widowed	4	5%
	tot	75	100%
1.6 Profession	Retired	14	19%
	Student	6	8%
	Educational field worker	12	16%
	Cultural field worker	10	13%
	Other	30	40%
	ND	3	4%
	tot	75	100%
1.7 Monthly wage	< 500	9	12%
	500 - 1.000	24	32%
	1.000 - 1.500	13	17%
	1.500 - 2.500	8	11%
	> 2.500	1	1%
	ND	20	27%
	tot	75	100%

Table 3. Sample museum engagement

MUSEUM ENGAGEMENT			
2.2 Organize activities	Yes	30	40,00%
	No	45	60,00%
	tot	75	100,00%
2.3 Collaborate in projects	Yes	44	58,67%
	No	31	41,33%
	tot	75	100,00%
2.4 Attend activities	Yes	66	88,00%
	No	9	12,00%
	tot	75	100,00%
2.5 Museum responds to interests	Yes	69	92,00%
	No	6	8,00%
	tot	75	100,00%
2.6 Museum responds to needs	Yes	58	77,33%
	No	17	22,67%
		75	100,00%

As we can see from table 4, many variables significantly correlated with the Psychological Well-Being Index are linked to the museum experience.

The Social Index represents the collective and social voluntary activities that are carried out by individuals. The index is in its turn correlated to the voluntary active participation in the museum.

High engagement, active participation and high frequency of visits to the museum are strictly connected to the psychological general well-being variable.

It seems that the interaction between the museum and the users is linked to the perception of their subjective well-being. High engagement with the museum means that visitors have done at least two activities between organizing, collaborating and attending and that they are satisfied by the museum both in terms of interests and needs. The study shows that these people who have a strong awareness of the value of the museum and actively participate in its cultural activities also have a good perception of their subjective psychological well-being. The frequency with which interviewees go to the museum is also correlated to the PGWBI. Frequency underlines a constant commitment to the museum and to other users.

In this case, the socio-demographical variables, like income, age and education, do not seem to be positively significant in relation to the psychological well-being index. Instead, regarding negative correlations with the PGWBI, the most significant variables are monthly income (< 1.000 euros) and, immediately after, low engagement with the museum (low participation and satisfaction) and low frequency of visits.

To facilitate the reading, only correlation values larger than 0.2 and lower than - 0.2 are reported in Table 4 and Table 5 respectively.

Table 4. Factors positively affecting Psychological General Wellbeing Index (linear correlation index with wellbeing score).

VARIABLES	PEARSON CORRELATION
Voluntary social activities	**0,360****
Social Index	**0,344****
High Engagement	**0,297****
Collective activities	**0,257***
Active Museum Participation	**0,249***
High Frequency	**0,244***
Museum Satisfaction	**0,238***
N/A Monthly Wage	0,224
Male	0,213

*p < 0.05, **p < 0.01, ***p < 0.001*

Table 5. Factors negatively affecting Psychological General Wellbeing Index (linear correlation index with wellbeing score).

VARIABLES	PEARSON CORRELATION
< 1000 euros monthly wage	**-0,352****
Low engagement	**-0,297****
Low frequency	**-0,244***
High School Diploma	-0,222
No cultural or educational worker	-0,218
Female	-0,213

*p < 0.05, **p < 0.01, ***p < 0.001*

Anyway, despite high museum engagement, the individuals' general cultural consumption is medium-low. The chart (Fig 2) shows the average cultural consumption per capita over six months.

It shows how sports activity is predominant. In the second positions, we find voluntary and collective activities. Reading books, going to exhibitions and attending concerts of classical and jazz music are the activities that stand out among the ones most strictly considered cultural consumption. Attendance in theatre remains low, even though there is a course inside the museum.

There is no correlation between the mere consumption of cultural activities and the perceived psychological well-being. To explain this phenomenon, we can refer to literature that demonstrates how in contexts where cultural consumption is low, this relationship is weaker (Tavano Blessi, Grossi, Sacco, Pieretti & Ferilli, 2016). In fact, the well-being implications of cultural attendance are very sensitive to the social context: levels of individual cultural attendance have very different impacts on well-being depending on whether the social context is characterized by generally high or low cultural attendance levels. In this specific case, the Costume

Museum of São Brás de Alportel is placed in a rural context where the cultural and recreational activities are mainly offered by the museum itself and have still failed to involve the whole community of the town. So, the level of general cultural attendance outside of the museum context is low and is not perceived as critical. However, we note a significant positive correlation between the Cultural Index, the Social Index, the high frequency of visits to the museum and the satisfaction of interests and needs by the museum (Table 6).

This may mean that there is a relation between museum volunteering activities and the general cultural consumption of individuals.

Figure 2. Average of cultural consumption per-capita in six months
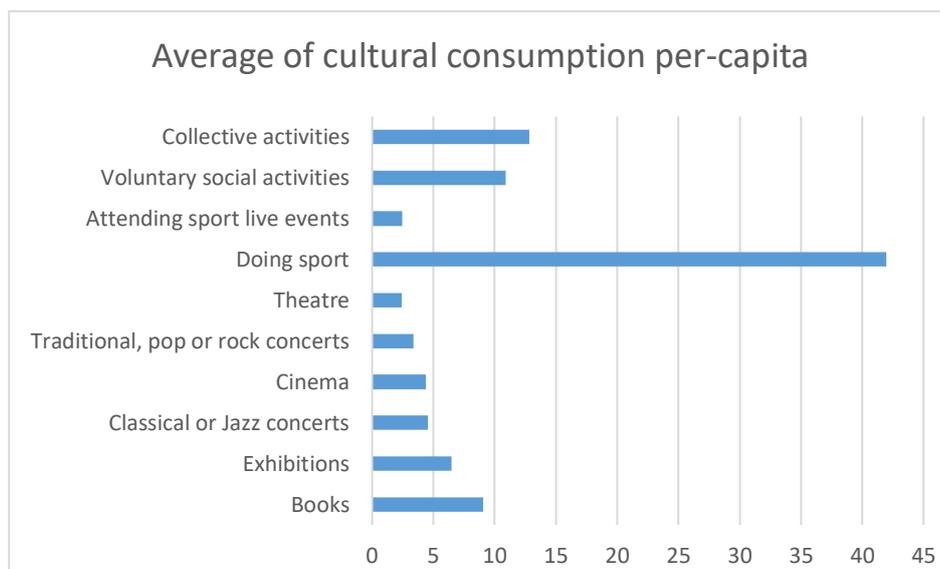
Table 6. Factors positively affecting the cultural passive consumption (linear correlation index with cultural index score)

VARIABLES	PEARSON CORRELATION
Global Index	**0,671***
Sport Index	**0,315**
Social Index	**0,302**
Over 65 years old	**0,276**
Retired	**0,244***
High Frequency	**0,242***
Museum Satisfaction	**0,237***
Cultural field worker	0,197
Female	0,134
From Other Country (no Portugal)	0,133
Active Museum Participation	0,120
Student	0,110

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

The experiment data has also been analysed by means of the auto-CM Artificial Neural Network to detect more elusive relations among variables and develop a comprehensive global picture of the complexity.

The PGWBI variable is divided into severe distress, distress, no distress and positive well-being state variables based on the PGWBI scores. There is severe distress for PGWBI values below 60, distress for PGWBI values between 60 and 70, no distress for PGWBI values between 70 and 90 and wellbeing for PGWBI values above 90. The other continuous variables (active museum participation, museum satisfaction, cultural index, social index, sport index, global index) are divided into high and low. In response to some lack of data in the educational and professional field variables, these are not taken into consideration in the Auto Contractive Map.

As we can see by looking at the map, positive well-being is strictly connected with high museum engagement, i.e. there is a connection between high museum participation and high museum satisfaction. At the opposite end, in fact, we find that severe distress conditions are strictly connected with low museum engagement, low museum participation and satisfaction and low frequency of museum visits. This shows how the museum participatory experience is related to the perception of subjective psychological well-being, which is affected by engagement, active participation and satisfaction of the user's needs and interests. The condition of no distress is strictly linked with the high social index that reflects the voluntary activities in the museum, highly active participation and the creation of relational goods.

Finally, the distress condition is also related to the females that do not that attend cultural, social or sports activities. From the maps, it seems that museum satisfaction comes from the "new resident", meaning the people that come from other countries and are now living in São Brás de Alportel. People from Portugal, especially the young ones, seem to enjoy the museum less.

Figure 3. Semantic connettivity map (MST) generated by the auto-CM ANN.

Direct links denote strong association among variables. The red node denotes the centre of the graph.
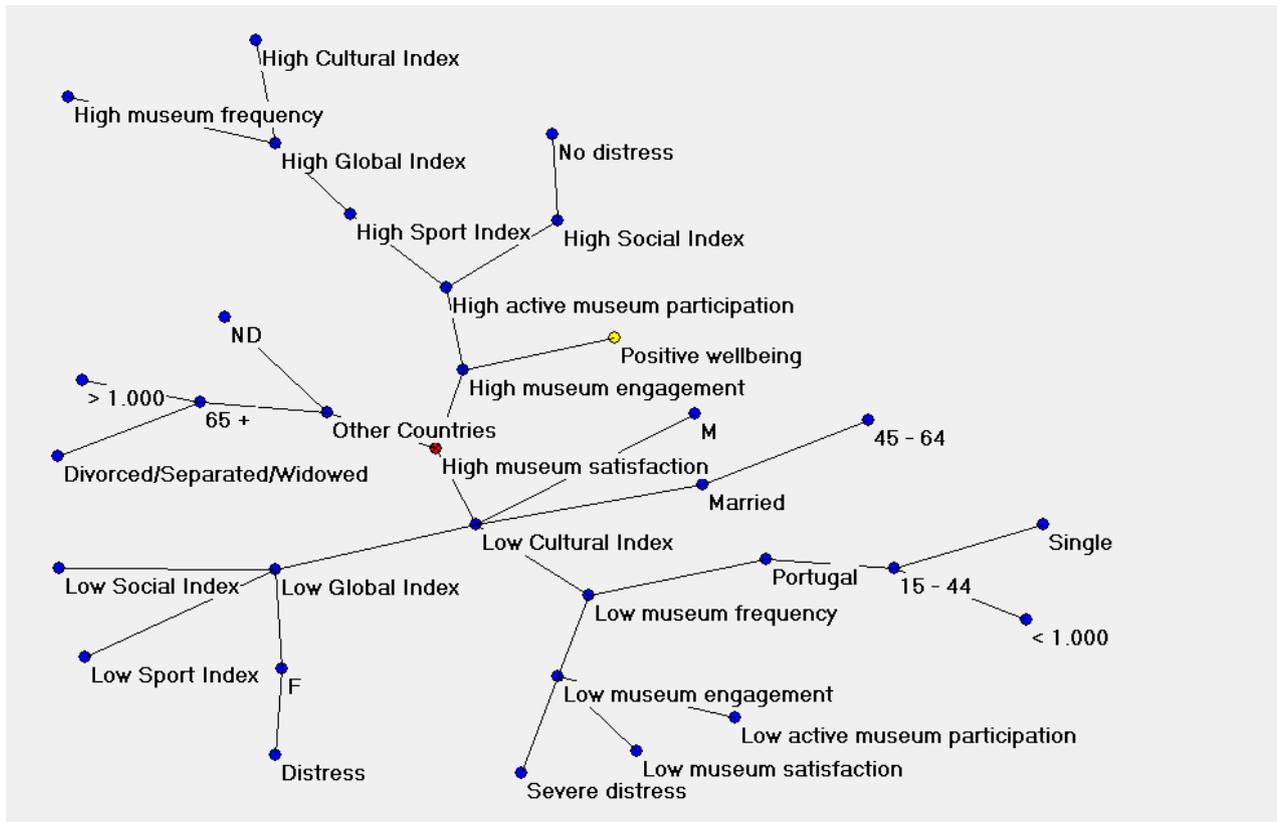
Discussion and conclusions

In the past years, social responsibility towards communities has become a crucial issue for all museums (Cerquetti, 2015; Council of European Union, 2014; ICOM, 2011). Museums have been asked to operate in the service of society and its development and sustainability. From the 21st-century the new objective is making museums drivers of local development like the sustainable improvement of the quality of life and the context in which people live. The concepts of collective responsibility for the heritage of a local community, participatory practices and management, and the need to listen to visitors' needs and interests are among the forms of local museum practices that contribute to this sustainable development.

The aim of the present study is to investigate the relation between a participatory museum experience and the psychological well-being of its users in a rural context.

This work does not demonstrate a causal relation between the variables, but show preliminary evidence of the relevance of participatory museum experience in rural areas for the psychological well-being of its users. It stands to lay the foundation for the development of future longitudinal studies investigating the causality of this relation.

However, the research adds up to those of the literature in which it is inserted, demonstrating a connection between cultural participation and subjective well-being, that allows us to reflect on the role of the participatory museum for the well-being of its users in rural areas.

The study shows that active participation and engagement in the museum are closely related to the perception of subjective psychological well-being, more than socio-demographic variables like income or age. This means that the participatory approach of a rural area's museum could have an impact on rural residents' well-being by providing them with the capability and social experiences.

The important role that an active attitude and the participatory approach play in the sphere of psychological well-being emerge quite clear from the study. MuT gives local residents the opportunity to put their abilities to work in the cultural field and for cultural heritage, to develop a sense of identity and belonging, and to create relational goods. Therefore, this study confirms the theory that the social dimension is what has a greater connection with individual psychological well-being. The community participation management converts the museum into a hub for cultural and social capital that can help cope with the lack of a strong sense of community that we now find also in rural places (Balfour, W-P Fortunato & Alter, 2016).

Promoting volunteering activities is a tool for engaging the community with the museum (Bollo, 2013), and it could contribute to increase personal well-being, as an opportunity for improving confidence, developing new skills and the capacity to work, and socializing (Ander et al., 2011).

In this rural context, the participatory museum experience is shown to be relevant and correlated to museum-goers' perception of their psychological well-being.

Given the correlation between the frequency of museum visits and the cultural index, I suggest that participating in the museum and recognizing its value could be influential also on an individual's passive cultural attendance. In this context, active cultural and relational participation in the museum can be the first steps for the education of individual cultural consumption. Participatory sociomuseology is a tool for cultural mediation. Active cultural participation in a museum, then, could acts toward the enhancement of well-being by bringing about certain outcomes, such as an increased level of relational goods and individual cultural consumption.

In conclusion, the suggestion is that museum policies for rural area museums could be oriented around social museology principles and participatory management in order to stimulate visitors to develop more culturally and community-oriented habits, with possible positive impacts in terms of well-being.

7. The impact of museum experience on the individual psychological well-being of visitors.

Abstract

Despite a growing interest over the last years in the relationship between culture and health, little attention has been dedicated to the relationship between museum experience and the psychological well-being of museum-goers. An increasing amount of the literature is demonstrating the effects of cultural and museum practices on psychological well-being, but there are still few studies that investigate this relationship outside of the specific programs designed for people with mental or physical diseases, especially in the Mediterranean region. Indeed, within museum visitor studies, the impact that is most recognized by scholars is the learning one. The vision of the museum as an environment related to well-being is still limited. The aim of this study is to explore the relationship between the museum experience, museum users, and their psychological well-being.

I consider a case study of an ethnology museum situated in Valencia, Spain, in which I conducted a study on 285 museum visitors on their sociodemographic characteristics and cultural interests, museum experience and psychological well-being. This article focuses on data collected using the Psychological General Well- Being Index (PGWBI) as well as through structured interviews. The findings show a correlation between users with a high level of cultural interests, a satisfying museum experience and the subjective perception of visitors' psychological well-being.

Introduction

Nowadays health is increasingly recognised as a social issue, linked to multiple and complex factors, like lifestyle and social and economic circumstances. Over the last decades, the concepts of health and well-being have become more holistic, so much so that they are widely used in policies as an index to measure a country's "real" wealth. The concept of well-being is very broad and open and is able therefore to bring culture to the same policy table as other major policy goals around health, education and the economy.

Cultural practices and consumption have started to be considered important elements in the determination of the well-being and health of a nation as well as of an individual.

Furthermore, consequently, there is a growing literature demonstrating the effects of cultural practices and consumption on health and well-being (Arts Council England, 2014; Bygren et al., 2009; Grossi, Blessi, Sacco & Buscema, 2012; Grossi, Sacco, Blessi & Cerutti, 2011; Konlaan, Bygren & Johansson, 2000; Wheatley & Bickerton, 2017). This has led to the birth of an increasing body of museum practices addressing community health and well-being, health promotion and education (Dodd & Jones, 2014, H+C, 2012). In the literature, though most of the studies that concern the relationship between museums and wellbeing focus on measuring the outcomes of activities specifically designed to promote the well-being of certain categories of people or to accompany patients in care (Chatterjee, Vreeland & Noble, 2009; McGuigan, Legget & Horsburgh, 2015; Morse, Thomson, Brown & Chatterjee, 2015; Todd, Camic, Lockyer, Thomson & Chatterjee, 2017).

Despite all this, within museum visitor studies, the museum as an environment related to psychological well-being is not fully recognized.

Contrary to what is the case for the impacts on learning of the museum experience, the number of studies that have analysed the impact of the museum experience on visitors' well-being is still limited.

Even with this growing interest in the ties between culture and health that sees museums as potential partners in the treatment of infirmity (Camic & Chatterjee, 2013), few studies are dedicated to the relation between museum experience and the psychological well-being of museum-goers. Thus, a more in-depth analysis is needed.

Moreover, when we talk about museums and well-being, most studies and projects have been carried out in the United Kingdom, but are still lacking in Mediterranean countries.

The aim of this study is to explore the rapport between the museum experience and the psychological well-being of visitors in a Mediterranean country.

Literature review

In the last years, the museum field has been paying increased attention to the impact of visiting experiences on museum-goers, for this determines the long-term effect that a museum has on its visitors and that they can take home with them. As shown by several scholars in the field of visitor studies, museum experience begins long before the visitor arrives and continues long after the visit is finished (Falk & Dierking, 2013; Hooper-Greenhill, 2000; Kirchberg & Tröndle, 2012; Pearik, Doering, & Karns, 1999). Museum experience is a spatial, chronological and causal dimension of visiting a museum (Kirchberg & Tröndle, 2012).

In any museum, visitors come with different backgrounds, expectations, prior experiences and interests that may influence their visit; then, a museum has its physical environment, its particular characteristics, its exhibitions and contents that can have an impact on these different human dimensions; together, these factors led to the post-visit consequences.

As definitively stated in the 22nd General Assembly of the ICOM held in Vienna in 2007, a museum is an "institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment" (ICOM Statutes, Article 3, Section 1).

Indeed, among scholars, the impact of the museum experience on visitors that is most recognized by scholars is the learning one. For example, Packer sees museum experience as an educational leisure activity and uses the term "learning for fun" to refer to the phenomenon in which visitors engage in a learning experience because they value and enjoy the process of learning itself (Packer, 2006). Hooper Green-Hill underpins the use of the Generic Learning Outcomes (GLOs), developed by the Research Centre for Museums and Galleries (RCMG) at the University of Leicester for the Museums, Archives and Libraries Council, to measure the outcomes of museum cultural learning (Hooper-Greenhill, 2004). For Falk and Dierking, a positive evaluation

of a museum visit depends on the degree of learning, mostly defined as the ability to recall information that was accumulated while visiting the museum (Falk & Dierking, 2013).

In fact, the educational and learning impacts of museum experience have been fully established all over the world, also because, starting from the nineties, education becomes one of the core activities practised by museums. Some scholars have also investigated the aims and benefits of visiting a museum which go beyond that of learning. For example, Kaplan, Bardwell & Slakter (1993) identified the museum environment as a restorative environment both from a cognitive and an emotional point of view. They analysed focus group comments that had been collected for a different purpose to determine whether, in talking generally about their museum experience, participants raised any of the themes related to Kaplan's theoretical restoration construct (restorative attributes like fascination, being away, extent and compatibility; and restorative outcomes such as feeling calm or peaceful and engaging in reflection). Following in Kaplan's footsteps, Packer (2008) identifies, among the benefits of a museum visit, psychological well-being, subjective well-being and mental restoration. She adopts a deductive qualitative approach to investigate the meaning and value of a museum visit from the visitors' perspective and finds that the satisfaction derived from a museum experience impacts psychological and subjective well-being and mental restoration.

In a follow-up article, Packer and Bond (2010) expanded the concept of restoration as an important museum function for visitors. They stressed the effects of restorative attributes, like fascination, being away, extent and compatibility, on the psychological well-being of museum visitors. They underlined the importance of the physical environment of the museum, as physical environments can arouse satisfactory experiences that further impact well-being. In the same year, Binnie (2010) demonstrated the reduction in the anxiety of visitors and museum staff after visiting an art exhibition.

Recently, the studies on museum and well-being have mostly been oriented in the health field. The research lately focuses on measuring outcomes of museum practices specifically designed to promote the well-being of people with a disease. Chatterjee et al. uphold that handling objects in a museum has a positive impact on hospital patients' wellbeing (Chatterjee et al., 2009), noting an increase in self-reported measures of life satisfaction and health status. The study was conducted within the pilot project "Heritage in Hospitals" coordinated by University College London Museums & Collections and University College London Hospitals Arts.

In a follow-up study, Ander, Thomson, Noble & Chatterjee (2011) argue that museum engagement can affect the dimension of health and well-being in personal, social, cultural and physical ways. They suggest a tentative Wellbeing Outcomes Framework for museums. Speaking of personal well-being, the authors identify aspects like a satisfying life, vitality, positive functioning, resilience and self-esteem, and emotional well-being and the ways in which museums can improve these.

Morse et al demonstrate how creative museum activities result in greater levels of confidence, sociability and well-being in participants that were in recovery (Morse et al., 2015). Todd et al present research findings that elucidate how museum programs create opportunities to enhance well-being and health and change experiences of social isolation in older adults (Todd et al., 2017).

The last study from this group of scholars consists of a review focused on the evaluation of social prescribing schemes in the United Kingdom that were published in peer-reviewed journals and reports (Chatterjee, Camic, Lockyer & Thomson 2018). The schemes included the use of the arts, books, education and exercise "on prescription" for patients with mental and/or physical health issues. Outcomes included an increase in self-esteem and confidence; improvement in mental well-being and positive mood; and a reduction in anxiety, depression and negative mood.

As can be seen, most of the studies were conducted in the United Kingdom, where the potential of culture to contribute to national health and well-being has been widely recognised.

No such study has been carried out in the Mediterranean region.

Furthermore, many of these studies refer to specific programs aimed at accompanying patients through a treatment process. There is a lack in the literature of studies that investigate the impact the visiting experience has on museum-goers' well-being.

Theoretical model and hypothesis development

This work aims to investigate the relation between the psychological well-being of visitors and the museum experience in a Mediterranean country.

To realize this study, I took into consideration both the particular characteristics of the museum users, the various elements of the museum experience and the relation of the latter with the psychological well-being of visitors. I focus on the users' characteristics and perceptions of the museum experience. Following Falk's model (2009), I recognize that visitors come to a museum with different socio-cultural and personal contexts that influence their experience and, of course, its impacts. Furthermore, as demonstrated in the relevant literature, socio-demographic characteristics like age, income etc., directly influence the psychological well-being of users.

Thus, I put in relation three different elements:

- Users, as in their socio-demographic characteristics and cultural interests;
- The museum experience, as in the visitors' motivation to visit the museum, the frequency of visits, the perceptible impacts and global satisfaction;
- The psychological well-being of the visitors.

Figure 1 Theoretical model
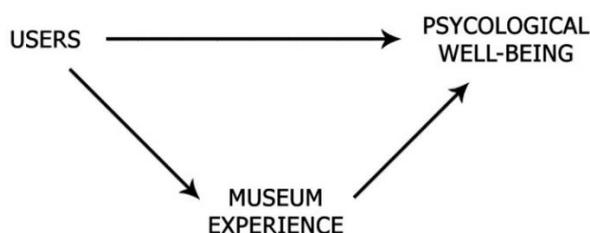
Methodology

The methodology used is the case study approach. Case study methodology is widely recognised in many social science studies especially when in-depth explanations of social behaviour are sought after.

As Yin (2009) argued it is "*an empirical inquiry that investigates a contemporary phenomenon (the 'case') in depth and within its real-world context*". I have chosen this methodology because I am investigating a contemporary phenomenon that has received little attention and needs to be evaluated in its own context, and also because the processes involve complex behaviour and the interaction of various agents. According to Yin's definition, I am dealing with an explorative case study (Yin, 2009).

The Ethnology Museum of Valencia (MUVAET) has been chosen for three main reasons: a) MUVAET offers many special events that involve the local community and thus facilitate this investigation; b) it is located in a Mediterranean Region; c) it maintains continuity with my previous study in which the museum chosen for the case study was also an ethnographic museum, but it differs from that for museology, context and offered activities. This allows me to make a comparison emphasizing the common elements and differences.

Data collection and data processing

The first part of the research consisted of the exploration of the ethnographical and territorial aspects of the case study through interviews with the museum's staff, archived report supplied by the museum and direct observations on site.

Afterwards, a questionnaire was personally submitted to a sample of 316 subjects visiting the museum in Spring 2018. The number of responses was 285.

The questionnaire contained different questions, including some that sought to analyse satisfaction with the technical aspects of the museum. The relevant parts for the purposes of this study are divided into 4 sections: 1) features of the museum visit; 2) sociodemographic data; 3) cultural interests; 4) psychological general well-being index. The first part investigates some aspects that characterize the museum visit like frequency, motivation (cognitive, identity, emotional, amusement, social), the impacts of the visit (cognitive, emotive, aesthetic) and the global satisfaction of the visit.

The second part covers the demographic and social characteristics of the respondent: the gender, age, monthly income level of the all family, nationality, schooling, socio-professional situation, job field and regularly spoken language.

I collected data on all the socio-demographic variables that are usually taken into consideration in studies on perceived psychological well-being (see Grossi, Sacco, Tavano Blessi & Cerutti, 2011; Grossi, Tavano Blessi, Sacco & Buscema, 2011), except for the number of diseases, which was not possible to investigate in this context.

The third part investigates the general cultural interests of museum visitors. The various categories of cultural interests taken into consideration are books, museums, out of museum exhibitions, monuments, cinema, theatre, contemporary music concerts, classical music concerts and opera.

The cultural interest was measured on a scale ranging from 0 (no interest) to 10 (maximum interest). The resulting variable of total cultural interest was divided into high (< 80 pt), medium (51 – 80 pt) and low (> = 50 pt) bands. The fourth part of the questionnaire measured the level of subjective well-being experienced by the respondent during the last four weeks, as measured by the Psychological General Well Being Index (Dupuy, 1990). ThePsychological General Well-Being Index (PGWBI) has been validated by decades of clinical practice. PGWBI was developed as a tool to measure self-representations of intra-personal affective or emotional states, reflecting a sense of subjective well-being or distress, and thus captures what we could call a subjective perception of well-being. The short version adopted for this study was validated in a long-term project carried out from 2000 to 2006 in Italy (Grossi et al., 2006).

The PGWBI has been used in previous research in cultural fields to investigate the interaction between culture, health and psychological well-being (Blessi, Grossi, Sacco, Pieretti, & Ferilli, 2014; Ferilli, Grossi, Sacco & Tavano Blessi, 2017; Grossi et al., 2012, 2011; Grossi, Tavano Blessi & Sacco, 2018).

To evaluate and analyse the data collected, the statistical analysis adopted was the *Pearson correlation* with the *Permutation Test* (p < 0.05), as is appropriate, in order to test the associations between variables and their significance respectively. Furthermore, so as to develop a possible picture concerning the relational grade between subjective well-being and the factors under investigation, a more sophisticated statistical technique was adopted, which refers to the artificial neural network, called Auto-CM (Buscema et al. 2008; Buscema and Grossi 2008). The Auto-CM is a method that provides the opportunity to draw a semantic map that underlines the relation between elements recorded and an individual psychological state, called Auto-CM (Semeion©) (Buscema et al. 2008; Buscema & Grossi 2008).

Case study

The museum, located in Valencia, Spain, has a permanent exhibition, organised around five areas that define the relationship between people and the environment in which they work: the town, the vegetable garden, the marshlands, the drylands and the mountains. The museum also has a temporary programme, which presents aspects of global cultural diversity through exhibitions, concerts, cinema programmes, show-cooking activities, educational workshops and the local museum fair (Etnopobles) (*source: an interview with museum's staff*). During my study, there was a temporary exhibition of black-and-white photographs of the Cabanyal, a district of the city of Valencia, taken between 1900 to 1991. The museum is equipped with various technological and interactive devices *(source: direct observation on site)*. Its audience includes both tourists and residents, with an average of 26,000 visitors per years (*source: internal archived report supplied by the museum's staff*). It is financed by the Provincial Council of València. The museum is in the centre of the urban context of Valencia. Valencia is the third largest city in Spain and it is a regional centre for culture and education. The Community of Valencia is rich in its geographical resources. In terms of the relevant statistics published by the Spanish Ministry of Education, Culture and Sports (2016), there are a total of 206

museums and museographical collections located in the Valencia Region, of which 93 are located in Valencia Province.

Findings

The sample consisted of 147 females and 138 males, which partly reflects the proportions across the Spanish population as a whole, which is composed of 23,777,015 females and 22,882,286 males (this data comes from the Instituto Nacional de Estatistica 2018). The effective age range of the sample was 23-83 of whom 65% was over 46 years old. The average educational level was quite high, with a remarkable share of university graduates (60%). The majority of the sample had a monthly income between 900 and 3000 euros. 79% was resident in the Valencian metropolitan area. Among the respondents, 30% worked in the cultural, creative or educational fields. The main characteristics of the sample are summarized in Table 1.

The cultural interests of the respondents were medium-high, with a total average of 70 points out of 100 (Figure 2).

Regarding the museum experience 38.60% of the sample was visiting the Ethnology Museum of València for the first time, 29,12% visited the museum in the last year and 32,28 % hadn't visited the museum for more than one year. This means that about 61,40% of the visitors had already been at the museum.

The motivation of the museum visit was composed in equal measure by a desire for knowledge (cognitive) and, more specific, a desire to know more about Valencian culture (cognitive-identity), and by wanting to feel emotions (emotional) and be entertained (amusement). The motivation listed less frequently was the social one; that is, being in the museum to accompany someone else (Figure 3). The sample proved homogeneous in assessing the perceived impacts, giving an average of 7 points out of 10 to each (cognitive, aesthetic, emotional impacts). The global satisfaction of the visit was on average 81.79 out of 100. The level of psychological well-being as measured through the short form of PGWBI resulted, on average, with the same level measured in other studies of the Italian population (Grossi et al., 2012, 2011) (77.96 vs. 77.76, respectively).

Table 1. Sample description

Gender		
F	147	52%
M	138	48%
Tot	285	100%
Age		
18 - 35	51	18%
36 - 45	49	17%
46 - 55	64	22%
56 - 65	60	21%
Over 65	61	21%
tot	285	100%
Monthly income in the all family		
no income	7	2%
< 900	17	6%
901 -1800	73	26%
1801 - 3000	79	28%
3001 - 4500	32	11%
>4500	11	4%
N/A	66	23%
tot	285	100%
Studies		
Elementary school diploma	17	6%
First part High school diploma	11	4%
High school diploma	74	26%
Bachelor's degree	62	22%
Master's degree	109	38%
PhD	12	4%
tot	285	100%
Relation with Valencia		
Resident	225	79%
Temporary resident	5	2%
Tourist	55	19%
tot	285	100%
Country		
Spain	268	94%
Other	17	6%
tot	285	100%
Socio-professional situation		
Student	18	6%
Looking for a job	18	6%
Employed worker	135	47%
Self employed worker	32	11%
House work	8	3%
Retired	74	26%
tot	285	100%
Job's field		
Cultural and creative field	38	13%
Education field	48	17%
Other field	199	70%
tot	285	100%
Usual spoken language		
Valencian language	52	18%
Castilian language	179	63%
Both Valencian and Castilian language	35	12%
Other language	19	7%
tot	285	100%

Figure 2. Total cultural interest per person
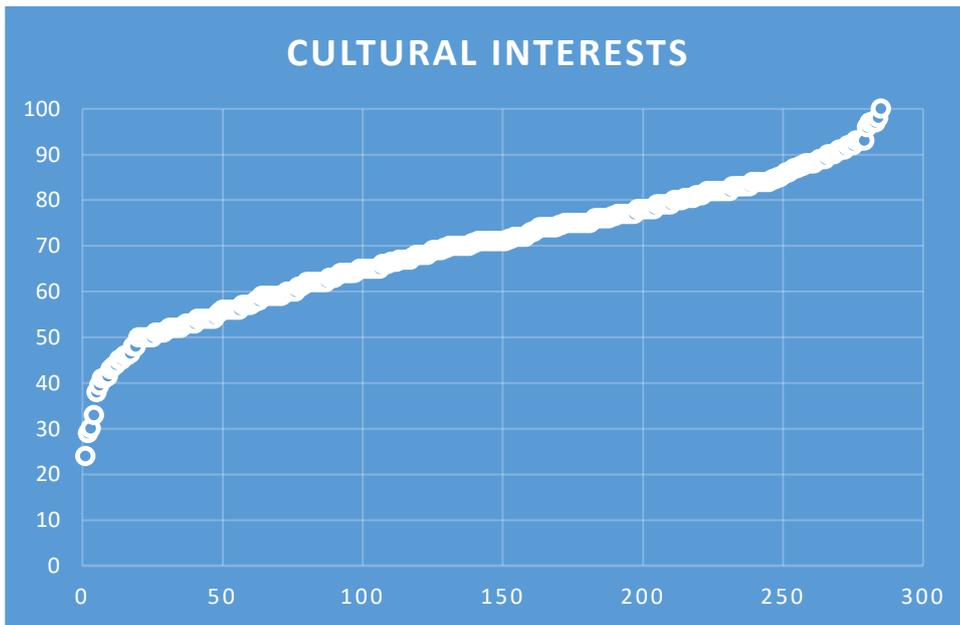
Figure 3. Average of each cultural interests
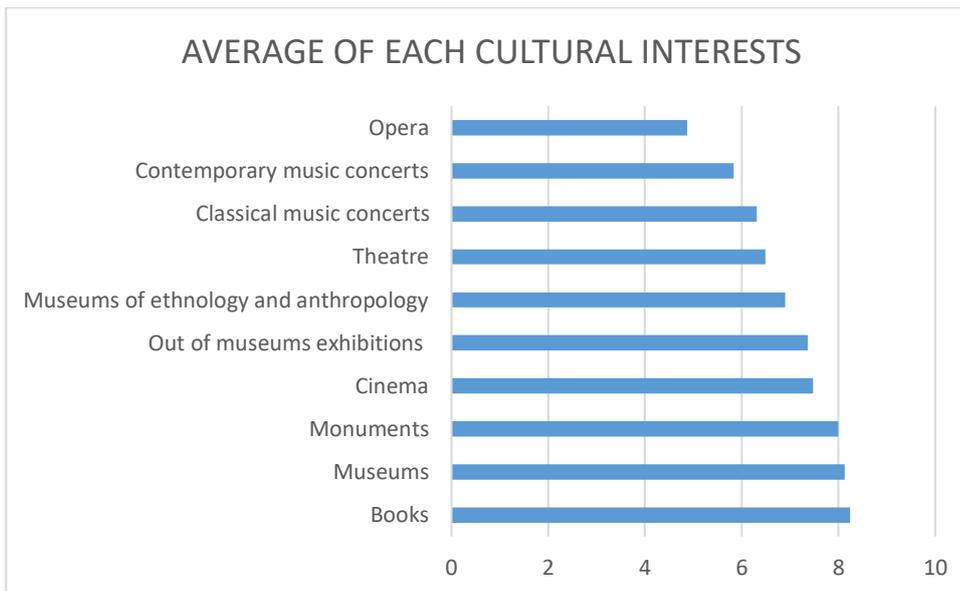
Figure 4. Average of the motivation to visit
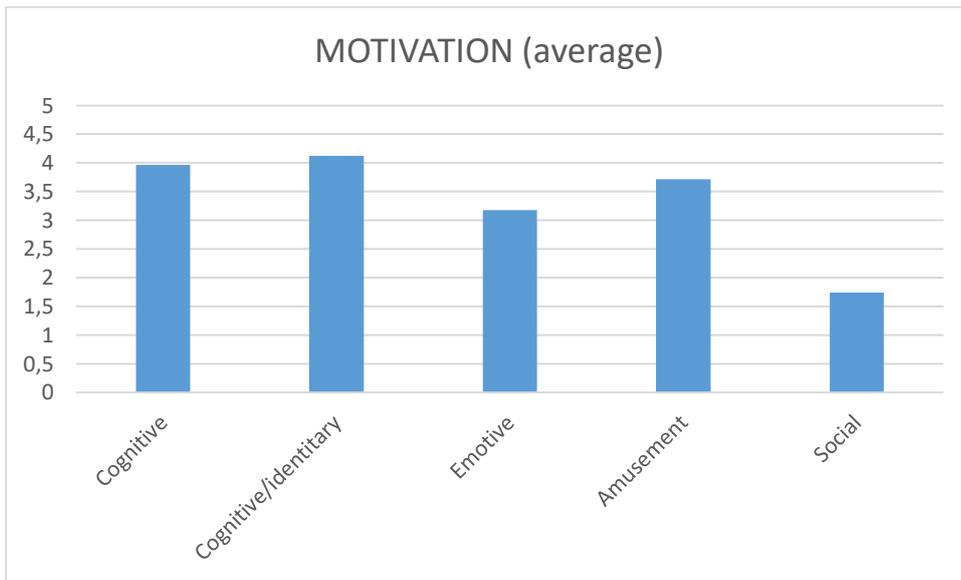
Figure 5. Psychological Well-Being Index

From the Pearson correlation test, there emerges a significant relation between PGWBI and the high cultural interests of museum visitors.

The correlation coefficients are low but significant, as the Permutation Test revealed, like in the previous studies carried out with the PGWBI. Table 2 shows all the significant correlations with the Psychological General Well-Being Index.

According to previous studies on the PGWBI (Grossi et al., 2012, 2011), the relevant socio-demographic variables are the male gender and a good income. In this case, instead, the PGWBI was linked with the condition of being retired (therefore of mature age), when usually there is an inverse linear relationship between age and the PGWBI value. This could be because the age average of my sample was higher than that of previous studies (51 vs 46). Furthermore, another socio-demographic variable correlated significantly with the PGWBI was speaking the Valencian language. Speaking the local language is an identity element that boosts the sense of belonging that can contribute to a positive perception of psychological well-being. Regarding the museum experience, among the different impacts, cognitive, emotive and aesthetic, the last one seems most related to psychological well-being.

This confirms theories that aesthetic experience has a noticeable impact on individual physical and mental health (Grossi et al., 2018). Sensitivity to beauty is related to a positive subjective perception of psychological well-being.

Another significative correlation concerns frequency. Users that had visited the museum more than once in the last year had a higher subjective perception of psychological well-being according to the PGWBI. Repeated visits create familiarity and greater engagement with the experience.

Table 2. Factors significantly affecting psychological well-being (linear correlation index with wellbeing score).

VARIABLES	PEARSON CORRELATION
High Cultural Interests	**0,192*****
Retired	**0,186****
Male	**0,161****
Aesthetic Impact	**0,149***
56 - 65 years old	**0,148***
Over 65 years old	**0,142***
Last visit in the past 12 months	**0,129***
Monthly income (3001 – 4500 euros)	**0,128***
Speaking Valencian language	**0,122***

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$*

Following my theoretical model, I find some interesting connection (Figure 5).

Some variables regarding the users' characteristics are also connected to the variables concerning the museum experience. High cultural interests and medium-high income (3001-4500 euros in a family) are both positively correlated with the aesthetic impact (0.29 and 0.15 respectively) as is the frequency (visiting the museum more than once in 1 year) (0.20 and 0.13 respectively). The users' characteristics of being male, 56-65, over 65 or retired are positively correlated with the PGWBI. Speaking the Valencian language is also correlated with the perception of the aesthetic impact of visiting the museum.

Figure 6. Findings
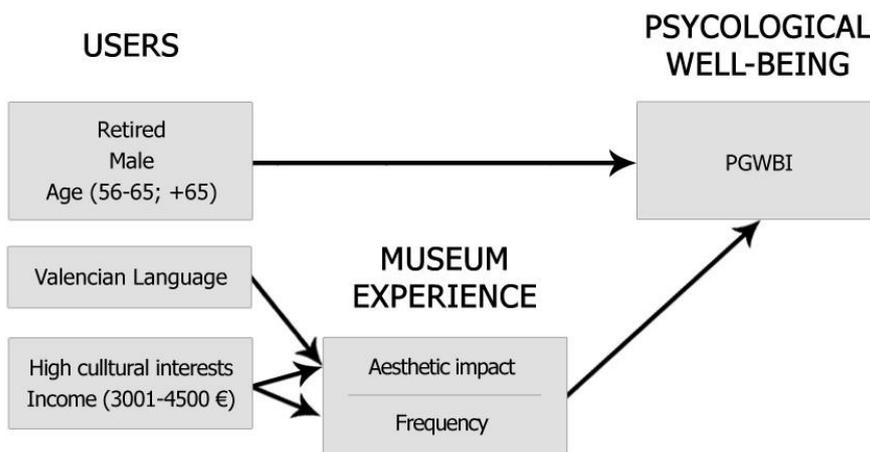
The data has also been analysed with the Auto-CM Artificial Neural Network in order to detect more elusive relations among variables and develop a comprehensive global picture of the complexity. Here I divided the Psychological General Well-Being Index in different bands based on its scores. There is severe distress for PGWBI values below 60, distress for PGWBI values between 60 and 70, no distress for PGWBI values between 70 and 90 and positive well-being for PGWBI values above 90.

As the map in Figure 7 shows, positive well-being is directly linked to a high satisfaction of the museum experience, which is related to high perception of the aesthetic, emotional and cognitive impact of the museum.

The high perception of these impacts is linked to various motivations that determined, in turn, the visit to the museum.

We can say that positive well-being is related with a positive perception of the elements that characterize the museum experience: visitor satisfaction, motivation (emotional, cognitive, identity, social) and impacts (cognitive, aesthetic, emotive).

This means that the capacity to appreciate the museum experience is related to the positive perception of one's well-being.

High cultural interests are linked to the motivation of leisure/amusement and are located in a branch placed between the network of positive well-being and no distress.

The no distress condition is directly associated with being resident in Valencia and with the frequency variables, in particular, those that indicate a repeated visit.

On the opposite ends, the condition of distress is strictly connected with a low perception of the museum's impacts along with medium-low visit satisfaction and a low income. Furthermore, in the same network branch, there is the frequency variable indicating the first visit to the museum, and thus a lack of familiarity with the experience.

The lack of motivation to visit the museum seems linked to having modest cultural interests, which are related in turn to a lack of university education and to working in different fields from education and culture.

Severe distress is strictly connected to the housewife condition: this underlines a social problem.

Figure 7. Semantic connectivity map (MST) generated by the auto-CM ANN. Direct links denote strong association among variables.
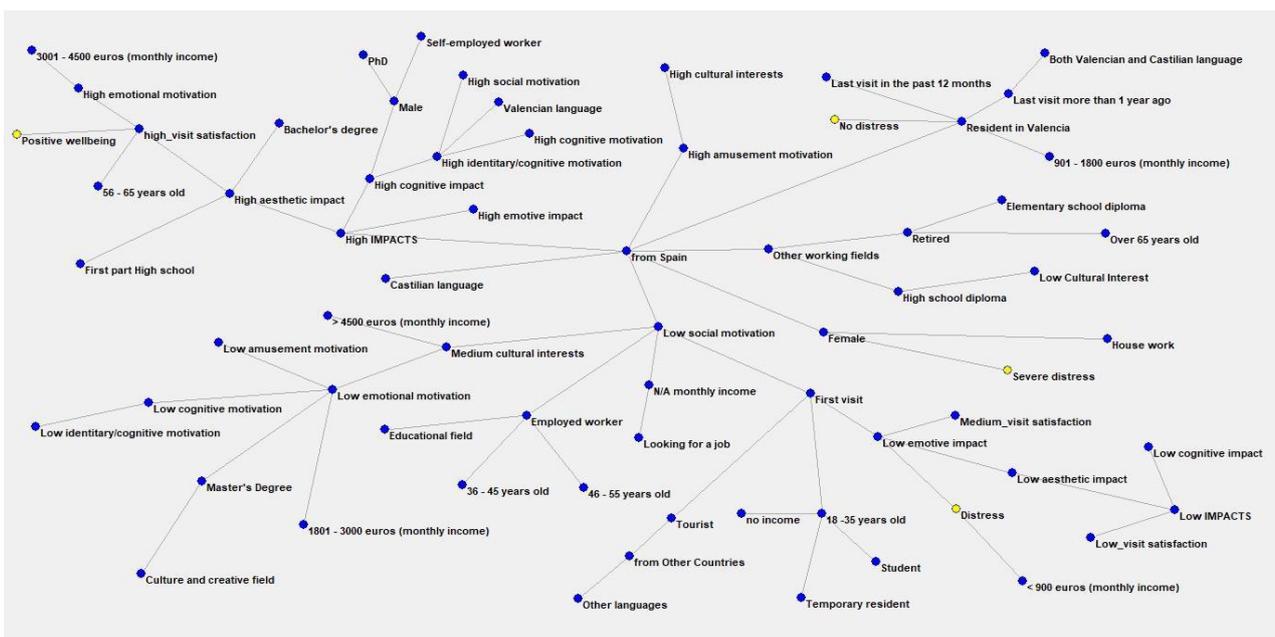
Results and discussion

The results are particularly significant because they underline a relation between the cultural practices and interests of museum-goers and museum-goers' perception of their psychological well-being.

The variable of high cultural interests appears to be the one that is most correlated to the perception of psychological well-being, even exceeding the socio-demographic variables listed as major well-being determinants in the subjective well-being literature (Grossi et al., 2012, 2011). In fact, having high cultural interests unexpectedly ranks as the most important determinant of psychological well-being for museum

visitors. So, for this specific population sample prepared for cultural consumption, having cultural interests is strictly connected to psychological well-being.

This confirms the theories of previous studies where Grossi et al found a strong relationship between cultural attendance and the psychological general well-being index (Grossi, Tavano Blessi, Sacco & Buscema, 2012; Grossi, Sacco, Tavano Blessi & Cerutti, 2011), especially in a context of high cultural supply and substantial cultural participation (Tavano Blessi et al., 2016). Their analysis suggests that culture has a relevant role as a determinant of individual psychological well-being, in that a selected subset of cultural variables turn out to perform among the best predictors of individual psychological well-being levels.

Having high cultural interests also influences the museum experience. In fact, between the variables related to psychological well-being, having high cultural interests is strictly connected with aesthetic perception and the frequency of visits.

Cultural interests help people develop their sense of beauty and aesthetic judgment. In turn, the aesthetic impact is correlated with PGWBI. On this, a recent study has shown how aesthetic visual stimuli may be very beneficial for the subjective psychological well-being of individuals. Grossi et al provide an experimental evaluation of the impact of aesthetic experiences, like visiting a cultural heritage site, in terms of stress reduction and increases in well-being (Grossi et al., 2018). The perception of beauty causes pleasant sensations. At the same time, cultural interests influence the frequency of visiting the museum.

Visiting the museum in the past 12 months indicates a sort of recognition of the value of the museum itself. As Kaplan demonstrated, frequent or repeat visitors are more likely to seek restorative museum experiences than first-time visitors (Kaplan, Bardwell and Slakter, 1993); this seems to be valid also for the subjective perception of psychological well-being.

The users' variable medium-high income (3001-4500 euros per month in all family) are also strictly connected with the perception of aesthetic impact and the frequency of visiting the museum and the PGWBI. Having a medium-high income allows people to satisfy their cultural interests and to develop an aesthetic judgement, as well as to frequently attend cultural institutions.

From the museum point of view, it seems that by boosting the aesthetic experience of visitors and the frequency of visits helps improve its impact on visitors' psychological well-being.

Looking at the semantic connectivity map we can say that the museum can foster the relation between the visit and the well-being of its visitor by providing satisfying experiences. The elements that can boost the perception of positive psychological well-being seem to be, on the one hand, the museum's ability to meet the expectations of its visitors and, on the other, the predisposition and motivation of the visitors themselves to visit the museum. Psychological well-being is linked with the capacity to perceive and decipher the visual, linguistic and conceptual cues into a coherent whole that generates meaning and, consequently, arouses interests, cognitive and aesthetic stimulation, and emotion.

Conclusions and implications

Museum experiences bring about changes in their visitor (Soren, 2009). Individuals can transform their museum experiences into knowledge, skills, attitudes, values, emotions, beliefs and senses. They do this according to their own expectations, pre-existing knowledge, skills and strategies for interpretation (Hooper-Greenhill, 2000). Falk categorised visitors according to their museum-specific identities and argued that self-defined identity during museum experiences is often related to visiting motivations derived from cognitive performances, and in particular to museums' long-term learning effects (Falk, 2009). This study reveals how psychological well-being is related to the museum experience through visitors' abilities to appreciate the culture and transform the aesthetic, cognitive and emotional contents of a museum into a satisfying experience. As the study shows, cultural interests play an important role in this. Higher levels of acculturation allow individuals to enjoy the museum experience more and at the same time make better informed and self-conscious choices, which have a positive impact in terms of self-determination and health-serving habits and practices. As Kesner (2006) says, individuals need to exercise the perceptual activities that museum visits require and then register these as some form of satisfying experience. The perceptual-cognitive competence of a visitor can transform the looking at an object or a story into a meaningful experience. This study is conducted in a museum of ethnology, where the contents of the exhibitions are something that closely affects the majority of resident visitors in my sample, making them easier to decipher for the residents.

In fact, on the other hand, the study shows the importance of the museum's ability to meet the interests and the expectations of its community so as to provide satisfying experiences and aesthetic, cognitive and emotional impacts that can contribute to that community's psychological well-being. Museums should connect the museum experience more tightly to their visitors, so as to strengthen their frequency and interests through more rewarding aesthetic stimulation. In this way, the experience will be relevant to visitor individual processes of psychological well-being.

Thus, this explorative study gives preliminary evidence of the potential relevance of museum experience for the psychological well-being of museum-goers. More studies are needed to investigate a causal relationship. This study highlights the existence of a relationship, the type is yet to be determined.

However, the present research adds up to a growing amount of evidence about the relation between cultural participation and well-being demonstrated by the literature in which it is inserted, that we can not ignore.

Still, for its part, it implies the need for reflection on the part of institutions. Visiting museums could be a cultural habit that improves the subjective perception of the psychological well-being of individuals, not only to accompany them in care but also to prevent the development of mental diseases.

CONCLUSIONS AND IMPLICATIONS

8. Main conclusions

This research is focused on two empirical case studies of museums in the Mediterranean region.

The relation between museum-goers' psychological well-being and museum experience is the object of the study. The study centres on two main questions. The first question asks whether there is a relationship between museum experience and the psychological well-being of museum-goers, outside of the clinical setting. The second one asks how, if there is such a relationship, museum experience can foster it.

Conventionally, the impacts of museum experience used to be studied from an educational perspective, focusing on learning outcomes. From another perspective, the studies on museums and well-being are carried out in the health field, investigating the effects on people with diseases, and not on common visitors.

Both the studies in this research project present outlooks on the possible impacts of museum experience on the psychological well-being of museum visitors, while integrating the well-being approach used in visitor studies. Museum experience here is associated with the well-being sphere in a comprehensive and integrated manner through the exploration of three elements of the phenomenon: the user's characteristics and background, the museum experience and the determinants of psychological well-being. This constitutes the theoretical basis of the empirical studies in the research.

Each study is independent of the other and developed according to the specific features of the case study analysed. The first article takes as case study the Costume Museum of São Brás de Alportel, a rural area in the Algarve region, Portugal. The museum adopts a socio-museology approach fostering the active participation of its users' community. The strong relationship the museum has with the visitors transforms the museum experience into a particular case. Indeed, to measure the museum experience, the variables taken into consideration are about users' active participation and engagement, which turned out to be correlated to their positive perception of their psychological well-being. In this study, the importance of the social and participatory dimension of the museum experience for the psychological well-being outcome emerges.

The second paper has as case study the Ethnology Museum of Valencia, the third largest city in Spain. The museum has permanent and temporary exhibitions and offers many special events that involve the local community. I focus on users' characteristics and cultural interests and their perception of the museum experience, measuring motivation, perceived impacts and satisfaction. The results reveal that visitors' repeated attendance and their ability to transform the museum's stimuli into a satisfying experience influence their psychological well-being. What is underlined is the relevance of the users' high cultural interests and their positive experience in the museum to the subjective perception of their psychological well-being.

Despite the differences between the two case studies and consequently the variables measures, a few basic common elements can be recognized. First, both papers show that the museum experience is related to the psychological well-being of museum-goers. Going with a certain continuity to the museum, and thus having a more satisfying experience could increase the perception of the individual psychological well-being. The common elements in the two different case studies seem to be the repetitiveness of the visits and the satisfaction of the museum experience. In the first case study the importance of active participation, also linked to voluntary and collective activities, emerges, signifying the importance also of social relationships. Instead, in the second case study, the relevance of the users' high cultural interests is underlined. Having high cultural interests influences both the museum experience and users' psychological well-being.

The articles confirm the theory that the correlation between cultural habits and psychological well-being depends on the social context. Levels of individual cultural attendance have very different impacts on well-being depending on whether the social context is characterized by high or low cultural attendance levels. In the rural context of MuT, the low level of cultural attendance and activities offered by the museum is not perceived as critical. For this, the participatory and social dimension is what results determinant for the well-being perception. Instead, in the context of the urban regional centre for culture and education, the findings are different. The cultural interests appear to be significant in the perception of psychological well-being.

In this sense, the museum can play an important role in boosting the relationship between culture and well-being. The museum can connect tightly to visitors, in the first case with a participatory approach and socio-museology, and in the second by providing a meaningful experience for their visitors. The implication for museums is that by looking at the context in which they are located, the can build significant experience for their users, strengthening their cultural habits through more rewarding cognitive and aesthetic stimulation, and making cultural attendance more relevant for their individual processes of well-being.

Summary table

	MUT	MUVAET
Museology	Socio-museology	Classical museology
Type	Participatory museum experience	Attending museum experience
Context	Rural context	Urban context
Theoretical model	USERS → PSYCOLOGICAL WELL-BEING; USERS → MUSEUM → PSYCOLOGICAL WELL-BEING	USERS → PSYCOLOGICAL WELL-BEING; USERS → MUSEUM EXPERIENCE → PSYCOLOGICAL WELL-BEING
Questions of research	1. Is there a relation between the participatory museum experience and the psychological well-being of museum-goers in a rural area? 2. If yes, how participatory museum can foster this relation?	1. Is there a relation between the museum experience and the psychological well-being of museum-goers? 2. If yes, how museum can foster this relation?
Methodology	- Case study - Statistical test: Pearson Correlation, Artificial Neural Network	- Case study - Statistical test: Pearson Correlation, Artificial Neural Network
Users variables	• Gender • Age • Birthplace • Education • Marital status • Profession • Monthly income • Cultural attendance	• Gender • Age • Residence • Education • Socio-professional status • Profession field • Monthly income • Language • Cultural interests
Museum experience variables	• Active participation • Museum satisfaction • Engagement • Frequency	• Motivation of visit • Impact of visit • Global satisfaction of visit • Frequency
Impact variables	• Psychological well-being	• Psychological well-being
Results	Linear correlation Pearson Correlation (PGWBI): - Users: Social Index - Museum experience: high engagement, active museum participation, high frequency, museum satisfaction Non-linear correlation ANN (Positive well-being): - High museum engagement, - High active participation - High museum satisfaction	Linear correlation Pearson Correlation (PGWBI): - Users: High Cultural Interests, retired condition, male, over 56, monthly income, Valencian language - Museum experience: Aesthetic impact, frequency Non-linear correlation ANN (Positive well-being): - High visit satisfaction - High visit impacts - High visit motivation
Conclusions	In rural area, the participatory museum experience is related to the perception of subjective psychological well-being, more than users' socio-demographic characteristics. 1. Yes, there is a relation between the participatory museum experience and the psychological well-being. 2. The museum can foster this relation keeping active the users' engagement and provide satisfactory experiences.	The museum experience is related to the psychological well-being of visitors through their repeated attendance and their ability to transform it into a satisfying experience. 1. Yes, there is a relation between the museum experience and the psychological well-being 2. The museum can foster this relation connecting the experience tightly to the visitors, to strengthen their frequency and interests.

9. Limitations and implications

This study shows its limitation mainly owing to its selected statistical analysis.

The linear and non-linear correlation are not able to establish a causality relation between the museum experience and the subjective psychological well-being. The study confines itself to showing that there is a relationship between perceived psychological well-being and satisfying and frequent participation in the museum's activities.

However, the research shows preliminary evidence that adds up to those demonstrated in the literature by cross-sectional studies. So we can not talk about causal relation, but can not even ignore the growing amount of evidence about the connection between cultural participation and subjective well-being.

Therefore, the findings of this study could still inspire a reflection and have important implications for academic studies, the museum sector, as well as for the design and development of cultural and health policies.

First of all, the research aims to lay the foundations for the development of future longitudinal studies that investigate the causality of the relationship between participation in museums and the subjective well-being of individuals.

Secondly, this research contributes to the investigation regarding the connection between museum attendance and subjective well-being. It is, therefore, a step forward in the recognition of the museum as an agent of well-being and local welfare.

Thirdly, discovering the different aspects related to the psychological well-being of the two case studies, it is suggested that museums have to be aware of their intrinsic and extrinsic potential value related to the context in which they are situated.

Lastly, it suggests a reflection on the power of museum experience out of a clinical and therapeutic setting. Although there is no causal relationship, the preliminary evidences show by the present study together with those of the literature in which it is inserted show that the museum attendance could be important not only to accompanying people in care, but also to develop the perception of subjective well-being of individuals, thus as a prevention of mental diseases.

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APPENDIX A - PGWBI

Psychological General Well Being Index 22 items

1. How have you been feeling in general during the past month?

In excellent spirits…………………………………………………………………	☐ 5
In very good spirits………………………………………………………..	☐ 4
In good spirits mostly………………………………………………………..	☐ 3
I have been up and down in spirits a lot………………………………………..	☐ 2
In low spirits mostly…………………………………………………………	☐ 1
In very low spirits……………………………………………………………	☐ 0

2. How often were you bothered by any illness, bodily disorder, aches or pains during the past month?

Every day……………………………………………………………………	☐ 0
Almost every day……………………………………………………………	☐ 1
About half of the time………………………………………………………..	☐ 2
Now and then, but less than half the time……………………………………..	☐ 3
Rarely……………………………………………………………………….	☐ 4
None of the time……………………………………………………………..	☐ 5

3. Did you feel depressed during the past month?

Yes – to the point that I felt like taking my life………………………………..	☐ 0
Yes – to the point that I did not care about anything……………………………	☐ 1
Yes – very depressed almost every day………………………………………..	☐ 2
Yes – quite depressed several times…………………………………………...	☐ 3
Yes – a little depressed now and then……………………………………….…	☐ 4
No – never felt depressed at all……………………………………………………	☐ 5

4. Have you been in firm control of your behaviour, thoughts, emotions or feelings during the past month?

Yes, definitely so……………………………………………………………………	☐ 5
Yes, for the most part……………………………………………………………	☐ 4
Generally so……………………………………………………………………….	☐ 3
Not too well……………………………………………………………………....	☐ 2
No, and I am somewhat disturbed……………………………………………..	☐ 1
No, and I am very disturbed……………………………………………………	☐ 0

5. Have you been bothered by nervousness or your "nerves" during the past month?

Extremely so – to the point where I could not work or take care of things………	☐ 0
Very much so……………………………………………………………………..	☐ 1
Quite a bit………………………………………………………………………..	☐ 2
Some – enough to bother me……………………………………………………	☐ 3
A little…………………………………………………………………………….	☐ 4
Not at all………………………………………………………………………...	☐ 5

6. How much energy, pep, or vitality did you have or feel during the past month?

Very full of energy – lots of pep………………………………………………..	☐ 5
Fairly energetic most of the time……………………………………………..…	☐ 4
My energy level varied quite a bit……………………………………………....	☐ 3

Generally low in energy or pep………………………………………….…… ☐ 2
Very low in energy or pep most of the time………………………………… ☐ 1
No energy or pep at all – I fell drained, sapped………………………….... ☐ 0

7.   I felt downhearted and blue during the past month.

None of this time…………………………………………………………… ☐ 5
A little of the time………………………………………………………….. ☐ 4
Some of the time…………………………………………………………… ☐ 3
A good bit of the time……………………………………………………... ☐ 2
Most of the time…………………………………………………………..... ☐ 1
All of the time……………………………………………………………… ☐ 0

8.   Were you generally tense or did you feel any tension during the past month?

Yes – extremely tens, most or all of the time…………………………….…. ☐ 0
Yes – very tense most of the time………………………………………….. ☐ 1
Not generally tense, but did feel fairly tense several times……………….….. ☐ 2
I felt a little tense a few times…………………………………………….… ☐ 3
My general tension level was quite low…………………………………….... ☐ 4
I never felt tense or any tension at all…………………………………….….. ☐ 5

9.   How happy, satisfied, or pleased have you been with your personal life during the past month?

Extremely happy – could not have been more satisfied or pleased……………. ☐ 5
Very happy most of the time……………………………………………….. ☐ 4
Generally satisfied, pleased……………………………………………….… ☐ 3
Sometimes fairly happy, sometimes fairly unhappy…………………………. ☐ 2
Generally dissatisfied or unhappy………………………………………….... ☐ 1
Very dissatisfied or unhappy most or all the time…………………………….. ☐ 0

10. Did you feel healthy enough to carry out the things you like to do or had to do during the past month?

Yes – definitely so…………………………………………………..………… ☐ 5
For the most part……………..…………………………………………….. ☐ 4
Health problems limited me in some important ways…………………………. ☐ 3
I was only healthy enough to take care of myself   ……………………….….. ☐ 2
I needed some help in taking care of myself……………………………….….. ☐ 1
I needed someone to help me with most or all of the things I had to do……….. ☐ 0

11. Have you felt so sad, discouraged, hopeless, or had so many problems that you wondered if anything was worthwhile during the past month?

Extremely so – to the point that I have just about given up……….…………… ☐ 0
Very much so………………..…………………………………………….. ☐ 1
Quite a bit……………….………………………………………………… ☐ 2
Some – enough to bother me……………………………………………….. ☐ 3
A little bit…………………………………………………………………… ☐ 4
Not at all…………………………………………………………...….…….. ☐ 5

12. I woke up feeling fresh and rested during the past month.

None of the time…..…………………………………...……..……………… ☐ 0
A little of the time..……..…………………………………………………... ☐ 1
Some of the time..………..………………………………………………… ☐ 2
A good bit of the time..…………………………………………………….. ☐ 3
Most of the time…...………………………………………………………… ☐ 4
All of the time……………………………………………...…….….……….. ☐ 5

13. Have you been concerned, worried, or had any fears about your health during the past month?

Extremely so...….………………………………………...…...…..…………… ☐ 0
Very much so……...…….…..…………………….…..………..…………… ☐ 1
Quite a bit……...….…………………………………….………...………… ☐ 2
Some, but not a lot…...…………………………………….………………… ☐ 3
Practically never......………………………………………………………… ☐ 4
Not at all………………………………………………………..………….. ☐ 5

14. Have you had any reason to wonder if you were losing your mind, or losing control over the way you act, talk, think, feel or of your memory during the past month?

Not at all...…………………………………….…...…...……..……………… ☐ 5
Only a little…………..…………………………….………….…….……….... ☐ 4
Some – but not enough to be concerned or worried about………..…………… ☐ 3
Some and I have been a little concerned……………….…………………… ☐ 2
Some and I am quite concerned...………………………………….………… ☐ 1
Yes, very much so and I am very concerned……………………....……….….. ☐ 0

15. My daily life was full of things that were interesting to me during the past month.

None of the time………………………………...…..……..……………….... ☐ 0
A little of the time………..…………………………….…………………..... ☐ 1
Some of the time……………………………….…..………………………... ☐ 2
A good bit of the time……………………………………..…………………. ☐ 3
Most of the time…………………………………………….……………….. ☐ 4
All of the time……………………………………………………....……….. ☐ 5

16. Did you feel active, vigorous, or dull, sluggish during the past month?

Very active, vigorous every day……...……………...…..……..……………… ☐ 5
Mostly active, vigorous – never really dull, sluggish…………..….………….... ☐ 4
Fairly active, vigorous – seldom dull, sluggish……………….……………… ☐ 3
Fairly dull, sluggish – seldom active, vigorous...…………………………… ☐ 2
Most dull, sluggish – never really active, vigorous.....……………………… ☐ 1
Very dull, sluggish every day……………………………………....……….. ☐ 0

17. Have you been anxious, worried, or upset during the past month?

Extremely so – to the point of being sick or almost sick……..………………. ☐ 0
Very much so…...…..…...…………………….………………....………….. ☐ 1
Quite a bit……...…………………………………….………...………….. ☐ 2
Some – enough to bother me...…………………………….………………… ☐ 3
A little bit……….………………………………………….……………….. ☐ 4
Not at all…………………………………………………....…...………….. ☐ 5

18. I was emotionally stable and sure of myself during the past month.

None of the time………………………………...…..……..……………….... ☐ 0
A little of the time………..…………………………….…………………..... ☐ 1
Some of the time……………………………….…..………………………... ☐ 2
A good bit of the time……………………………………..…………………. ☐ 3
Most of the time…………………………………………….……………….. ☐ 4
All of the time……………………………………………………....……….. ☐ 5

19. Did you feel relaxed, at ease or high strung, tight, or keyed-up during the past month?

Felt relaxed and at ease the whole month……………………..……………….. ☐ 5

Felt relaxed and at ease most of the time………….…………………….….... ☐ 4
Generally felt relaxed but at times felt fairly high strung...…………………… ☐ 3
Generally felt high strung but at times felt fairly relaxed………………………… ☐ 2
Felt high strung, tight, or keyed-up most of the time.……………………………. ☐ 1
Felt high strung, tight, or keyed-up the whole month.……………...………….. ☐ 0

20. I felt cheerful, lighthearted during the past month.

None of the time.……………………………...…...……………………... ☐ 0
A little of the time.……….…………..………………………………….... ☐ 1
Some of the time.…………………………………………………………. ☐ 2
A good bit of the time.………………….……………………………………… ☐ 3
Most of the time.…………….……...…….………………………………. ☐ 4
All of the time.………………………………………………...……………. ☐ 5

21. I felt tired, worn out, used up, or exhausted during the past month.

None of the time.……………………………...…...……………………... ☐ 5
A little of the time.……….…………..………………………………….... ☐ 4
Some of the time.…………………………………………………………. ☐ 3
A good bit of the time.……………….……………………………………… ☐ 2
Most of the time.…………….……...…….………………………………. ☐ 1
All of the time.………………………………………………...……………. ☐ 0

22. Have you been under or felt you were under any strain, stress, or pressure during the past month?

Yes – almost more than I could bear or stand.………………….…………….. ☐ 0
Yes – quite a bit of pressure.…………….………………………………….... ☐ 1
Yes, some – more than usual.……………………...…….………………….. ☐ 2
Yes, some – but about usual.…………………………………………………... ☐ 3
Yes – a little.……………………………….…...………………………… ☐ 4
Not at all.…………………………………………………...………….. ☐ 5

Psychological General Well Being Index 6 items

1. **Have you been bothered by nervousness or your "nerves" during the past month?**

   Extremely so – to the point where I could not work or take care of things……… ☐ 0
   Very much so………………………………………………………………….. ☐ 1
   Quite a bit…………………………………………………………………… ☐ 2
   Some – enough to bother me………………………………………………… ☐ 3
   A little………………………………………………………………………. ☐ 4
   Not at all……………………………………………………..……………….. ☐ 5

2. **How much energy, pep, or vitality did you have or feel during the past month?**

   Very full of energy – lots of pep……………………………………………. ☐ 5
   Fairly energetic most of the time…………………………………………… ☐ 4
   My energy level varied quite a bit…………………………………………... ☐ 3
   Generally low in energy or pep……………………………………………… ☐ 2
   Very low in energy or pep most of the time………………………………… ☐ 1
   No energy or pep at all – I fell drained, sapped……………………………..... ☐ 0

3. **I felt downhearted and blue during the past month.**

   None of this time…………………………………………………………… ☐ 5
   A little of the time…………………………………………………………..... ☐ 4
   Some of the time…………………………………………………………… ☐ 3
   A good bit of the time………………………………………………………... ☐ 2
   Most of the time…………………………………………………………….. ☐ 1
   All of the time……………………………………………………………… ☐ 0

4. **I was emotionally stable and sure of myself during the past month.**

   None of the time…………………………………………...…..……………..... ☐ 0
   A little of the time………….…………………………...……...……………..... ☐ 1
   Some of the time…………………………………………………………… ☐ 2
   A good bit of the time……………………………………………………… ☐ 3
   Most of the time…………………..………………...………………………… ☐ 4
   All of the time……………………………………………………...………… ☐ 5

5. **I felt cheerful, lighthearted during the past month.**

   None of the time……………………………………...……..………………... ☐ 0
   A little of the time………….…………………………...……...…………….... ☐ 1
   Some of the time…………………………………………………………… ☐ 2
   A good bit of the time……………………………………………………… ☐ 3
   Most of the time…………………..………………...………………………… ☐ 4
   All of the time……………………………………………………...……… ☐ 5

6. **I felt tired, worn out, used up, or exhausted during the past month.**

   None of the time……………………………………...……..………………... ☐ 5
   A little of the time………….…………………………...……...……………..... ☐ 4
   Some of the time…………………………………………………………… ☐ 3
   A good bit of the time……………………………………………………… ☐ 2
   Most of the time…………………..………………...………………………… ☐ 1
   All of the time……………………………………………………...……… ☐ 0

APPENDIX B – MUT

Questionnaire

1. WHO YOU ARE?

1.1.   Gender

    o   M
    o   F

1.2.   Age

O <15   **O** 15 -24   **O** 15-24   **O** 25-34   **O** 35-44   **O** 45-54   **O** 55-64   **O** 65+

1.3.   Birthplace, Country

    [   ]

1.4.   Studies

    o   Elementary/Middle school diploma
    o   High school diploma
    o   Degree
    o   Master degree
    o   PhD

1.5.   Marital status

    o   Single/Never married
    o   Married/Domestic partnership
    o   Divorced/Separated
    o   Widowed

1.6.   Profession

    [   ]

1.7.   Monthly wage in euro (optional)

    o   <500
    o   500 - 1.000
    o   1.000–1.500
    o   1.500–2.500
    o   >2.500

2. HOW IS YOUR LIFE AT MUSEU DO TRAJE IN SÃO BRÁS DE ALPORTEL?

2.1.   Which role do you play in the museum?

- o   Employee
- o   Freelance worker
- o   Friend/ volunteer
- o   Club/ volunteer
- o   Researcher
- o   Member of an organization
- o   Visitor

2.2.   Have you ever **organized** any activities in the museum?

- o   Yes
- o   No

2.2.1   If yes, which ones?

2.3.   Have you ever **collaborated** in any museum activities or projects?

- o   Yes
- o   No

2.3.1.   If yes, which ones?

2.4.   Have you ever **attended** any museum activities?

- o   Yes
- o   No

2.4.1.   If yes, which ones?

2.5.   Does Museu do São Brás respond to your interests?

- o   Yes
- o   No

2.5.1.   If yes, which kind of interests?

2.6.   Does Museu do São Brás respond to your needs?

    o   Yes
    o   No

    2.6.1.   If yes, which kind of needs?

_____

2.7.   Which of these words do you associate to this museum?

    o   School
    o   Temple of Culture
    o   Lab
    o   Square [meeting point]
    o   Home

2.8.   How many times per month do you usually come at the museum?

2.9.   Why are you here today?

_____

_____

2.10.   Which role this museum plays in your life?

_____

_____

2.11.   In which ways this museum contributes to your happiness?

_____

_____

2.12.   Imagine that this museum never existed – would your life be much different today?

    o   Yes
    o   No

    2.12.1. Why?

_____

3.   WHAT ABOUT YOUR CULTURAL LIFE?

3.1.   In the last six months, how many times have you been to the cinema?

- o At least 1 time per week
- o 1 - 2 times per month
- o Every 2 - 3 months
- o Never

3.2.   In the last six months, how many times have you watched a theatre show?

- o At least 1 time per week
- o 1 - 2 times per month
- o Every 2 - 3 months
- o Never

3.3.   In the last six months, how many times have you been to classical or jazz concerts?

- o At least 1 time per week
- o 1 - 2 times per month
- o Every 2 - 3 months
- o Never

3.4.   In the last six months, how many times have you been to traditional/pop music or rock concerts?

- o At least 1 time per week
- o 1 - 2 times per month
- o Every 2 - 3 months
- o Never

3.5.   In the last six months, how many times have you visited an exhibition?

- o At least 1 time per week
- o 1 - 2 times per month
- o Every 2 - 3 months
- o Never

3.6. In the last six months, how many books have you read?

3.7.   In the last six months, how often have you done sport?

- o Every day
- o 1 - 2 times per week
- o 3 times per month or less
- o Never

3.8.   In the last six months, how often have you attended a live sporting event?

- o   At least 1 time per week
- o   1 - 2 times per month
- o   Every 2 - 3 months
- o   Never

3.9.   In the last six months, how often have you participated in voluntary social or cultural activities?

- o   At least 1 time per week
- o   1 - 2 times per month
- o   Every 2 - 3 months
- o   Never

3.10.   In the last six months, how often have you attended collective activities?

- o   At least 1 time per week
- o   1 - 2 times per month
- o   Every 2 - 3 months
- o   Never

3.11.   In the last six months, how often have you attended talks activities, classes, workshops?

- o   At least 1 time per week
- o   1 - 2 times per month
- o   Every 2 - 3 months
- o   Never

4. HOW DO YOU FEEL?

This part of the questionnaire aims to assess your current state of wellbeing.
Please, after reading the possible answers, choose the one that best describe your situation.

4.1.   How much energy, pep or vitality did you have or feel during the past month?

- o   Very full of energy, lots of pep
- o   Fairly energetic most of the time
- o   My energy level varied quite a bit
- o   Generally low in energy or pep
- o   Very low in energy most of the time
- o   No energy at all, i felt drained, sapped

4.2.   Have you been bothered by nervousness or your "nerves" [stress] during the past month?

- o   Extremely so, to the point where I could not work or take care of things
- o   Very much so
- o   Quite a bit
- o   Some, enough to bother me
- o   A little
- o   Not at all

4.3.   I felt downhearted and blue during the past month.

- o   None of the time
- o   A little of the time
- o   Some of the time
- o   A good bit of the time
- o   Most of the time
- o   All of the time

4.4.   I was emotionally stable and sure of myself during the past month.

- o   None of the time
- o   A little of the time
- o   Some of the time
- o   A good bit of the time
- o   Most of the time
- o   All of the time

4.5.   I felt cheerful, lighthearted during the past month.

- o   None of the time
- o   A little of the time
- o   Some of the time
- o   A good bit of the time
- o   Most of the time
- o   All of the time

4.6.   I felt tired, worn out, used up, or exhausted during the past month.

- o   None of the time
- o   A little of the time
- o   Some of the time
- o   A good bit of the time
- o   Most of the time
- o   All of the time

THANK YOU FOR YOUR COLLABORATION

Summary statistics (Quantitative data)

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
Male	75	0	75	0,000	1,000	0,333	0,475
Female	75	0	75	0,000	1,000	0,667	0,475
Over 65 years old	75	0	75	0,000	1,000	0,320	0,470
45 - 64 years old	75	0	75	0,000	1,000	0,267	0,445
15 - 44 years old	75	0	75	0,000	1,000	0,413	0,496
from Portugal	75	0	75	0,000	1,000	0,493	0,503
from Other Countries	75	0	75	0,000	1,000	0,507	0,503
Elementary/Middle school diploma	75	0	75	0,000	1,000	0,110	0,310
High school diploma	75	0	75	0,000	1,000	0,438	0,493
Degree/ Master degree	75	0	75	0,000	1,000	0,452	0,494
Single	75	0	75	0,000	1,000	0,280	0,452
Married	75	0	75	0,000	1,000	0,480	0,503
Divorced/Separated/Widowed	75	0	75	0,000	1,000	0,240	0,430
Retired	75	0	75	0,000	1,000	0,194	0,390
Student	75	0	75	0,000	1,000	0,083	0,273
Educational field worker	75	0	75	0,000	1,000	0,167	0,368
Cultural field worker	75	0	75	0,000	1,000	0,139	0,341
No cultural or educational worker	75	0	75	0,000	1,000	0,417	0,486
< 1.000 euros (monthly wage)	75	0	75	0,000	1,000	0,440	0,500
> 1.000 euros (monthly wage)	75	0	75	0,000	1,000	0,293	0,458
N/A monthly wage	75	0	75	0,000	1,000	0,267	0,445
Active museum participation	75	0	75	0,000	3,000	1,867	0,875
Museum satisfaction	75	0	75	0,000	2,000	1,693	0,615
low engagement	75	0	75	0,000	1,000	0,453	0,501
high engagement	75	0	75	0,000	1,000	0,547	0,501
High frequency	75	0	75	0,000	1,000	0,253	0,438
Low frequency	75	0	75	0,000	1,000	0,747	0,438
Cinema	75	0	75	0,000	25,000	4,373	5,990
Theatre	75	0	75	0,000	25,000	2,400	5,157
Classical or Jazz concerts	75	0	75	0,000	25,000	4,560	6,958
Traditional, pop, rock concerts	75	0	75	0,000	25,000	3,373	5,979
Exhibition	75	0	75	0,000	25,000	6,467	6,997
Books	75	0	75	0,000	100,000	9,053	17,244
Talk activities, workshop, classes	75	0	75	0,000	25,000	7,467	10,005
Cultural Index	75	0	75	0,000	118,000	36,360	26,980
Sport	75	0	75	0,000	180,000	41,947	55,554
Live sporting events	75	0	75	0,000	25,000	2,467	4,872
Sport Index	75	0	75	0,000	205,000	44,413	56,424
Voluntary social activities	75	0	75	0,000	25,000	10,920	11,013
Collective activities	75	0	75	0,000	25,000	12,813	11,234
Social Index	75	0	75	0,000	50,000	23,733	19,886
Global Index	75	0	75	0,000	364,000	104,507	75,581
PGWBI	75	0	75	10,980	109,800	76,518	20,210

Estimation of missing data: mean or mode

Observations with replaced missing data:

Observations with replaced missing data:																																												
Observation	Male	Female	Over 65 years old	45 - 64 years old	15 - 44 years old	from Portugal	from Other Countries	Elementary/Middle school diploma	High school diploma	Degree/ Master degree	Single	Married	Divorced/Separated/Widowed	Retired	Student	Educational field worker	Cultural field worker	No cultural or educational worker	< 1.000 euros (monthly wage)	> 1.000 euros (monthly wage)	N/A monthly wage	Active museum participation	Museum satisfaction	low engagement	high engagement	High frequency	Low frequency	Cinema	Theatre	Classical or jazz concerts	Traditional, pop, rock concerts	Exhibition	Books	Talk activities, workshop, classes	Cultural Index	Sport	Live sporting events	Sport Index	Voluntary social activities	Collective activities	Social Index	Global Index	PGWBI
Obs9	0,000	1,000	0,000	1,000	0,000	0,000	0,000	1,000	1,000	0,000	0,000	0,000	0,000	1,000	0,000	0,194	0,083	0,167	0,139	0,417	0,000	0,000	1,000	1,000	0,000	1,000	0,000	0,000	1,000	2,000	2,000	9,000	2,000	9,000	6,000	9,000	39,000	15,000	0,000	15,000	9,000	2,000	11,000	65,000	98,820
Obs14	1,000	0,000	0,000	1,000	0,000	0,000	1,000	0,110	0,438	0,452	0,000	0,000	1,000	0,000	0,000	1,000	0,000	0,000	0,000	1,000	2,000	2,000	0,000	1,000	0,000	1,000	2,000	0,000	2,000	0,000	2,000	3,000	0,000	9,000	11,000	0,000	11,000	25,000	25,000	50,000	70,000	91,500
Obs45	0,000	1,000	0,000	1,000	0,000	1,000	0,000	1,000	0,000	1,000	0,000	0,000	0,000	1,000	0,000	0,194	0,083	0,167	0,139	0,417	1,000	0,000	0,000	2,000	2,000	0,000	1,000	0,000	1,000	2,000	0,000	2,000	2,000	9,000	2,000	0,000	17,000	30,000	0,000	30,000	2,000	25,000	27,000	74,000	80,520
Obs54	0,000	1,000	1,000	0,000	0,000	0,000	1,000	0,110	0,438	0,452	0,000	0,000	1,000	0,000	0,000	1,000	0,000	0,000	0,000	1,000	1,000	2,000	1,000	0,000	0,000	1,000	9,000	2,000	9,000	0,000	9,000	20,000	9,000	58,000	15,000	0,000	15,000	2,000	9,000	11,000	84,000	40,260
Obs69	1,000	0,000	0,000	1,000	0,000	1,000	0,000	1,000	0,000	0,000	0,000	1,000	0,000	0,194	0,083	0,167	0,139	0,417	1,000	0,000	0,000	1,000	2,000	1,000	0,000	0,000	1,000	25,000	25,000	0,000	25,000	2,000	0,000	77,000	180,000	9,000	189,000	0,000	0,000	0,000	266,000	62,220

Correlation matrix (Pearson)

Correlation matrix (Pearson):

Variable	Male	Female	Over 65 years old	45 - 64 years old	15 - 44 years old	from Portugal	from Other Countries	Elementary/Middle school diploma	High school diploma	Degree/ Master degree	Single	Married	Divorced/Separated/Widowed	Retired	Student	Educational field worker	Cultural field worker	No cultural or educational worker	< 1.000 euros (monthly wage)	> 1.000 euros (monthly wage)	N/A monthly wage	Active museum participation	Museum satisfaction	low engagement	high engagement	High frequency	Low frequency	Cinema	Theatre	Classical or Jazz concerts	Traditional, pop, rock concerts	Exhibition	Books	Talk activities, workshop, classes	Cultural index	Sport	Live sporting events	Sport index	Voluntary social activities	Collective activities	Social index	Global index	PGWBI
Male	1	-1,000	-0,121	0,021	0,096	-0,019	0,019	0,217	0,085	-0,222	-0,126	0,113	0,000	0,024	-0,104	-0,232	-0,028	0,234	0,000	-0,021	0,021	0,043	-0,015	-0,019	0,019	-0,087	0,087	-0,092	0,105	-0,004	-0,011	-0,015	-0,209	-0,076	-0,134	0,229	0,160	0,240	0,078	-0,125	-0,028	0,124	0,213
Female	-1,000	1	0,121	-0,021	-0,096	0,019	-0,019	-0,217	-0,085	0,222	0,126	-0,113	0,000	-0,024	0,104	0,232	0,028	-0,234	0,000	0,021	-0,021	-0,043	0,015	0,019	-0,019	0,087	-0,087	0,092	-0,105	0,004	0,011	0,015	0,209	0,076	0,134	-0,229	-0,160	-0,240	-0,078	0,125	0,028	-0,124	-0,213
Over 65 years old	-0,121	0,121	1	-0,414	-0,576	-0,334	0,334	0,044	-0,180	0,152	-0,237	-0,030	0,284	0,319	-0,211	0,078	-0,028	-0,178	-0,378	0,311	0,103	0,007	0,204	-0,051	0,051	0,126	-0,126	0,039	0,203	-0,022	-0,231	0,086	0,442	0,146	0,277	-0,048	-0,291	-0,072	0,256	0,334	0,331	0,132	0,189
45 - 64 years old	0,021	-0,021	-0,414	1	-0,506	-0,052	0,052	0,285	-0,082	-0,098	-0,309	0,266	0,014	0,117	-0,167	-0,083	-0,044	0,094	0,012	-0,124	0,114	-0,012	0,204	-0,065	0,065	-0,074	0,074	-0,134	0,053	0,139	0,074	-0,062	-0,123	-0,031	-0,044	0,113	0,023	0,113	-0,142	-0,076	-0,122	0,037	-0,083
15 - 44 years old	0,096	-0,096	-0,576	-0,506	1	0,363	-0,363	-0,298	0,244	-0,056	0,502	-0,210	-0,281	-0,407	0,350	0,000	0,067	0,084	0,347	-0,184	-0,200	0,004	-0,377	0,106	-0,106	-0,053	0,053	0,084	-0,240	-0,103	0,152	-0,025	-0,308	-0,110	-0,222	-0,057	0,255	-0,034	-0,115	-0,248	-0,204	-0,158	-0,104
from Portugal	-0,019	0,019	-0,334	-0,052	0,363	1	-1,000	-0,178	0,151	-0,039	0,276	-0,201	-0,055	-0,344	0,197	-0,073	0,157	0,110	0,200	0,009	-0,233	0,029	-0,072	0,066	-0,066	-0,146	0,146	0,126	0,095	-0,095	0,261	0,049	-0,341	-0,154	-0,134	0,026	0,175	0,040	-0,117	-0,299	-0,234	-0,079	-0,153
from Other Countries	0,019	-0,019	0,334	0,052	-0,363	-1,000	1	0,178	-0,151	0,039	-0,276	0,201	0,055	0,344	-0,197	0,073	-0,157	-0,110	-0,200	-0,009	0,233	-0,029	0,072	-0,066	0,066	0,146	-0,146	-0,126	-0,095	0,095	-0,261	-0,049	0,341	0,154	0,134	-0,026	-0,175	-0,040	0,117	0,299	0,234	0,079	0,153
Elementary/Middle school diploma	0,217	-0,217	0,044	0,285	-0,298	-0,178	0,178	1	-0,310	-0,319	-0,222	0,178	0,025	0,423	-0,083	-0,123	-0,082	-0,143	-0,054	-0,134	0,198	-0,001	-0,034	0,033	-0,033	-0,008	0,008	-0,209	0,148	0,167	-0,107	0,193	-0,070	0,042	0,040	0,096	-0,101	0,086	0,123	0,044	0,093	0,103	0,096
High school diploma	0,085	-0,085	-0,180	-0,082	0,244	0,151	-0,151	-0,310	1	-0,802	0,170	-0,043	-0,128	-0,084	0,135	-0,396	-0,125	0,379	0,359	-0,278	-0,116	-0,190	-0,130	0,139	-0,139	0,208	-0,208	0,060	-0,027	-0,087	0,111	0,044	0,013	-0,045	-0,044	0,073	0,191	0,088	-0,192	-0,025	-0,121	0,018	-0,216
Degree/ Master degree	-0,222	0,222	0,152	-0,098	-0,056	-0,039	0,039	-0,319	-0,802	1	-0,030	-0,069	0,112	-0,182	-0,083	0,472	0,176	-0,288	-0,324	0,361	-0,008	0,190	0,151	-0,159	0,159	0,213	-0,213	0,072	-0,066	-0,018	-0,043	-0,165	0,031	0,019	0,019	-0,133	-0,127	-0,142	0,114	-0,003	0,062	-0,083	0,156
Single	-0,126	0,126	-0,237	-0,309	0,502	0,276	-0,276	-0,222	0,170	-0,030	1	-0,599	-0,350	-0,236	0,466	-0,285	0,183	0,015	0,225	-0,271	0,027	-0,246	-0,319	0,327	-0,327	0,046	-0,046	0,136	-0,124	-0,020	0,111	0,048	-0,014	0,063	0,084	-0,054	0,075	-0,047	-0,085	-0,242	-0,184	-0,054	-0,038
Married	0,113	-0,113	-0,030	0,266	-0,210	-0,201	0,201	0,178	-0,043	-0,069	-0,599	1	-0,540	0,178	-0,271	0,183	-0,282	0,069	-0,045	0,202	-0,157	0,239	0,089	-0,232	0,232	-0,007	0,007	-0,208	0,123	-0,059	-0,227	-0,076	-0,104	-0,008	-0,129	0,169	0,012	0,168	0,078	0,246	0,182	0,127	-0,086
Divorced/Separated/Widowed	0,000	0,000	0,284	0,014	-0,281	-0,055	0,055	0,025	-0,128	0,112	-0,350	-0,540	1	0,040	-0,173	0,085	0,138	-0,097	-0,184	0,049	0,155	-0,022	0,231	-0,073	0,073	-0,040	0,040	0,101	-0,013	0,090	0,149	0,039	0,137	-0,058	0,064	-0,141	-0,093	-0,147	-0,002	-0,033	-0,019	-0,092	0,140
Retired	0,024	-0,024	0,319	0,117	-0,407	-0,344	0,344	0,423	-0,084	-0,182	-0,236	0,178	0,040	1	-0,148	-0,220	-0,197	-0,415	-0,071	-0,096	0,179	0,180	0,174	-0,223	0,223	0,182	-0,182	-0,110	0,136	0,162	-0,049	0,114	0,323	0,200	0,239	0,104	-0,087	0,095	0,333	0,195	0,295	0,234	0,131
Student	-0,104	0,104	-0,211	-0,167	0,350	0,197	-0,197	-0,083	0,135	-0,083	0,466	-0,271	-0,173	-0,148	1	-0,135	-0,121	-0,255	-0,058	-0,198	0,269	-0,189	-0,181	0,231	-0,231	-0,066	0,066	0,108	-0,046	0,025	-0,048	0,122	-0,109	0,322	0,108	-0,083	0,075	-0,076	-0,029	-0,065	-0,053	-0,032	0,133
Educational field worker	-0,232	0,232	0,078	-0,083	0,000	-0,073	0,073	-0,123	-0,396	0,472	-0,285	0,183	0,085	-0,220	-0,135	1	-0,180	-0,378	-0,233	0,348	-0,096	0,224	0,090	-0,171	0,171	-0,014	0,014	0,061	-0,046	-0,063	-0,114	-0,182	0,007	-0,110	-0,097	-0,153	0,080	-0,144	0,065	0,135	0,112	-0,113	0,038
Cultural field worker	-0,028	0,028	-0,028	-0,044	0,067	0,157	-0,157	-0,082	-0,125	0,176	0,183	-0,282	0,138	-0,197	-0,121	-0,180	1	-0,339	-0,024	-0,005	0,032	0,050	0,059	-0,035	0,035	0,123	-0,123	0,007	0,106	0,282	0,096	0,173	-0,043	0,109	0,193	-0,068	0,037	-0,063	0,190	0,012	0,112	0,051	0,010
No cultural or educational worker	0,234	-0,234	-0,178	0,094	0,084	0,110	-0,110	-0,143	0,379	-0,288	0,015	0,069	-0,097	-0,415	-0,255	-0,378	-0,339	1	0,283	-0,071	-0,244	-0,243	-0,147	0,203	-0,203	-0,185	0,185	-0,023	-0,123	-0,294	0,085	-0,144	-0,174	-0,335	-0,315	0,127	-0,059	0,119	-0,433	-0,230	-0,370	-0,121	-0,216
< 1.000 euros (monthly wage)	0,000	0,000	-0,378	0,012	0,347	0,200	-0,200	-0,054	0,359	-0,324	0,225	-0,045	-0,184	-0,071	-0,058	-0,233	-0,024	0,283	1	-0,571	-0,535	0,105	0,005	-0,052	0,052	-0,022	0,022	0,129	0,009	0,146	0,329	0,169	-0,147	-0,155	0,077	0,027	0,303	0,053	-0,158	-0,120	-0,155	0,026	-0,352
> 1.000 (monthly wage)	-0,021	0,021	0,311	-0,124	-0,184	0,009	-0,009	-0,134	-0,278	0,361	-0,271	0,202	0,049	-0,096	-0,198	0,348	-0,005	-0,071	-0,571	1	-0,389	0,065	0,132	-0,116	0,116	0,029	-0,029	-0,075	0,087	-0,137	-0,144	-0,191	0,007	-0,251	-0,174	-0,068	-0,201	-0,084	0,053	0,103	0,087	-0,102	0,166
N/A monthly wage	0,021	-0,021	0,103	0,114	-0,200	-0,233	0,233	0,198	-0,116	-0,008	0,027	-0,157	0,155	0,179	0,269	-0,096	0,032	-0,244	-0,535	-0,389	1	-0,185	-0,142	0,178	-0,178	-0,005	0,005	-0,068	-0,100	-0,023	-0,221	0,007	0,158	0,433	0,092	0,039	-0,133	0,027	0,123	0,029	0,084	0,075	0,225
Active museum participation	0,043	-0,043	0,007	-0,012	0,004	0,029	-0,029	-0,001	-0,190	0,190	-0,246	0,239	-0,022	0,180	-0,189	0,224	0,050	-0,243	0,105	0,065	-0,185	1	0,350	-0,846	0,846	0,477	-0,477	0,053	-0,186	0,161	0,278	0,149	0,055	0,086	0,121	-0,004	0,180	0,011	0,368	0,300	0,373	0,150	0,249
Museum satisfaction	-0,015	0,015	0,204	0,204	-0,377	-0,072	0,072	-0,034	-0,130	0,151	-0,319	0,089	0,231	0,174	-0,181	0,090	0,059	-0,147	0,005	0,132	-0,142	0,350	1	-0,420	0,420	0,192	-0,192	0,009	0,159	0,164	0,087	0,125	0,105	0,186	0,237	0,138	0,057	0,141	0,206	0,377	0,327	0,276	0,238
low engagement	-0,019	0,019	-0,051	-0,065	0,106	0,066	-0,066	0,033	0,139	-0,159	0,327	-0,232	-0,073	-0,223	0,231	-0,171	-0,035	0,203	-0,052	-0,116	0,178	-0,846	-0,420	1	-1,000	-0,346	0,346	0,055	-0,196	-0,101	-0,256	-0,077	-0,106	0,000	-0,075	0,094	-0,127	0,082	-0,365	-0,359	-0,405	-0,073	-0,297
high engagement	0,019	-0,019	0,051	0,065	-0,106	-0,066	0,066	-0,033	-0,139	0,159	-0,327	0,232	0,073	0,223	-0,231	0,171	0,035	-0,203	0,052	0,116	-0,178	0,846	0,420	-1,000	1	0,346	-0,346	-0,055	0,196	0,101	0,256	0,077	0,106	0,000	0,075	-0,094	0,127	-0,082	0,365	0,359	0,405	0,073	0,297
High frequency	-0,087	0,087	0,126	-0,074	-0,053	-0,146	0,146	-0,008	-0,208	0,213	0,046	-0,007	-0,040	0,182	-0,066	-0,014	0,123	-0,185	-0,022	0,029	-0,005	0,477	0,192	-0,346	0,346	1	-1,000	0,108	-0,069	0,210	0,268	0,168	0,100	0,260	0,243	0,241	-0,031	0,234	0,293	0,241	0,298	0,340	0,245
Low frequency	0,087	-0,087	-0,126	0,074	0,053	0,146	-0,146	0,008	0,208	-0,213	-0,046	0,007	0,040	-0,182	0,066	0,014	-0,123	0,185	0,022	-0,029	0,005	-0,477	-0,192	0,346	-0,346	-1,000	1	-0,108	0,069	-0,210	-0,268	-0,168	-0,100	-0,260	-0,243	-0,241	0,031	-0,234	-0,293	-0,241	-0,298	-0,340	-0,245
Cinema	-0,092	0,092	0,039	-0,134	0,084	0,126	-0,126	-0,209	0,060	0,072	0,136	-0,208	0,101	-0,110	0,108	0,061	0,007	-0,023	0,129	-0,075	-0,068	0,053	0,009	0,055	-0,055	0,108	-0,108	1	0,254	0,104	0,459	0,278	-0,183	0,060	0,396	0,236	0,168	0,247	-0,102	-0,033	-0,075	0,306	-0,186
Theatre	0,105	-0,105	0,203	0,053	-0,240	0,095	-0,095	0,148	-0,027	-0,066	-0,124	0,123	-0,013	0,136	-0,046	-0,046	0,106	-0,123	0,009	0,087	-0,100	-0,186	0,159	0,196	-0,196	-0,069	0,069	0,254	1	0,220	-0,062	0,364	-0,106	0,234	0,427	0,418	-0,001	0,411	-0,059	-0,043	-0,057	0,445	-0,171
Classical or Jazz concerts	-0,004	0,004	-0,022	0,139	-0,103	-0,095	0,095	0,167	-0,067	0,111	-0,020	-0,059	0,090	0,162	0,025	-0,063	0,282	-0,294	0,146	-0,137	-0,101	0,161	0,164	-0,101	0,101	0,210	-0,210	0,104	0,220	1	0,264	0,460	0,106	0,325	0,657	0,112	0,385	0,143	0,123	0,129	0,141	0,378	0,066
Traditional, pop, rock concerts	-0,011	0,011	-0,231	0,074	0,152	0,261	-0,261	-0,107	0,111	-0,043	0,111	-0,227	0,149	-0,049	-0,048	-0,114	0,096	0,085	0,329	-0,144	-0,221	0,278	0,087	-0,256	0,256	0,268	-0,268	0,459	-0,062	0,264	1	0,330	-0,164	0,008	0,375	0,256	0,325	0,280	0,042	-0,002	0,022	0,349	-0,023
Exhibition	-0,015	0,015	0,086	-0,062	-0,025	0,049	-0,049	0,193	0,044	-0,165	0,048	-0,076	0,039	0,114	0,122	-0,182	0,173	-0,144	0,169	-0,191	0,007	0,149	0,125	-0,077	0,077	0,168	-0,168	0,278	0,364	0,460	0,330	1	-0,032	0,277	0,647	0,302	0,190	0,314	0,233	0,123	0,198	0,517	-0,046
Books	-0,209	0,209	0,442	-0,123	-0,308	-0,341	0,341	-0,070	0,013	0,031	-0,014	-0,104	0,137	0,323	-0,109	0,007	-0,043	-0,174	-0,147	0,007	0,158	0,055	0,105	-0,106	0,106	0,100	-0,100	-0,183	-0,106	0,106	-0,164	-0,032	1	0,118	0,340	-0,111	-0,155	-0,122	0,186	0,269	0,255	0,097	0,034
Talk activities, workshop, classes	-0,076	0,076	0,146	-0,031	-0,110	-0,154	0,154	0,042	-0,045	0,019	0,063	-0,008	-0,058	0,200	0,322	-0,110	0,109	-0,335	-0,155	-0,251	0,433	0,086	0,186	0,000	0,000	0,260	-0,260	0,060	0,234	0,325	0,008	0,277	0,118	1	0,573	0,181	0,079	0,185	0,262	0,413	0,378	0,442	0,156
Cultural Index	-0,134	0,134	0,277	-0,044	-0,222	-0,134	0,134	0,040	-0,044	0,019	0,084	-0,129	0,064	0,239	0,108	-0,097	0,193	-0,315	0,077	-0,174	0,092	0,121	0,237	-0,075	0,075	0,243	-0,243	0,396	0,427	0,657	0,375	0,647	0,340	0,573	1	0,303	0,193	0,315	0,219	0,320	0,302	0,672	0,023
Sport	0,229	-0,229	-0,048	0,113	-0,057	0,026	-0,026	0,096	0,073	-0,133	-0,054	0,169	-0,141	0,104	-0,083	-0,153	-0,068	0,127	0,027	-0,068	0,039	-0,004	0,138	0,094	-0,094	0,241	-0,241	0,236	0,418	0,112	0,256	0,302	-0,111	0,181	0,303	1	0,136	0,996	0,002	0,079	0,046	0,864	-0,019
Live sporting events	0,160	-0,160	-0,291	0,023	0,255	0,175	-0,175	-0,101	0,191	-0,127	0,075	0,012	-0,093	-0,087	0,075	0,080	0,037	-0,059	0,303	-0,201	-0,133	0,180	0,057	-0,127	0,127	-0,031	0,031	0,168	-0,001	0,385	0,325	0,190	-0,155	0,079	0,193	0,136	1	0,220	0,079	0,110	0,106	0,261	0,039
Sport Index	0,240	-0,240	-0,072	0,113	-0,034	0,040	-0,040	0,086	0,088	-0,142	-0,047	0,168	-0,147	0,095	-0,076	-0,144	-0,063	0,119	0,053	-0,084	0,027	0,011	0,141	0,082	-0,082	0,234	-0,234	0,247	0,411	0,143	0,280	0,314	-0,122	0,185	0,315	0,996	0,220	1	0,009	0,087	0,054	0,873	-0,016
Voluntary social activities	0,078	-0,078	0,256	-0,142	-0,115	-0,117	0,117	0,123	-0,192	0,114	-0,085	0,078	-0,002	0,333	-0,029	0,065	0,190	-0,433	-0,158	0,053	0,123	0,368	0,206	-0,365	0,365	0,293	-0,293	-0,102	-0,059	0,123	0,042	0,233	0,186	0,262	0,219	0,002	0,079	0,009	1	0,598	0,892	0,320	0,360
Collective activities	-0,125	0,125	0,334	-0,076	-0,248	-0,299	0,299	0,044	-0,025	-0,003	-0,242	0,246	-0,033	0,195	-0,065	0,135	0,012	-0,230	-0,120	0,103	0,029	0,300	0,377	-0,359	0,359	0,241	-0,241	-0,033	-0,043	0,129	-0,002	0,123	0,269	0,413	0,320	0,079	0,110	0,087	0,598	1	0,896	0,415	0,257
Social Index	-0,028	0,028	0,331	-0,122	-0,204	-0,234	0,234	0,093	-0,121	0,062	-0,184	0,182	-0,019	0,295	-0,053	0,112	0,112	-0,370	-0,155	0,087	0,084	0,373	0,327	-0,405	0,405	0,298	-0,298	-0,075	-0,057	0,141	0,022	0,198	0,255	0,378	0,302	0,046	0,106	0,054	0,892	0,896	1	0,411	0,344
Global Index	0,124	-0,124	0,132	0,037	-0,158	-0,079	0,079	0,103	0,018	-0,083	-0,054	0,127	-0,092	0,234	-0,032	-0,113	0,051	-0,121	0,026	-0,102	0,075	0,150	0,276	-0,073	0,073	0,340	-0,340	0,306	0,445	0,378	0,349	0,517	0,097	0,442	0,672	0,864	0,261	0,873	0,320	0,415	0,411	1	0,087
PGWBI	0,213	-0,213	0,189	-0,083	-0,104	-0,153	0,153	0,096	-0,216	0,156	-0,038	-0,086	0,140	0,131	0,133	0,038	0,010	-0,216	-0,352	0,166	0,225	0,249	0,238	-0,297	0,297	0,245	-0,245	-0,186	-0,171	0,066	-0,023	-0,046	0,034	0,156	0,023	-0,019	0,039	-0,016	0,360	0,257	0,344	0,087	1

Values in bold are different from 0 with a significance level alpha=0,05

P-value (Pearson)

Variable	Male	Female	Over 65 years old	45-64 years old	15-44 years old	from Portugal	from Other Countries	Elementary/Middle school diploma	High school diploma	Degree/Master degree	Single	Married	Divorced/Separated/Widowed	Retired	Student	Educational field worker	Cultural field worker	No cultural or educational worker	<1.000 euros (monthly wage)	>1.000 euros (monthly wage)	N/A monthly wage	Active museum participation	Museum satisfaction	low engagement	high engagement	High frequency	Low frequency	Cinema	Theatre	Classical or jazz concerts	Traditional, pop, rock concerts	Exhibition	Books	Talk activities, workshop, classes	Cultural Index	Sport	Live sporting events	Sport Index	Voluntary social activities	Collective activities	Social Index	Global Index	PGWBI
Male	0	<0,0001	0,300	0,856	0,414	0,872	0,872	0,061	0,466	0,056	0,281	0,333	1,000	0,836	0,373	0,045	0,813	0,043	1,000	0,860	0,856	0,712	0,895	0,872	0,872	0,459	0,459	0,433	0,370	0,972	0,925	0,899	0,072	0,518	0,252	0,048	0,171	0,038	0,508	0,285	0,814	0,290	0,066
Female	<0,0001	0	0,300	0,856	0,414	0,872	0,872	0,061	0,466	0,056	0,281	0,333	1,000	0,836	0,373	0,045	0,813	0,043	1,000	0,860	0,856	0,712	0,895	0,872	0,872	0,459	0,459	0,433	0,370	0,972	0,925	0,899	0,072	0,518	0,252	0,048	0,171	0,038	0,508	0,285	0,814	0,290	0,066
Over 65 years old	0,300	0,300	0	0,000	<0,0001	0,003	0,003	0,705	0,122	0,194	0,041	0,800	0,014	0,005	0,069	0,504	0,811	0,128	0,001	0,007	0,377	0,955	0,079	0,867	0,667	0,281	0,281	0,742	0,081	0,848	0,046	0,466	<0,0001	0,211	0,016	0,686	0,011	0,540	0,027	0,003	0,004	0,259	0,105
45-64 years old	0,856	0,856	0,000	0	<0,0001	0,656	0,656	0,013	0,485	0,405	0,007	0,021	0,904	0,319	0,152	0,481	0,705	0,424	0,918	0,291	0,332	0,922	0,079	0,582	0,582	0,528	0,528	0,251	0,652	0,235	0,529	0,596	0,292	0,789	0,707	0,334	0,846	0,333	0,225	0,513	0,299	0,753	0,478
15-44 years old	0,414	0,414	<0,0001	<0,0001	0	0,001	0,001	0,009	0,835	0,634	<0,0001	0,070	0,014	0,000	0,002	1,000	0,570	0,473	0,002	0,114	0,085	0,972	0,001	0,366	0,366	0,651	0,651	0,474	0,038	0,378	0,192	0,830	0,007	0,346	0,055	0,630	0,027	0,774	0,325	0,032	0,079	0,175	0,374
from Portugal	0,872	0,872	0,003	0,656	0,001	0	<0,0001	0,127	0,194	0,737	0,017	0,084	0,640	0,001	0,090	0,533	0,177	0,346	0,086	0,942	0,044	0,807	0,538	0,575	0,575	0,213	0,213	0,280	0,419	0,416	0,024	0,677	0,003	0,188	0,253	0,827	0,133	0,731	0,317	0,009	0,044	0,500	0,189
from Other Countries	0,872	0,872	0,003	0,656	0,001	<0,0001	0	0,127	0,194	0,737	0,017	0,084	0,640	0,001	0,090	0,533	0,177	0,346	0,086	0,942	0,044	0,807	0,538	0,575	0,575	0,213	0,213	0,280	0,419	0,416	0,024	0,677	0,003	0,188	0,253	0,827	0,133	0,731	0,317	0,009	0,044	0,500	0,189
Elementary/Middle school diploma	0,061	0,061	0,705	0,013	0,009	0,127	0,127	0	0,007	0,005	0,056	0,127	0,832	0,000	0,480	0,294	0,483	0,223	0,647	0,251	0,088	0,995	0,772	0,776	0,776	0,944	0,944	0,072	0,206	0,151	0,360	0,097	0,548	0,721	0,736	0,410	0,390	0,462	0,291	0,706	0,426	0,379	0,415
High school diploma	0,466	0,466	0,122	0,485	0,035	0,194	0,194	0,007	0	<0,0001	0,146	0,717	0,272	0,473	0,248	0,000	0,287	0,001	0,002	0,016	0,320	0,103	0,266	0,235	0,235	0,073	0,073	0,611	0,820	0,458	0,345	0,708	0,909	0,699	0,709	0,535	0,101	0,452	0,099	0,830	0,302	0,876	0,062
Degree/Master degree	0,056	0,056	0,194	0,405	0,634	0,737	0,737	0,005	<0,0001	0	0,799	0,555	0,337	0,119	0,480	<0,0001	0,131	0,012	0,005	0,001	0,943	0,103	0,196	0,173	0,173	0,067	0,067	0,541	0,573	0,877	0,715	0,157	0,793	0,872	0,873	0,255	0,278	0,224	0,330	0,983	0,599	0,479	0,182
Single	0,281	0,281	0,041	0,007	<0,0001	0,017	0,017	0,056	0,146	0,799	0	<0,0001	0,002	0,041	<0,0001	0,013	0,117	0,896	0,052	0,019	0,819	0,033	0,005	0,004	0,004	0,692	0,692	0,246	0,289	0,862	0,344	0,683	0,905	0,589	0,476	0,644	0,523	0,689	0,468	0,036	0,114	0,648	0,745
Married	0,333	0,333	0,800	0,021	0,070	0,084	0,084	0,127	0,717	0,555	<0,0001	0	<0,0001	0,127	0,019	0,117	0,014	0,556	0,700	0,083	0,179	0,039	0,447	0,046	0,046	0,950	0,950	0,073	0,293	0,618	0,051	0,517	0,373	0,949	0,268	0,147	0,918	0,150	0,507	0,034	0,118	0,278	0,464
Divorced/Separated/Widowed	1,000	1,000	0,014	0,904	0,014	0,640	0,640	0,832	0,272	0,337	0,002	<0,0001	0	0,732	0,138	0,466	0,237	0,408	0,115	0,674	0,183	0,854	0,046	0,535	0,535	0,792	0,792	0,388	0,909	0,443	0,203	0,742	0,242	0,622	0,588	0,228	0,426	0,209	0,989	0,782	0,870	0,433	0,229
Retired	0,836	0,836	0,005	0,319	0,000	0,003	0,003	0,000	0,473	0,119	0,041	0,127	0,732	0	0,205	0,058	0,090	0,000	0,544	0,410	0,124	0,122	0,136	0,055	0,055	0,118	0,118	0,348	0,245	0,166	0,678	0,330	0,005	0,085	0,039	0,374	0,459	0,418	0,004	0,093	0,010	0,043	0,262
Student	0,373	0,373	0,069	0,152	0,002	0,090	0,090	0,480	0,248	0,480	<0,0001	0,019	0,138	0,205	0	0,249	0,301	0,027	0,622	0,088	0,020	0,105	0,119	0,046	0,046	0,573	0,573	0,358	0,697	0,832	0,685	0,299	0,354	0,005	0,356	0,477	0,525	0,519	0,808	0,577	0,653	0,787	0,255
Educational field worker	0,045	0,045	0,504	0,481	1,000	0,533	0,533	0,294	0,000	<0,0001	0,013	0,117	0,466	0,058	0,249	0	0,123	0,001	0,044	0,002	0,411	0,053	0,444	0,142	0,142	0,905	0,905	0,601	0,693	0,589	0,331	0,118	0,949	0,349	0,407	0,189	0,492	0,217	0,582	0,247	0,338	0,335	0,748
Cultural field worker	0,813	0,813	0,811	0,705	0,570	0,177	0,177	0,483	0,287	0,131	0,117	0,014	0,237	0,090	0,301	0,123	0	0,003	0,837	0,967	0,784	0,668	0,615	0,765	0,765	0,293	0,293	0,955	0,367	0,014	0,415	0,137	0,711	0,353	0,096	0,565	0,752	0,590	0,103	0,922	0,340	0,663	0,932
No cultural or educational worker	0,043	0,043	0,128	0,424	0,473	0,346	0,346	0,223	0,001	0,012	0,896	0,556	0,408	0,000	0,027	0,001	0,003	0	0,014	0,546	0,035	0,035	0,208	0,080	0,080	0,112	0,112	0,843	0,295	0,011	0,469	0,219	0,136	0,003	0,006	0,279	0,615	0,307	0,000	0,047	0,001	0,303	0,063
<1.000 euros (monthly wage)	1,000	1,000	0,001	0,918	0,002	0,086	0,086	0,647	0,002	0,005	0,052	0,700	0,115	0,544	0,622	0,644	0,837	0,014	0	<0,0001	<0,0001	0,370	0,964	0,659	0,659	0,850	0,850	0,268	0,936	0,212	0,004	0,148	0,208	0,184	0,510	0,817	0,008	0,652	0,176	0,305	0,183	0,823	0,002
>1.000 euros (monthly wage)	0,860	0,860	0,007	0,291	0,114	0,942	0,942	0,251	0,016	0,001	0,019	0,083	0,674	0,410	0,088	0,002	0,967	0,546	<0,0001	0	0,001	0,579	0,280	0,321	0,321	0,807	0,807	0,523	0,458	0,241	0,218	0,101	0,956	0,030	0,136	0,563	0,083	0,473	0,652	0,381	0,457	0,384	0,155
N/A monthly wage	0,856	0,856	0,377	0,332	0,085	0,044	0,044	0,088	0,320	0,943	0,819	0,179	0,183	0,124	0,020	0,411	0,784	0,035	<0,0001	0,001	0	0,112	0,226	0,127	0,127	0,969	0,969	0,561	0,393	0,847	0,057	0,951	0,175	0,000	0,432	0,737	0,256	0,816	0,293	0,805	0,471	0,520	0,053
Active museum participation	0,712	0,712	0,955	0,922	0,972	0,807	0,807	0,995	0,103	0,103	0,033	0,039	0,854	0,122	0,105	0,053	0,666	0,015	0,370	0,579	0,112	0	0,002	<0,0001	<0,0001	<0,0001	<0,0001	0,649	0,111	0,167	0,016	0,201	0,639	0,464	0,303	0,971	0,123	0,924	0,001	0,009	0,001	0,200	0,031
Museum satisfaction	0,895	0,895	0,079	0,079	0,001	0,538	0,538	0,772	0,266	0,196	0,005	0,447	0,046	0,136	0,119	0,444	0,615	0,308	0,964	0,260	0,226	0,002	0	0,000	0,000	0,099	0,099	0,936	0,174	0,160	0,459	0,286	0,371	0,110	0,040	0,236	0,624	0,227	0,076	0,001	0,004	0,016	0,039
low engagement	0,872	0,872	0,667	0,582	0,366	0,575	0,575	0,776	0,235	0,173	0,004	0,046	0,535	0,055	0,046	0,142	0,765	0,080	0,659	0,321	0,127	<0,0001	0,000	0	<0,0001	0,002	0,002	0,637	0,093	0,389	0,027	0,514	0,365	0,998	0,521	0,422	0,279	0,486	0,001	0,002	0,000	0,536	0,010
high engagement	0,872	0,872	0,667	0,582	0,366	0,575	0,575	0,776	0,235	0,173	0,004	0,046	0,535	0,055	0,046	0,142	0,765	0,080	0,659	0,321	0,127	<0,0001	0,000	<0,0001	0	0,002	0,002	0,637	0,093	0,389	0,027	0,514	0,365	0,998	0,521	0,422	0,279	0,486	0,001	0,002	0,000	0,536	0,010
High frequency	0,459	0,459	0,281	0,528	0,651	0,213	0,213	0,944	0,073	0,067	0,692	0,950	0,732	0,118	0,573	0,905	0,293	0,112	0,850	0,807	0,969	<0,0001	0,099	0,002	0,002	0	<0,0001	0,358	0,554	0,070	0,020	0,149	0,392	0,025	0,036	0,038	0,793	0,043	0,011	0,038	0,009	0,003	0,034
Low frequency	0,459	0,459	0,281	0,528	0,651	0,213	0,213	0,944	0,073	0,067	0,692	0,950	0,732	0,118	0,573	0,905	0,293	0,112	0,850	0,807	0,969	<0,0001	0,099	0,002	0,002	<0,0001	0	0,358	0,554	0,070	0,020	0,149	0,392	0,025	0,036	0,038	0,793	0,043	0,011	0,038	0,009	0,003	0,034
Cinema	0,433	0,433	0,742	0,251	0,474	0,280	0,280	0,072	0,611	0,541	0,246	0,073	0,388	0,348	0,358	0,601	0,955	0,843	0,268	0,523	0,561	0,649	0,936	0,637	0,637	0,358	0,358	0	0,028	0,377	<0,0001	0,016	0,116	0,612	0,000	0,041	0,150	0,032	0,384	0,778	0,522	0,008	0,110
Theatre	0,370	0,370	0,081	0,652	0,038	0,419	0,419	0,206	0,820	0,573	0,289	0,293	0,909	0,245	0,697	0,693	0,367	0,295	0,936	0,458	0,393	0,111	0,174	0,093	0,093	0,554	0,554	0,028	0	0,058	0,398	0,001	0,365	0,043	0,000	0,000	0,993	0,000	0,614	0,713	0,626	<0,0001	0,143
Classical or jazz concerts	0,972	0,972	0,848	0,235	0,378	0,416	0,416	0,151	0,458	0,877	0,862	0,618	0,443	0,166	0,832	0,589	0,014	0,011	0,212	0,241	0,847	0,167	0,160	0,389	0,389	0,070	0,070	0,377	0,058	0	0,022	<0,0001	0,365	0,004	<0,0001	0,340	0,001	0,220	0,295	0,271	0,229	0,001	0,573
Traditional, pop, rock concerts	0,925	0,925	0,046	0,529	0,192	0,024	0,024	0,360	0,345	0,715	0,344	0,051	0,203	0,678	0,685	0,331	0,415	0,469	0,004	0,218	0,057	0,016	0,459	0,027	0,027	0,020	0,020	<0,0001	0,598	0,022	0	0,004	0,159	0,948	0,001	0,027	0,004	0,015	0,724	0,984	0,854	0,002	0,847
Exhibition	0,899	0,899	0,466	0,596	0,830	0,677	0,677	0,097	0,708	0,157	0,683	0,517	0,742	0,330	0,299	0,118	0,137	0,219	0,148	0,101	0,951	0,201	0,286	0,514	0,514	0,149	0,149	0,016	0,001	<0,0001	0,004	0	0,785	0,016	<0,0001	0,008	0,102	0,006	0,044	0,293	0,088	<0,0001	0,695
Books	0,072	0,072	<0,0001	0,292	0,007	0,003	0,003	0,548	0,909	0,793	0,905	0,373	0,242	0,005	0,354	0,949	0,711	0,136	0,208	0,956	0,175	0,639	0,371	0,365	0,365	0,392	0,392	0,116	0,365	0,365	0,159	0,785	0	0,315	0,003	0,345	0,184	0,296	0,109	0,020	0,027	0,406	0,775
Talk activities, workshop, classes	0,518	0,518	0,211	0,789	0,346	0,188	0,188	0,721	0,699	0,872	0,589	0,949	0,622	0,085	0,005	0,349	0,353	0,003	0,184	0,030	0,998	0,025	0,025	0,612	0,043	0,004	0,948	0,016	0,043	0,004	0,159	0,016	0,315	0	<0,0001	0,121	0,496	0,113	0,023	0,000	0,001	<0,0001	0,847
Cultural Index	0,252	0,252	0,016	0,707	0,055	0,253	0,253	0,736	0,709	0,873	0,476	0,268	0,588	0,039	0,356	0,407	0,096	0,006	0,510	0,136	0,432	0,303	0,040	0,521	0,521	0,036	0,036	0,000	0,000	<0,0001	0,001	<0,0001	0,003	<0,0001	0	0,008	0,097	0,006	0,059	0,005	0,008	<0,0001	0,847
Sport	0,048	0,048	0,686	0,334	0,630	0,827	0,827	0,410	0,535	0,255	0,644	0,147	0,228	0,374	0,477	0,189	0,565	0,279	0,817	0,563	0,737	0,971	0,236	0,422	0,422	0,038	0,038	0,041	0,000	0,340	0,027	0,008	0,345	0,121	0,008	0	0,245	<0,0001	0,984	0,503	0,697	<0,0001	0,868
Live sporting events	0,171	0,171	0,011	0,846	0,027	0,133	0,133	0,390	0,101	0,278	0,523	0,918	0,428	0,459	0,525	0,492	0,752	0,615	0,008	0,083	0,256	0,123	0,624	0,279	0,279	0,793	0,793	0,150	0,993	0,001	0,004	0,102	0,184	0,498	0,097	0,245	0	0,058	0,502	0,349	0,367	0,024	0,741
Sport Index	0,038	0,038	0,540	0,333	0,774	0,731	0,731	0,462	0,452	0,224	0,689	0,150	0,209	0,418	0,519	0,217	0,590	0,307	0,652	0,473	0,041	0,524	0,227	0,486	0,486	0,043	0,041	0,032	0,000	0,220	0,015	0,006	0,296	0,113	0,006	<0,0001	0,058	0	0,938	0,459	0,645	<0,0001	0,893
Voluntary social activities	0,508	0,508	0,027	0,225	0,325	0,317	0,317	0,291	0,099	0,330	0,468	0,507	0,989	0,004	0,808	0,582	0,103	0,000	0,176	0,652	0,293	0,001	0,076	0,005	0,001	0,011	0,011	0,384	0,614	0,295	0,724	0,044	0,109	0,023	0,009	0,984	0,502	0,938	0	<0,0001	<0,0001	0,005	0,002
Collective activities	0,285	0,285	0,003	0,515	0,032	0,009	0,009	0,706	0,830	0,983	0,036	0,034	0,782	0,093	0,577	0,247	0,922	0,047	0,305	0,381	0,805	0,009	0,001	0,002	0,002	0,038	0,038	0,778	0,713	0,271	0,984	0,293	0,020	0,000	0,005	0,503	0,349	0,459	<0,0001	0	<0,0001	0,000	0,026
Social Index	0,814	0,814	0,004	0,299	0,079	0,044	0,044	0,426	0,302	0,599	0,114	0,118	0,870	0,010	0,653	0,138	0,340	0,001	0,183	0,457	0,471	0,001	0,004	0,000	0,000	0,009	0,009	0,522	0,626	0,229	0,854	0,088	0,627	0,001	0,008	0,697	0,367	0,645	<0,0001	<0,0001	0	0,000	0,002
Global Index	0,290	0,290	0,259	0,753	0,175	0,500	0,500	0,379	0,876	0,479	0,648	0,278	0,433	0,043	0,787	0,335	0,663	0,303	0,823	0,384	0,520	0,200	0,016	0,536	0,536	0,003	0,001	0,008	<0,0001	0,001	0,002	<0,0001	0,406	<0,0001	<0,0001	<0,0001	0,024	<0,0001	0,005	0,000	0,000	0	0,459
PGWBI	0,066	0,066	0,105	0,478	0,374	0,189	0,189	0,415	0,062	0,182	0,745	0,464	0,229	0,262	0,255	0,748	0,932	0,063	0,002	0,155	0,053	0,031	0,039	0,010	0,010	0,034	0,034	0,110	0,143	0,575	0,847	0,695	0,775	0,181	0,847	0,868	0,741	0,893	0,002	0,026	0,002	0,459	0

Coefficients of determination (Pearson)
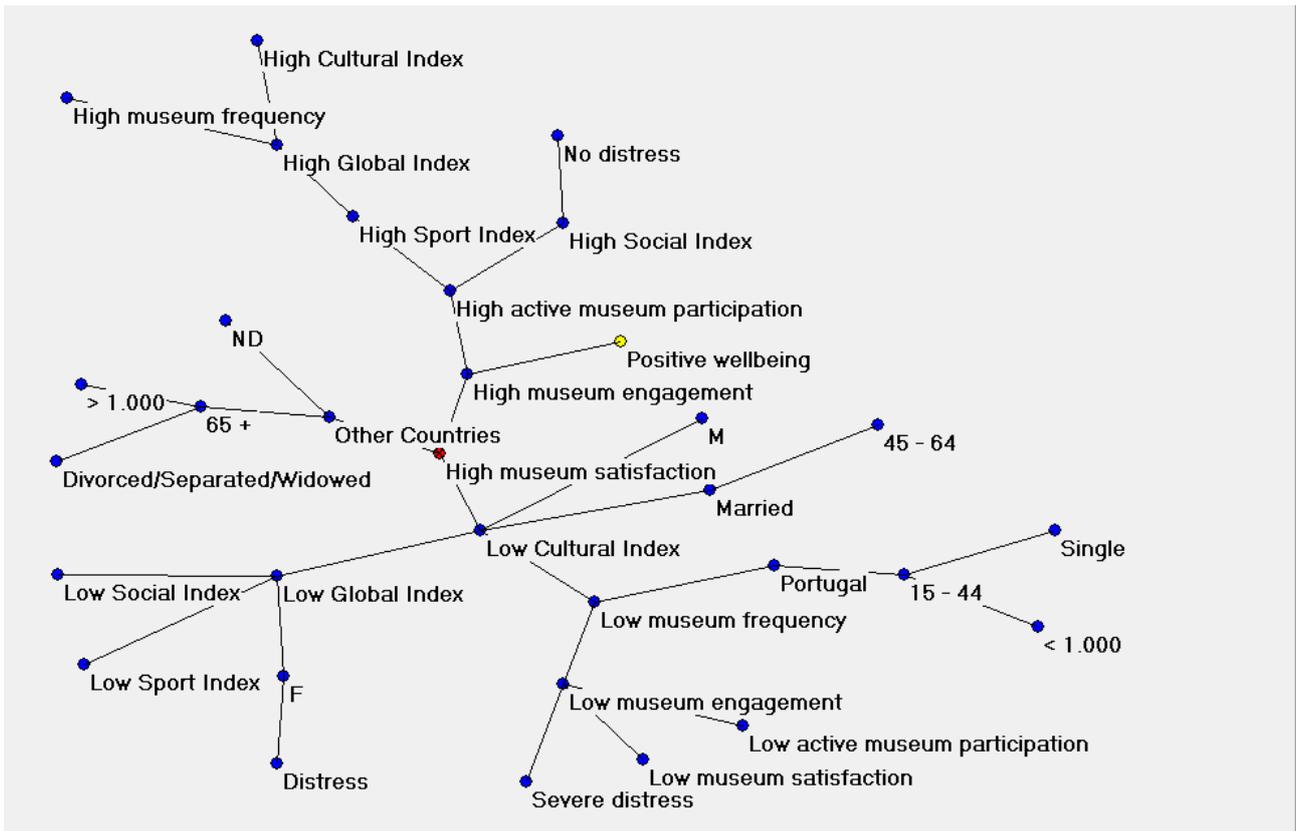
Coefficients of determination (Pearson):

Variables	Male	Female	Over 65 years old	45 - 64 years old	15 - 44 years old	from Portugal	from Other Countries	Elementary/Middle school diploma	High school diploma	Degree/ Master degree	Single	Married	Divorced/Separated/Widowed	Retired	Student	Educational field worker	Cultural field worker	No cultural or educational worker	< 1.000 euros (monthly wage)	> 1.000 (monthly wage)	N/A monthly wage	Active museum participation	Museum satisfaction	low engagement	high engagement	High frequency	Low frequency	Cinema	Theatre	Classical or jazz concerts	Traditional, pop, rock concerts	Exhibition	Books	Talk activities, workshop, classes	Cultural Index	Sport	Live sporting events	Sport Index	Voluntary social activities	Collective activities	Social Index	Global Index	PGWBI
Male	1	1,000	0,015	0,000	0,009	0,000	0,000	0,047	0,007	0,049	0,016	0,013	0,000	0,001	0,011	0,054	0,001	0,055	0,000	0,000	0,000	0,002	0,000	0,000	0,000	0,008	0,008	0,008	0,011	0,000	0,000	0,000	0,044	0,006	0,018	0,053	0,026	0,057	0,006	0,016	0,001	0,015	0,045
Female	1,000	1	0,015	0,000	0,009	0,000	0,000	0,047	0,007	0,049	0,016	0,013	0,000	0,001	0,011	0,054	0,001	0,055	0,000	0,000	0,000	0,002	0,000	0,000	0,000	0,008	0,008	0,008	0,011	0,000	0,000	0,000	0,044	0,006	0,018	0,053	0,026	0,057	0,006	0,016	0,001	0,015	0,045
Over 65 years old	0,015	0,015	1	0,171	0,332	0,111	0,111	0,002	0,032	0,023	0,056	0,001	0,081	0,102	0,045	0,006	0,001	0,032	0,143	0,097	0,011	0,000	0,042	0,003	0,003	0,016	0,016	0,001	0,041	0,001	0,053	0,007	0,195	0,021	0,077	0,002	0,084	0,005	0,065	0,112	0,109	0,017	0,036
45 - 64 years old	0,000	0,000	0,171	1	0,256	0,003	0,003	0,081	0,007	0,010	0,095	0,071	0,000	0,014	0,028	0,007	0,002	0,009	0,000	0,015	0,013	0,000	0,042	0,004	0,004	0,005	0,005	0,018	0,003	0,019	0,005	0,004	0,015	0,001	0,002	0,013	0,001	0,013	0,020	0,006	0,015	0,001	0,007
15 - 44 years old	0,009	0,009	0,332	0,256	1	0,132	0,132	0,089	0,060	0,003	0,252	0,044	0,079	0,166	0,122	0,000	0,004	0,007	0,120	0,034	0,040	0,000	0,142	0,011	0,011	0,003	0,003	0,007	0,058	0,011	0,023	0,001	0,095	0,012	0,049	0,003	0,065	0,001	0,013	0,062	0,042	0,025	0,011
from Portugal	0,000	0,000	0,111	0,003	0,132	1	1,000	0,032	0,023	0,002	0,076	0,040	0,003	0,118	0,039	0,005	0,025	0,012	0,040	0,000	0,054	0,001	0,005	0,004	0,004	0,021	0,021	0,016	0,009	0,009	0,068	0,002	0,116	0,024	0,018	0,001	0,031	0,002	0,014	0,089	0,055	0,006	0,024
from Other Countries	0,000	0,000	0,111	0,003	0,132	1,000	1	0,032	0,023	0,002	0,076	0,040	0,003	0,118	0,039	0,005	0,025	0,012	0,040	0,000	0,054	0,001	0,005	0,004	0,004	0,021	0,021	0,016	0,009	0,009	0,068	0,002	0,116	0,024	0,018	0,001	0,031	0,002	0,014	0,089	0,055	0,006	0,024
Elementary/Middle school diploma	0,047	0,047	0,002	0,081	0,089	0,032	0,032	1	0,096	0,102	0,049	0,032	0,001	0,179	0,007	0,015	0,007	0,020	0,003	0,018	0,039	0,000	0,001	0,001	0,001	0,000	0,000	0,044	0,022	0,028	0,012	0,037	0,005	0,002	0,002	0,009	0,010	0,007	0,015	0,002	0,009	0,011	0,009
High school diploma	0,007	0,007	0,032	0,007	0,060	0,023	0,023	0,096	1	0,644	0,029	0,002	0,016	0,007	0,018	0,157	0,016	0,143	0,129	0,077	0,014	0,036	0,017	0,019	0,019	0,043	0,043	0,004	0,001	0,008	0,012	0,002	0,000	0,002	0,002	0,005	0,036	0,008	0,037	0,001	0,015	0,000	0,047
Degree/ Master degree	0,049	0,049	0,023	0,010	0,003	0,002	0,002	0,102	0,644	1	0,001	0,005	0,013	0,033	0,007	0,223	0,031	0,083	0,105	0,130	0,000	0,036	0,023	0,025	0,025	0,045	0,045	0,005	0,004	0,000	0,002	0,027	0,001	0,000	0,000	0,018	0,016	0,020	0,013	0,000	0,004	0,007	0,024
Single	0,016	0,016	0,056	0,095	0,252	0,076	0,076	0,049	0,029	0,001	1	0,359	0,123	0,056	0,217	0,081	0,033	0,000	0,051	0,074	0,001	0,061	0,102	0,107	0,107	0,002	0,002	0,018	0,015	0,000	0,012	0,002	0,000	0,004	0,007	0,003	0,006	0,002	0,007	0,059	0,034	0,003	0,001
Married	0,013	0,013	0,001	0,071	0,044	0,040	0,040	0,032	0,002	0,005	0,359	1	0,291	0,032	0,073	0,033	0,080	0,005	0,002	0,041	0,025	0,057	0,008	0,054	0,054	0,000	0,000	0,043	0,015	0,003	0,051	0,006	0,011	0,000	0,017	0,029	0,000	0,028	0,006	0,060	0,033	0,016	0,007
Divorced/Separated/Widowed	0,000	0,000	0,081	0,000	0,079	0,003	0,003	0,001	0,016	0,013	0,123	0,291	1	0,002	0,030	0,007	0,019	0,009	0,034	0,002	0,024	0,000	0,053	0,005	0,005	0,002	0,002	0,010	0,000	0,008	0,022	0,001	0,019	0,003	0,004	0,020	0,009	0,022	0,000	0,001	0,000	0,008	0,020
Retired	0,001	0,001	0,102	0,014	0,166	0,118	0,118	0,179	0,007	0,033	0,056	0,032	0,002	1	0,022	0,048	0,039	0,172	0,005	0,009	0,032	0,032	0,030	0,050	0,050	0,033	0,033	0,012	0,018	0,026	0,002	0,013	0,104	0,040	0,057	0,011	0,008	0,009	0,111	0,038	0,087	0,055	0,017
Student	0,011	0,011	0,045	0,028	0,122	0,039	0,039	0,007	0,018	0,007	0,217	0,073	0,030	0,022	1	0,018	0,015	0,065	0,003	0,039	0,072	0,036	0,033	0,053	0,053	0,004	0,004	0,012	0,002	0,001	0,002	0,015	0,012	0,104	0,012	0,007	0,006	0,006	0,001	0,004	0,003	0,001	0,018
Educational field worker	0,054	0,054	0,006	0,007	0,000	0,005	0,005	0,015	0,157	0,223	0,081	0,033	0,007	0,048	0,018	1	0,032	0,143	0,054	0,121	0,009	0,050	0,008	0,029	0,029	0,000	0,000	0,004	0,002	0,004	0,013	0,033	0,000	0,012	0,009	0,024	0,006	0,021	0,004	0,018	0,013	0,013	0,001
Cultural field worker	0,001	0,001	0,001	0,002	0,004	0,025	0,025	0,007	0,016	0,031	0,033	0,080	0,019	0,039	0,015	0,032	1	0,115	0,001	0,000	0,001	0,003	0,003	0,001	0,001	0,015	0,015	0,000	0,011	0,079	0,009	0,030	0,002	0,012	0,037	0,005	0,001	0,004	0,036	0,000	0,012	0,003	0,000
No cultural or educational worker	0,055	0,055	0,032	0,009	0,007	0,012	0,012	0,020	0,143	0,083	0,000	0,005	0,009	0,172	0,065	0,143	0,115	1	0,080	0,005	0,060	0,059	0,022	0,041	0,041	0,034	0,034	0,001	0,015	0,086	0,007	0,021	0,030	0,112	0,099	0,016	0,003	0,014	0,188	0,053	0,137	0,015	0,046
< 1.000 euros (monthly wage)	0,000	0,000	0,143	0,000	0,120	0,040	0,040	0,003	0,129	0,105	0,051	0,002	0,034	0,005	0,003	0,054	0,001	0,080	1	0,326	0,286	0,011	0,000	0,003	0,003	0,000	0,000	0,017	0,000	0,021	0,108	0,028	0,022	0,024	0,006	0,001	0,092	0,003	0,025	0,014	0,024	0,001	0,124
> 1.000 (monthly wage)	0,000	0,000	0,097	0,015	0,034	0,000	0,000	0,018	0,077	0,130	0,074	0,041	0,002	0,009	0,039	0,121	0,000	0,005	0,326	1	0,151	0,004	0,017	0,013	0,013	0,001	0,001	0,006	0,008	0,019	0,021	0,036	0,000	0,063	0,030	0,005	0,041	0,007	0,003	0,011	0,008	0,010	0,027
N/A monthly wage	0,000	0,000	0,011	0,013	0,040	0,054	0,054	0,039	0,014	0,000	0,001	0,025	0,024	0,032	0,072	0,009	0,001	0,060	0,286	0,151	1	0,034	0,020	0,032	0,032	0,000	0,000	0,005	0,010	0,001	0,049	0,000	0,025	0,187	0,008	0,002	0,018	0,001	0,015	0,001	0,007	0,008	0,050
Active museum participation	0,002	0,002	0,000	0,000	0,000	0,001	0,001	0,000	0,036	0,036	0,061	0,057	0,000	0,032	0,036	0,050	0,003	0,059	0,011	0,004	0,034	1	0,123	0,716	0,716	0,228	0,228	0,003	0,034	0,026	0,077	0,022	0,003	0,007	0,015	0,000	0,032	0,000	0,135	0,090	0,139	0,022	0,062
Museum satisfaction	0,000	0,000	0,042	0,042	0,142	0,005	0,005	0,001	0,017	0,023	0,102	0,008	0,053	0,030	0,033	0,008	0,003	0,022	0,000	0,017	0,020	0,123	1	0,176	0,176	0,037	0,037	0,000	0,025	0,027	0,008	0,016	0,011	0,035	0,056	0,019	0,003	0,020	0,042	0,142	0,107	0,076	0,057
low engagement	0,000	0,000	0,003	0,004	0,011	0,004	0,004	0,001	0,019	0,025	0,107	0,054	0,005	0,050	0,053	0,029	0,001	0,041	0,003	0,013	0,032	0,716	0,176	1	1,000	0,119	0,119	0,003	0,038	0,010	0,065	0,006	0,011	0,000	0,006	0,009	0,016	0,007	0,134	0,129	0,164	0,005	0,088
high engagement	0,000	0,000	0,003	0,004	0,011	0,004	0,004	0,001	0,019	0,025	0,107	0,054	0,005	0,050	0,053	0,029	0,001	0,041	0,003	0,013	0,032	0,716	0,176	1,000	1	0,119	0,119	0,003	0,038	0,010	0,065	0,006	0,011	0,000	0,006	0,009	0,016	0,007	0,134	0,129	0,164	0,005	0,088
High frequency	0,008	0,008	0,016	0,005	0,003	0,021	0,021	0,000	0,043	0,045	0,002	0,000	0,002	0,033	0,004	0,000	0,015	0,034	0,000	0,001	0,000	0,228	0,037	0,119	0,119	1	1,000	0,012	0,005	0,044	0,072	0,028	0,010	0,067	0,059	0,058	0,001	0,055	0,086	0,058	0,089	0,116	0,060
Low frequency	0,008	0,008	0,016	0,005	0,003	0,021	0,021	0,000	0,043	0,045	0,002	0,000	0,002	0,033	0,004	0,000	0,015	0,034	0,000	0,001	0,000	0,228	0,037	0,119	0,119	1,000	1	0,012	0,005	0,044	0,072	0,028	0,010	0,067	0,059	0,058	0,001	0,055	0,086	0,058	0,089	0,116	0,060
Cinema	0,008	0,008	0,001	0,018	0,007	0,016	0,016	0,044	0,004	0,005	0,018	0,043	0,010	0,012	0,012	0,004	0,000	0,001	0,017	0,006	0,005	0,003	0,000	0,003	0,003	0,012	0,012	1	0,064	0,011	0,211	0,077	0,034	0,004	0,157	0,056	0,028	0,061	0,010	0,001	0,006	0,094	0,035
Theatre	0,011	0,011	0,041	0,003	0,058	0,009	0,009	0,022	0,001	0,004	0,015	0,015	0,000	0,018	0,002	0,002	0,011	0,015	0,000	0,008	0,010	0,034	0,025	0,038	0,038	0,005	0,005	0,064	1	0,048	0,004	0,133	0,011	0,055	0,182	0,175	0,000	0,169	0,003	0,002	0,003	0,198	0,029
Classical or Jazz concerts	0,000	0,000	0,001	0,019	0,011	0,009	0,009	0,028	0,008	0,000	0,000	0,003	0,008	0,026	0,001	0,004	0,079	0,086	0,021	0,019	0,001	0,026	0,027	0,010	0,010	0,044	0,044	0,011	0,048	1	0,069	0,211	0,011	0,105	0,431	0,012	0,148	0,021	0,015	0,017	0,020	0,143	0,004
Traditional, pop, rock concerts	0,000	0,000	0,053	0,005	0,023	0,068	0,068	0,012	0,012	0,002	0,012	0,051	0,022	0,002	0,002	0,013	0,009	0,007	0,108	0,021	0,049	0,077	0,008	0,065	0,065	0,072	0,072	0,211	0,004	0,069	1	0,109	0,027	0,000	0,140	0,066	0,105	0,078	0,002	0,000	0,000	0,121	0,001
Exhibition	0,000	0,000	0,007	0,004	0,001	0,002	0,002	0,037	0,002	0,027	0,002	0,006	0,001	0,013	0,015	0,033	0,030	0,021	0,028	0,036	0,000	0,022	0,016	0,006	0,006	0,028	0,028	0,077	0,133	0,211	0,109	1	0,001	0,077	0,418	0,091	0,036	0,098	0,054	0,015	0,039	0,268	0,002
Books	0,044	0,044	0,195	0,015	0,095	0,116	0,116	0,005	0,000	0,001	0,000	0,011	0,019	0,104	0,012	0,000	0,002	0,030	0,022	0,000	0,025	0,003	0,011	0,011	0,011	0,010	0,010	0,034	0,011	0,011	0,027	0,001	1	0,014	0,116	0,012	0,024	0,015	0,035	0,072	0,065	0,009	0,001
Talk activities, workshop, classes	0,006	0,006	0,021	0,001	0,012	0,024	0,024	0,002	0,002	0,000	0,004	0,000	0,003	0,040	0,104	0,012	0,012	0,112	0,024	0,063	0,187	0,007	0,035	0,000	0,000	0,067	0,067	0,004	0,055	0,105	0,000	0,077	0,014	1	0,329	0,033	0,006	0,034	0,068	0,171	0,143	0,195	0,024
Cultural Index	0,018	0,018	0,077	0,002	0,049	0,018	0,018	0,002	0,002	0,000	0,007	0,017	0,004	0,057	0,012	0,009	0,037	0,099	0,006	0,030	0,008	0,015	0,056	0,006	0,006	0,059	0,059	0,157	0,182	0,431	0,140	0,418	0,116	0,329	1	0,092	0,037	0,099	0,048	0,102	0,091	0,451	0,001
Sport	0,053	0,053	0,002	0,013	0,003	0,001	0,001	0,009	0,005	0,018	0,003	0,029	0,020	0,011	0,007	0,024	0,005	0,016	0,001	0,005	0,002	0,000	0,019	0,009	0,009	0,058	0,058	0,056	0,175	0,012	0,066	0,091	0,012	0,033	0,092	1	0,019	0,993	0,000	0,006	0,002	0,747	0,000
Live sporting events	0,026	0,026	0,084	0,001	0,065	0,031	0,031	0,010	0,036	0,016	0,006	0,000	0,009	0,008	0,006	0,006	0,001	0,003	0,092	0,041	0,018	0,032	0,003	0,016	0,016	0,001	0,001	0,028	0,000	0,148	0,105	0,036	0,024	0,006	0,037	0,019	1	0,049	0,006	0,012	0,011	0,068	0,002
Sport Index	0,057	0,057	0,005	0,013	0,001	0,002	0,002	0,007	0,008	0,020	0,002	0,028	0,022	0,009	0,006	0,021	0,004	0,014	0,003	0,007	0,001	0,000	0,020	0,007	0,007	0,055	0,055	0,061	0,169	0,021	0,078	0,098	0,015	0,034	0,099	0,993	0,049	1	0,000	0,008	0,003	0,763	0,000
Voluntary social activities	0,006	0,006	0,065	0,020	0,013	0,014	0,014	0,015	0,037	0,013	0,007	0,006	0,000	0,111	0,001	0,004	0,036	0,188	0,025	0,003	0,015	0,135	0,042	0,134	0,134	0,086	0,086	0,010	0,003	0,015	0,002	0,054	0,035	0,068	0,048	0,000	0,006	0,000	1	0,357	0,795	0,102	0,129
Collective activities	0,016	0,016	0,112	0,006	0,062	0,089	0,089	0,002	0,001	0,000	0,059	0,060	0,001	0,038	0,004	0,018	0,000	0,053	0,014	0,011	0,001	0,090	0,142	0,129	0,129	0,058	0,058	0,001	0,002	0,017	0,000	0,015	0,072	0,171	0,102	0,006	0,012	0,008	0,357	1	0,803	0,172	0,066
Social Index	0,001	0,001	0,109	0,015	0,042	0,055	0,055	0,009	0,015	0,004	0,034	0,033	0,000	0,087	0,003	0,013	0,012	0,137	0,024	0,008	0,007	0,139	0,107	0,164	0,164	0,089	0,089	0,006	0,003	0,020	0,000	0,039	0,065	0,143	0,091	0,002	0,011	0,003	0,795	0,803	1	0,169	0,119
Global Index	0,015	0,015	0,017	0,001	0,025	0,006	0,006	0,011	0,000	0,007	0,003	0,016	0,008	0,055	0,001	0,013	0,003	0,015	0,001	0,010	0,006	0,022	0,076	0,005	0,005	0,116	0,116	0,094	0,198	0,143	0,121	0,268	0,009	0,195	0,451	0,747	0,068	0,763	0,102	0,172	0,169	1	0,008
PGWBI	0,045	0,045	0,036	0,007	0,011	0,024	0,024	0,009	0,047	0,024	0,001	0,007	0,020	0,017	0,018	0,001	0,000	0,046	0,124	0,027	0,050	0,062	0,057	0,088	0,088	0,060	0,060	0,035	0,029	0,004	0,001	0,002	0,001	0,024	0,001	0,000	0,002	0,000	0,129	0,066	0,119	0,008	1

Semantic connectivity map (MST) generated by the auto-CM ANN

Variables used in auto-CM analysis

Variable
Male
Female
65 +
45 - 64
15 - 44
Portugal
Other Countries
Single
Married
Divorced/Separated/Widowed
< 1.000
> 1.000
ND
Low active museum participation
High active museum participation
Low museum satisfaction
High museum satisfaction
Low museum engagement
High museum engagement
High museum frequency
Low museum frequency
High Cultural Index
Low Cultural Index
High Sport Index
Low Sport Index
High Social Index
Low Social Index
High Global Index
Low Global Index
Severe distress
Distress
No distress
Positive wellbeing

APPENDIX C – MUVAET

Questionnaire

El Museu Valencià d'Etnologia de la Diputación de Valencia está realizando un estudio sobre los visitantes de sus exposiciones con el fin de adecuar las condiciones de la visita a sus necesidades y mejorar los servicios que se prestan. El cuestionario es anónimo y los datos obtenidos tendrán un carácter divulgativo y científico, y serán utilizados para mejorar los servicios del museo.

Sección A: Lugar y fecha

A1. **Entrevistador**

Encuestador 1 ☐

Encuestador 2 ☐

A2. **Esta encuesta se realiza después de la visita a alguna sala del *Museu Valencià d'Etnologia.* ¿Podría indicarnos de qué sala está saliendo?**

1. Sala de Exposiciones Temporales (Planta Baja). Sala exposción: 2. La ciutat Viscuda (Planta primera). Sala exposición: 3. Horta i Marjal (planta primera). Sala exposición: 4.Secà i muntanaya (planta segunda)

☐

A3. **Fecha**

☐☐☐☐☐☐☐☐

Sección B: Formas y frecuencia de la visita

B1. **¿Cuándo fué la úlitma vez que visito el Museu Valencià d'Etnologia?**

Es la primera vez que lo visito ☐

La última vez que visité el museo fué en los últimos 3 meses ☐

La última vez que visité el museo fué en los últimos 6 meses ☐

La última vez que visité el museo fué en los últimos 12 meses ☐

La última vez que visité el museo fué hace más de 1 año ☐

La última vez que visité al museo fué hace mucho tiempo ☐

B2. **En caso de que haya venido más veces, ¿cuántas veces diría que ha venido al *Museu Valencià d'Etnologia* en los útlimos 12 meses?**

☐☐

B3. **En la visita de hoy, ha venido....**

Solo/a ☐

En pareja ☐

Con familiares ☐

Con familiares incluyendo niños ☐

Con amigos ☐

En un grupo ☐

Otro ☐

B4. **¿Cuánto tiempo, en minutos, ha durado su visita al museo de Etnologia?**

☐☐☐

B5. **¿Cuánto tiempo, en minutos diría que va a pasar en el resto del edficio/complejo de la Beneficencia?**

Sin contar los que ha pasado en las salas del Museu Valencià d'Etnologia

☐☐☐

Sección C: Disponibilidad a pagar

C1. **¿Cuánto ha pagado por el acceso al Museu Valencià d'Etnologia?**

Escriba la respuesta en Euros con 1 decimal en su caso. Ej. 3.8

☐☐☐

C2. **Ahora que ya ha visitado el museo, ¿Cuál diría que es precio máximo que hubiera estado dispuesto a pagar por la entrada al Museu Valencià d'Etnologia?**

Escriba la respuesta con 1 decimal (en su caso). Ej. 4.7

☐☐☐

Sección D: Motivación

D1. **Sobre las motivaciones para visitar el Museu Valencià d'Etnologia, ¿En que grado, de acuerdo con la escala propuesta, diría que está de acuerdo con las siguientes afirmaciones?**

	Completamente en desacuerdo	Parcialmente en desacuerdo	Neutral, ni de acuerdo ni en desacuerdo	Parcialmente de acuerdo	Totalmente de acuerdo
He venido a visitar el museo para ampliar mis conocimientos en general	☐	☐	☐	☐	☐
He venido al museo para profundizar en el conocimiento de la cultura valenciana	☐	☐	☐	☐	☐
He venido al museo para sentir y experimentar emociones nuevas y distintas	☐	☐	☐	☐	☐

	Completamente en desacuerdo	Parcialmente en desacuerdo	Neutral, ni de acuerdo ni en desacuerdo	Parcialmente de acuerdo	Totalmente de acuerdo
He venido al museo para pasar un rato entretenido y hacer algo diferente	☐	☐	☐	☐	☐
He venido al museo por que me han traído otras personas o para enseñárselo a familiares y amigos	☐	☐	☐	☐	☐

D2. **Para esta visita en concreto ¿Cuál diría que ha sido el elemento más importante para motivar la visita?**

El conjunto del complejo cultural, el edificio ☐

Una exposición temporal ☐

Una exposición permanente ☐

Una actividad desarrollada en el complejo ☐

Alguna actividad de estudio, investigación, académica ☐

El museo se encontraba en una ruta turística con otros elementos ☐

Acompañar a un/una amigo/a o familiar ☐

Sección E: Notoriedad, conocimiento y señalética

E1. **Para el caso concreto de esta visita, ¿Cómo ha tenido conocimiento de la existencia y programación del Museu valencià d'Etnologia?**

Por la información que he encontrado al acceder al Centro de la Beneficiencia por otras razones ☐

Por la información emitida por el propio museo a través de correos y otros avisos ☐

Por la web del museo ☐

Por el seguimiento en las redes sociales ☐

Por infromación de medios de comunicación digitales ☐

Por guías de programación en la prensa escrita ☐

Por recomendaciones de radio o televisión ☐

Por la información en los autobuses urbanos de València ☐

Por la información de familiares y amigos ☐

Por la información en otros centros culturales de la Diputación ☐

Por las recomendaciones en oficinas de turismo u otros prescriptores turísticos (hoteles, guías, pág web...) ☐

Por casualidad ☐

☐

Otro ▼

Otro

E2. **¿A través de qué medio de transporte ha accedido a la puerta del museo?**

Andando ☐

En bicicleta ☐

En coche o moto particular ☐

En autobús público ☐

En autobús privado ☐

En taxi ☐

E3. **Respecto al acceso a las salas del museu d'Etnologia, cuál de las siguientes afirmaciones refleja mejor su experiencia.**

No he tenido ningún problema de acceso, ya que había venido en anteriores ocasiones ☐

Aunque asistía por primera vez no he tenido problemas para acceder ☐

He tenido algunos problemas por la falta o escasez de indicaciones o señales para acceder ☐

He tenido problema para acceder porque la información de la que disponía no era la más adecuada ☐

Sección F: Percepción de la calidad de los servicios

F1. **De acuerdo con su percepción o criterio, ¿cuáles de los siguientes aspectos o servicios del museo serían mejorables o cuáles resultan satisfactorios?**

	Claramente mejorable	Mejorable	No tengo criterio	Satisfactorio	Muy satisfactorio
La disposición y estructura de las exposiciones	☐	☐	☐	☐	☐
Las recreaciones y escenas en las salas	☐	☐	☐	☐	☐
El edificio, su arquitectura y la organización espacial	☐	☐	☐	☐	☐
El contenido de los mensajes y la esencia del discurso de la exposición	☐	☐	☐	☐	☐
Los terminales interactivos (pantallas de ordenadores, audios de la sala)	☐	☐	☐	☐	☐
Las zonas de descanso (patios, espacio de descanso entre salas)	☐	☐	☐	☐	☐
Las condiciones ambientales como la temperatura, la sonoridad o la iluminación	☐	☐	☐	☐	☐
El tiempo requerido para la visita	☐	☐	☐	☐	☐
La información, los paneles con textos, las fichas en la sala	☐	☐	☐	☐	☐
El trato, la información y la atención del personal de sala y del personal de recepción	☐	☐	☐	☐	☐
La cafeteria	☐	☐	☐	☐	☐
El servicio de guardarropía	☐	☐	☐	☐	☐
La biblioteca	☐	☐	☐	☐	☐

	Claramente mejorable	Mejorable	No tengo criterio	Satisfactorio	Muy satisfactorio
Las visitas guiadas	☐	☐	☐	☐	☐
Los baños	☐	☐	☐	☐	☐

F2. **Durante la visita, ¿ha tenido alguna de las siguientes sensaciones?**

	Sí	Dudoso	No
Me he sentido perdido/a, desorientado/a	☐	☐	☐
Me he sentido cansado/a, abrumado/a	☐	☐	☐
Me he sentido nervioso/a, estresado/a	☐	☐	☐
Me he sentido aburrido/a	☐	☐	☐

Sección G: Satisfacción y probabilidad de prescripción

G1. **Señale en un escala del 1 al 10, qué impactos le ha generado la exposición en las siguientes dimensiones,**

siendo 1= ningún impacto, 5= cierto impacto 10=un impacto muy considerable

He aprendido cosas nuevas y he reflexionado sobre algunos de los aspectos que se muestran en la exposición. ☐

He sentido emociones y la exposición me ha conmovido o provocado diversos sentimientos. ☐

He apreciado sensación de belleza, armonía o impacto estético ☐

G2. **De nuevo en una escala del 1 al 10, que puntuación le otorgaría en general al grado de satisfacción sobre su visita al museo, siendo:**

1- Nada Satisfecho 5- mínimamente satisfecho 10- Totalmente satisfecho

Satisfacción global ☐

G3. **¿Cree que volverá a repetir una visita al museo en los próximos 6 meses?**

Sí, con toda seguridad ☐

Podría ser que sí ☐

Creo que no ☐

No con toda seguridad ☐

G4. **A partir de su experiencia, ¿Piensa que recomendará la visita a sus familiares y amigos?**

Sí, con toda seguridad ☐

Sí, si surge la oportunidad de hablar sobre el tema. ☐

No creo ☐

No, con toda seguridad ☐

G5. **¿Desde su perspectiva y experiencia, tanto para usted como para otros usuarios/as piensa que los siguientes acciones tendrían un efecto percecptible en el número de visitantes del museo o en su frecuencia?**

	No tendría ningún efecto	Tendría un efecto mínimo	Tendría un efecto perceptible	Tendría un efecto considerable
Disponer de un párking	☐	☐	☐	☐
Ampliar los horarios del museo	☐	☐	☐	☐
Reducir el precio de la entrada	☐	☐	☐	☐
Disponer de unos servicios de cafetería y tienda más atractivos	☐	☐	☐	☐
Disponer de servicios para facilitar la visita con niños	☐	☐	☐	☐
Disponer de un servicio más eficiente de comunicación para informar sobre programación, novedades, actividades	☐	☐	☐	☐
Mayor diversidad y cantidad de actividades	☐	☐	☐	☐
Actividades más atractivas	☐	☐	☐	☐

G6. **Comente cualquier otro aspecto, no señalado en los casos anteriores y que según su criterio, mejoraria la frecuencia de visitas al museo**

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Sección H: Caracterización Sociodemográfica

H1. **Sexo**

Femenino ☐

Masculino ☐

H2. **Año de nacimiento**

☐☐☐☐

H3. **Actualmente, entre todos/as los/as miembros del hogar (incluida la persona entrevistada) y por todos los conceptos, ¿de cuántos ingresos disponen por término medio en su hogar al mes, después de la deducción de impuestos (o sea, ingresos netos)?**

- No tienen ingresos de ningún tipo ☐

- Menos o igual a 300 € ☐

- De 301 a 900 € ☐

- De 901 a 1.800 € ☐

- De 1.801 a 3.000 € ☐

- De 3.001 a 4.500 € ☐

- De 4.501 a 6.000 € ☐

- Más de 6.000 € ☐

H4. **¿Cuántos miembros componen su unidad convivencial (incluyéndose a usted) y residen en el mismo hogar?**

H5. **¿Cuál es la etapa concluida de sus estudios?**

Sin estudios

Primaria

Secundaria 1ª etapa

Secundaria 2ª etapa/F.P.

Estudios universitarios de 1er ciclo

Estudios de Licenciatura o Posgrado

Doctorado

H6. **¿Cuals de la siguientes afirmaciones describe mejor su ubicación hoy en la ciudad de Valencia?**

Soy un residente de la ciudad de Valencia o de su área metropolitana desde hace más de 5 años

Soy un residente reciente de la ciudad de Valencia o de su área metropolitana (menos de 5 años)

Soy un residente temporal en la ciudad de Valencia (por un período menor a un año)

Soy un excursionista que visito hoy la ciudad pero no pernocto en ella

Soy un turista que al menos pernoctaré una noche en la ciudad de Valencia

H7. **¿Cuál es su país/ Comunidad Autónoma de residencia habitual?**

En caso de residir en España, indique la Comunidad Autónoma, en caso de residir fuera de España indique el país

H8. **¿Cuál es el código postal de su residencia habitual?**

H9. **¿Cuál es su situación socioprofesional actual?**

1.-Estudiante secundaria /bachiller/FP.

2.-Estudiante universitario.

3.-En busca de empleo.

4.-Trabajador por cuenta ajena o asalariado.

5.-Trabajador autónomo/prof. liberal/ empresario.

6.-Tareas domésticas.

7.-Jubilado/a.

H10. **¿Podría indicarnos en cuál de los siguientes ámbitos desarrolla su actividad profesional?**

En el campo de la Educación ☐

En el campo del Patrimonio, Museos, Archivos o Bibliotecas ☐

En el campo de la cultura y las industrias culturales (Música, Editorial, Audiovisual, Videojuegos, Artes Escénicas y Visuales) ☐

En el campo de los sectores creativos (Diseño, Publicidad, Arquitectura, Investigación,...) ☐

En otros campos ☐

H11. **¿En que lengua suele expresarse habitualmente?**

Principalmente en castellano. ☐

Principalmente en valenciano. ☐

Indistintamente en Valenciano o castellano en función de los interlocutores. ☐

En otras lenguas. ☐

Sección I: Interés por prácticas socioculturales

I1. **¿Cómo calificaría su interés en las siguientes actividades culturales? (Desde 0 (NINGÚN INTERÉS) hasta 10 (MÁXIMO INTERÉS))**

Leer libros por otras razones distintas ai trabajo o estudios. ☐

Museos. ☐

Exposiciones (Fuera de un museo). ☐

Monumentos. ☐

Cine. ☐

Museo de etnología y antropología ☐

Teatro. ☐

Conciertos de música actual. ☐

Conciertos de música clásica. ☐

Ópera. ☐

Sección J: Impacto de las prácticas socioculturales

Mediante este apartado medimos la relación entre el consumo cultural y el bienestar de las personas.

J1. **¿Ha sufrido de los nervios durante el último mes?**

Mucho, hasta el punto de no poder trabajar u ocuparme de mis cosas ☐

Con mucha frecuencia ☐

Bastantes veces ☐

A veces, las suficientes para preocuparme ☐

Un poco ☐

No, en absoluto ☐

J2. **¿Cuánta energía o vitalidad ha tenido o sentido durante el último mes?**

Lleno/a de energía o vitalidad ☐

Con bastante vitalidad la mayor parte del tiempo ☐

He tenido altibajos ☐

Generalmente, algo bajo/a de energía ☐

Muy poca energía la mayor parte del tiempo ☐

Sin energía -me sentía abatido/a, sin fuerza ☐

J3. **¿Se ha sentido triste y desanimado/a durante el último mes?**

No, en absoluto ☐

Pocas veces ☐

En algunos momentos ☐

La mayor parte del tiempo ☐

Casi todo el tiempo ☐

Todo el tiempo ☐

J4. **¿Me he sentido emocionalmente equilibrado/a y seguro/a de mi mismo/a durante el último mes?**

En ningún momento ☐

En muy poca ocasiones ☐

En algunos momentos ☐

En bastantes momentos ☐

La mayor parte del tiempo ☐

Todo el tiempo ☐

J5. **¿Me he sentido/a alegre durante la semana pasada?**

En ningún momento ☐

En muy pocas ocasiones ☐

En algunos momentos ☐

En bastantes momentos ☐

La mayor parte del tiempo ☐

Todo el tiempo ☐

J6. **¿Me he sentido cansado/a, fatigado/a, agotado/a o exhausto/a durante el último mes?**

En ningún momento ☐

En muy pocas ocasiones ☐

En algunos momentos ☐

En bastantes momentos ☐

La mayor parte del tiempo ☐

Todo el tiempo ☐

Muchas gracias por su colaboración

Summary statistics (Quantitative data)

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
First visit	285	0	285	0,000	1,000	0,386	0,488
Last visit in the past 12 months	285	0	285	0,000	1,000	0,291	0,455
Last visit more than 1 year ago	285	0	285	0,000	1,000	0,323	0,468
Alone	285	0	285	0,000	1,000	0,316	0,466
With my partner	285	0	285	0,000	1,000	0,375	0,485
With friends	285	0	285	0,000	1,000	0,204	0,403
With family	285	0	285	0,000	1,000	0,077	0,267
With family and kids	285	0	285	0,000	1,000	0,014	0,118
In group	285	0	285	0,000	1,000	0,014	0,118
Cognitive motivation	285	0	285	1,000	5,000	3,979	1,169
Identitary/cognitive motivation	285	0	285	1,000	5,000	4,126	1,147
Emotional motivation	285	0	285	1,000	5,000	3,189	1,465
Amusement motivation	285	0	285	1,000	5,000	3,726	1,262
Social motivation	285	0	285	1,000	5,000	1,740	1,459
Cognitive impact	285	0	285	1,000	10,000	7,625	2,011
Emotive impact	285	0	285	1,000	10,000	7,295	2,400
Aesthetic impact	285	0	285	1,000	10,000	7,256	2,282
Total impacts	285	0	285	7,000	30,000	22,175	5,496
Global satisfaction	285	0	285	20,000	100,000	81,796	16,983
Female	285	0	285	0,000	1,000	0,516	0,501
Male	285	0	285	0,000	1,000	0,484	0,501
18 -35 years old	285	0	285	0,000	1,000	0,179	0,384
36 - 45 years old	285	0	285	0,000	1,000	0,172	0,378
46 - 55 years old	285	0	285	0,000	1,000	0,225	0,418
56 - 65 years old	285	0	285	0,000	1,000	0,211	0,408
Over 65 years old	285	0	285	0,000	1,000	0,214	0,411
no income	285	0	285	0,000	1,000	0,025	0,155
< 900 euros (monthly income)	285	0	285	0,000	1,000	0,060	0,237
901 - 1800 euros (monthly income)	285	0	285	0,000	1,000	0,256	0,437
1801 - 3000 euros (monthly income)	285	0	285	0,000	1,000	0,277	0,448
3001 - 4500 euros (monthly income)	285	0	285	0,000	1,000	0,112	0,316
> 4500 euros (monthly income)	285	0	285	0,000	1,000	0,039	0,193
N/A monthly income	285	0	285	0,000	1,000	0,232	0,423
Elementary school diploma	285	0	285	0,000	1,000	0,060	0,237

First part High school	285	0	285	0,000	1,000	0,039	0,193
High school diploma	285	0	285	0,000	1,000	0,260	0,439
Bachelor's degree	285	0	285	0,000	1,000	0,218	0,413
Master's Degree	285	0	285	0,000	1,000	0,382	0,487
PhD	285	0	285	0,000	1,000	0,042	0,201
Resident in Valencia	285	0	285	0,000	1,000	0,789	0,408
Temporary resident	285	0	285	0,000	1,000	0,018	0,132
Tourist	285	0	285	0,000	1,000	0,193	0,395
from Spain	285	0	285	0,000	1,000	0,940	0,237
from Other Countries	285	0	285	0,000	1,000	0,060	0,237
Student	285	0	285	0,000	1,000	0,063	0,244
Looking for a job	285	0	285	0,000	1,000	0,063	0,244
Employed worker	285	0	285	0,000	1,000	0,474	0,500
Self-employed worker	285	0	285	0,000	1,000	0,112	0,316
House work	285	0	285	0,000	1,000	0,028	0,165
Retired	285	0	285	0,000	1,000	0,260	0,439
Culture and creative field	285	0	285	0,000	1,000	0,133	0,341
Educational field	285	0	285	0,000	1,000	0,168	0,375
Other working fields	285	0	285	0,000	1,000	0,698	0,460
Valencian language	285	0	285	0,000	1,000	0,182	0,387
Castilian language	285	0	285	0,000	1,000	0,628	0,484
Both Valencian and Castilian language	285	0	285	0,000	1,000	0,123	0,329
Other languages	285	0	285	0,000	1,000	0,067	0,250
Books	285	0	285	1,000	10,000	8,246	2,117
Museums	285	0	285	1,000	10,000	8,135	1,869
Exhibitions	285	0	285	1,000	10,000	7,367	2,074
Monuments	285	0	285	1,000	10,000	7,991	1,819
Cinema	285	0	285	1,000	10,000	7,475	2,235
Ethnology and anthropology museums	285	0	285	2,000	10,000	6,902	2,092
Theatre	285	0	285	1,000	10,000	6,495	2,416
Contemporary music concerts	285	0	285	1,000	10,000	5,833	2,924
Classical music concerts	285	0	285	1,000	10,000	6,318	2,612
Opera	285	0	285	1,000	10,000	4,875	2,901
CULTURAL INTERESTS	285	0	285	24,000	100,000	69,637	14,086
Low Cultural Interest	285	0	285	0,000	1,000	0,088	0,283
Medium cultural interests	285	0	285	0,000	1,000	0,663	0,473
High cultural interests	285	0	285	0,000	1,000	0,249	0,433
PGWBI	285	0	285	10,980	109,800	77,964	15,047

Correlation matrix (Pearson)

P-value (Pearson)

Coefficients of determination (Pearson)

Semantic connectivity map (MST) generated by the auto-CM ANN

Variables used in auto-CM analysis

Variable
First visit
Last visit in the past 12 months
Last visit more than 1 year ago
Low cognitive motivation
High cognitive motivation
Low identitary/cognitive motivation
High identitary/cognitive motivation
Low emotional motivation
High emotional motivation
Low amusement motivation
High amusement motivation
Low social motivation
High social motivation
Low cognitive impact
High cognitive impact
Low emotive impact
High emotive impact
Low aesthetic impact
High aesthetic impact
Low IMPACTS
High IMPACTS
Low_visit satisfaction
Medium_visit satisfaction
high_visit satisfaction
Female
Male
18 -35 years old
36 - 45 years old
46 - 55 years old
56 - 65 years old
Over 65 years old
no income
< 900 euros (monthly income)
901 - 1800 euros (monthly income)
1801 - 3000 euros (monthly income)
3001 - 4500 euros (monthly income)
> 4500 euros (monthly income)
N/A monthly income
Elementary school diploma
First part High school
High school diploma
Bachelor's degree
Master's Degree

PhD

Resident in Valencia

Temporary resident

Tourist

from Spain

from Other Countries

Student

Looking for a job

Employed worker

Self-employed worker

House work

Retired

Culture and creative field

Educational field

Other working fields

Valencian language

Castilian language

Both Valencian and Castilian language

Other languages

Low Cultural Interest

Medium cultural interests

High cultural interests

Sever distress

Distress

No distress

Positive wellbeing