SCHOOL OF TOURISM & HOSPITALITY MANAGEMENT SANT IGNASI
RAMON LLULL UNIVERSITY

YEAR 2019-2020

BACHELOR DEGREE IN TOURISM AND HOSPITALITY MANAGEMENT

SUBJECT: DEGREE THESIS

SEMESTER: VIII

TITLE OF ASSIGNMENT:

ANALYSIS OF THE ACCESSIBILITY IN CULTURAL HERITAGE FOR PEOPLE WITH AUTISM SPECTRUM DISORDER

Subject	Degree Thesis
Lecturer	Mónica Cerdán Chiscano
Title of assignment	Analysis of the accessibility in cultural heritage for people with Autism Spectrum Disorder
Student name	Gisela Mora Sorribes
	Roser Sors Planas
Student e-mail	gisela.mora@htsi.url.edu
	roser.sors@htsi.url.edu

Abstract

Accessing to culture is a right for every human being. However, reality shows that people with disabilities constantly face difficulties when trying to participate in these environments. Even though physical accessibility has been considerably improved, the rest of disabilities must have been apparently forgotten, which is the case of customers having intellectual disabilities, such as people with Autism Spectrum Disorder (ASD).

This paper aims to research whether people with this disorder actually participates in the cultural sector, which are the barriers and obstacles they face, and which ways could be helpful to improve the collective's experiences when visiting cultural heritage sites. Fifteen interviews were conducted to different families, associations and experts, but also to one cultural site, Gran Teatre del Liceu. This is a theatre of Barcelona, which already worked to implement inclusive practices for people with ASD, named "friendly shows".

Interviews mainly showed a common aspect answering that accessibility was more developed in terms of physical disabilities rather than sensorial or intellectual ones, as well as the lack of employee awareness and the difficulty of the collective to interact, leading to social misunderstanding of the disorder and discrimination towards it. Some ways of improving customer experience were brought up regarding anticipation and diminishing stressors, which was the purpose of Liceu's "friendly shows".

From an inclusive perspective, this study points out the need to make cultural heritage sites accessible to all publics, emphasizing on the enhancement of dignity and quality of life of people with autism.

Key words: accessibility, ASD, cultural experience, inclusion, heritage sites.

Acknowledgements

First of all, we want to express our gratitude to our supervisor, Mónica Cerdán Chiscano, for guiding us during this project and helping us to build this research. We profoundly appreciate the constant support and patience. As well as the knowledge shared from Mrs. Cerdán, as professional involved in several projects about accessibility and as a supervisor, which has allowed us to understand much properly this topic and has given us the opportunity and tools to discover it.

Likewise, we would like to thank the community of teachers of the School of Tourism and Hospitality Management (HTSI) involved in Degree Thesis, who have contributed to this research, sharing their knowledge and experience. In particular, we would like to mention, the coordinator of the Degree Thesis project, Gilda Hernández Maskivker, for her guidance and assistance throughout the research.

Undoubtedly, we would like to express our gratitude to all participants, who have collaborated in this research. They have been a fundamental pillar in this study. We appreciate each one singular view, which has allowed us to understand the uniqueness of the topic from the closer and real perspective. We are deeply grateful for the kindness we have received from all participants, as well as we want to thank them for their time, efforts, and approachability.

Finally, this research has been possible thanks to the support received from our families and friends, who have given us the motivation and encouragement to achieve this research, as well as they have been always with us in each step. For this reason, we want to express our appreciation, for their patience and unconditional support, especially Ester and Eugènia.

Table of contents

CHAPTER 1: INTRODUCTION

1.1. Context of the research

Like anyone else, people with disabilities must have the right of going on holidays and travelling, but still the travel conception has not taken into consideration their requirements. Therefore, during travelling, they face a number of barriers that difficult the action, which include inaccessible transport, communication, cultural heritage and lack of knowledge (Buhalis et al., 2005). However, the 70% of the total amount of people with special requirements, financially and physically could afford travelling (Van Horn, 2002; Buhalis et al., 2005).

According to the World Health Organisation (2011), 15% worldwide population suffers some kind of disability, which means a 5% growth since 1970, and 2.2% of the population suffers a disability with important functioning adversities (World Health Organisation, 2011). In 2010, it was created the "*European Disability Strategy 2010-2020"* by the European Commission, which goal is the inclusion of people with disabilities in society. It is estimated that 80 million people suffer a disability in the European Union (European Commission, 2010). According to INE, in 2008 3,947,900 million people were suffering a disability in Spain, of which 620,900 had a disability related to social interaction (Instituto Nacional de Estadística, 2008). Furthermore, in Catalonia was estimated that 582,027 million people had a disability, of which 67,758 had an intellectual disability (Institut d'Estadística de Catalunya, 2018). Due to the life longevity, a pronounced factor in Asian countries, and chronic health diseases, the amount of disabilities is increasing (World Health Organisation, 2011).

So, these numbers showed that an important part of the society suffers from a long-term disability and as suggested by the medicine, these figures may continue growing (World Health Organisation, 2011).

From the European overview, it was developed The Work Plan for Culture (2015-2018), which priorities were concentrated to promote cultural diversity and therefore, the accessible and inclusive culture. The improving areas pursue the cultural awareness to implement an inclusive cultural heritage (European Commission, 2014).

From a region perspective, in Catalonia in 2007, it was launched the project "Turisme Accesible - Turisme per a tothom" (in English *Accessible Tourism - Tourism for all*) by the Catalan Agency of Tourism (2007). Its aim was empowering and promoting tourism for all collectives, in different tourism suppliers. This initiative, included the accessible developments and improvements done by cultural heritage sites (Agència Catalana de Turisme, 2007).

According to Statistics on Museums and Museum Collections (2016), "museums are institutions of a permanent nature that acquire, conserve, research, communicate and exhibit for the purposes of

study, education and contemplation, collections that are of historical, artistic, scientific, technical or any other form of cultural value" (División de Estadística y Estudios, S. G. T. M. de C. y D., 2018). In 2018 was estimated that 65,400,000 people visited a museum in Spain, which means 9,2% more than 2016 (División de Estadística y Estudios, S. G. T. M. de C. y D., 2020). Following this, in 2016, 47,3% of the museum supply facilities were accessible for people with disabilities, which means 711 museums in Spain, and 28.5% had activities oriented to people with disabilities. (División de Estadística y Estudios, S. G. T. M. de C. y D., 2018).

Darcy, Cameron & Pegg (2010), said the awareness towards the disability rights is increasing in the western countries. However, either federal or regional institutions are developing incentives and studies, far from being implemented in the sites.

1.2. Identification of the research problem

For many years, the understanding of disabled people was a political issue, as the representation of the collective's oppression, which led more people to start defending their conditions and fighting against social oppression (Morris, 1996; Palacios, 2008). According to Palacios & Romañach (2006), nowadays society still classifies people for different physical appearance and functioning, thus it reinforces the discrimination and non-acceptance of the collectives into society.

Additionally, people with disabilities have been treated following a medical view, which creates a negative stigmatization and illness appearance. Therefore, people with disabilities have to face a lot of limitations that influence their journey, also when they are doing tourism, and it is one of the reasons why these collectives decide not to travel or avoid these situations (Darcy, 1998).

This situation also occurs in cultural heritage (Georgieva, 2018). As Eardley et al. (2016) said, many cultural heritages, such as museums, require a lot of improvements for being accessible for collectives with special needs. However, at the same time, either people with disabilities or without disabilities can use these improvements (Small & Darcy, 2010). Furthermore, Reich et al. (2010) stated that *physical*(1) and *cognitive*(2) *disabilities* are much care than others. Allday (2009) commented as well, that accessibility is centred on physical improvements and intellectual ones are still minimal and not taken into consideration.

(1) *Physical disability* includes mobility impairments such as: upper limb, lower limb, manual dexterity or disability in coordination with different organs of the body. It can be in-born, acquired withthe age, effect of a disease or temporal (Disabled World, 2019)

(2) *Cognitive disability* refers topeople with an IQ under the score of 77, dyslexia or other learning difficulties (Disabled World, 2016; 2019).

Since some years ago, some studies investigated how to improve people with disabilities tourism experiences and cultural heritage. Luckily, the awareness of involving these collectives in leisure environments is increasing (Woodruff, 2019). However, there are few studies focused on ASD (Autism Spectrum Disorder), as well as in intellectual disabilities (Magkafa & Newbutt, 2018). So, this paper is focused on the accessibility challenges that people with ASD (Autism Spectrum Disorder) face when visiting cultural heritage.

1.3. Originality and contribution to knowledge

After reading a diversity of articles and scientific papers related to the accessibility in tourism, the authors of the present study found out a point that was common in all papers: accessibility in tourism and cultural heritage sites for people with disabilities was lacking and deficient, and especially regarding intellectual disabilities and the Autism Spectrum Disorder (ASD).

According to Darcy, Cameron & Pegg (2010), tourism operators need to focus on generating more detailed and cultivated accessible experiences, as for now, it is still a global handicap.

Even though entities like the American Alliance of Museums (AAM) developed a strategic plan for 2016 to 2020 where the nucleus is accessibility, diversity, equity and inclusion (Braden, 2016), the tourism industry is still antagonist to give supply to people who have accessible difficulties (Small & Darcy, 2010).

Museums are indeed willing to become accessible for a wider range of public, but a lot of planning is still needed (Weil, 1999). For instance, while most places have started to implement accessibility for a physically disabled public (ramps, accessible toilets, elevators, etc.) for the compliance of the law (España. Real Decreto Legislativo 1/2013, de 29 noviembre), needs of people with developmental disorders are still not covered as they are less visible than physical ones, and few academics are studying how to fix it. That is why the purpose of this research is to fill the gap on the academics to call for inclusion and equal opportunities to access knowledge for everyone.

Given this circumstance, we show a framework of the existence of adapted activities and special tools that this collective needs, according to the sample used in this case study on Gran Teatre del Liceu. Until now, previous research has been done in Gran Teatre del Liceu (Barcelona) by Maria Josep Conde with Apropa Cultura, a Catalan initiative which main goal is co-working with cultural sites to adapt them to the needs of all disabled people (Conde, 2017).

In any case, the authors do not have enough knowledge or experience to create an accurate plan to include the disabled collective in all touristic and cultural sites, but they invite academics to contribute to knowledge and fill the gap on such investigation. Moreover, they do a call to tourism

coordinators and tourism businesses to work on one of their "biggest challenges" (Scheyvens & Biddulph, 2018), which is the inclusion of the diversity in their supply.

1.4. Aim and objectives

This analytical study is structured in different objectives, to discover the reality of accessibility for people with Autism Spectrum Disorder (ASD). The aim of this study is to explore the customer experience of people with ASD, including families, companions and professionals, in heritage cultural sites. And throughout the findings, analysing the accessibility in Gran Teatre del Liceu.

The second objective is to analyse the special needs and reflect collective's considerations of suitable adaptations, taking into account their proposals and experiences, to develop accessible cultural sites so it can be engaging and achieve their expectations. As well as that, improving the experiences through the Universal Design System is another factor to consider, if applicable.

Finally, the third objective is to explore the Gran Teatre del Liceu's accessibility implementation and proposals oriented to people with ASD and intellectual disabilities, by analysing the improvements and developments carried out in this site.

Overall, this study aims to discover and reflect how people with ASD are treated from the cultural background and if the needs of these collectives are well delivered and accomplished. According to these selected objectives, this research will work on the following research questions:

Q1.	Are the cultural heritage and proposals accessible for people with ASD?
Q2.	Is the experience engaging? Does it achieve the expectations of the public? If applicable, are there ways to improve the experience through the Universal Design System? Which ones?
Q3.	How does Gran Teatre del Liceu manage its accessibility? Are they taking into consideration the needs of people with ASD?

Table 1. Research questions *(Appendix F.1.)*

1.5. Structure of the study

At this point, the authors have organized the study in different chapters, as follows:

Chapter 1: In the first chapter, *Introduction*, the description of the topic is displayed, which will be deeply explained in the second chapter. To understand the topic, a contextualisation about the research problem was needed, which is the lack of accessible cultural offer for people with disabilities, especially people with the Autism Spectrum Disorder. Also, the originality and contribution to knowledge was added, as well as the aims, objectives and research questions.

Chapter 2: The second chapter, *Literature review*, is divided into three other sections (that go into detail along the accessibility in tourism, the disabilities and the heritage), reinforced by previous

literature. First, *Accessible Tourism* section explains the current situation on the topic, including the leisure and tourism constraints the ASD collective faces, and the importance of the Sustainable Development Goals (SDGs) and Agenda 2030. *Disabilities* section exposes the evolution of the ASD perception throughout the society all along the years, the main characteristics that define ASD and what are the specific considerations of the collective in education. Third, *Heritage* points out the right to consume cultural experiences for this minority, the real options of accessibility done until now, and explore the accessible practices in cultural heritage sites, emphasizing on co-creation's relevance. At the end of the chapter, both a literature map and a conceptual framework are exposed.

Chapter 3: The next chapter, *Methodology*, relates the methods used to develop this research, including the kind of study will be used, how the data will be collected and analysed, what and why the sample was chosen and what ethical considerations were applied.

Chapter 4: After collecting all the data, *Findings and Discussion* chapter puts into words what the sample has stated in the interviews into two sections, which aim is answering the research questions chosen in the first chapter. The two sections present the topics analysed through the selective codings reflected in the methodology, and the latter deepens into a case study on a specific cultural site from Barcelona, which is Gran Teatre del Liceu (usually named "Liceu").

Chapter 5: Finally, the *Conclusions* chapter ends with the research, where appears a summary of the findings and discussion, but also recommendations for future actions in cultural sites and limitations found in the study complemented by some suggestions to give thought to in further researches.

CHAPTER 2: LITERATURE REVIEW

2.1. Accessible tourism

2.1.1. The concept of accessible tourism

Even though there is a global desire of helping collectives with disabilities to naturalize their state and an increase the awareness to raise their quality of life, it still remains a lot of barriers to feel included in society, such as poor accessibility, social exclusion or misbehaviour towards these collectives (United Nations, 2019). For this reason, accessible tourism is one of the day-to-day issues in Europe, in order to establish new approaches for reaching this demand, and enabling the destinations for this collective (Eichhorn et al., 2008).

As Darcy (2010a) said, accessible tourism has been deeply studied from an academic view; however, it has been and it is still difficult to find the implementation in the tourism sector. Darcy & Dickson (2009) defined that "accessible tourism is a form of tourism that involves collaborative strategically planned processes between stakeholders that enables people with access requirements, including mobility, vision, hearing and cognitive dimensions of access, to function independently and with equity and dignity through the delivery of universally designed tourism products, services and environments". Following this, the World Tourism Organization (2016) defined accessible tourism as the combination of tourism facilities that allow people with disabilities to get the best out of a destination without inconvenience. Additionally, accessibility from a social, disability and architectural view, refers to the nature of a product, facility or data created to be useful for everyone, no matter what are the skills (European Commission DG Enterprise and Industry, 2014).

When analysing tourism, is important to take into consideration that tourism needs information patterns to clarify tourism elections (Eichhorn et al., 2008). In fact, tourism satisfaction reflects that both society and tourism industry have to know the variety of information needs (Vogt & Fesenmaier, 1995; Fodness & Murray, 1999; Gursoy & McCleary, 2004; Eichhorn et al., 2008) and then create new approaches for solving these gaps and individuals necessities (Fodness & Murray, 1997; Vogt & Fesenmaier, 1998; Allison, 2000; Gursoy & Chen, 2000; Gursoy & McCleary, 2004; Eichhorn et al., 2008). Additionally, in order to achieve the participation of collectives with disabilities in society, and therefore develop the adaptations, it requires the awareness of everybody and collective change of mind (Buhalis & Darcy, 2011). Polat & Hermans (2016) stated that accessible tourism integrates all people who can profit from accessible implementations, in spite of abilities, gender, nationality, faith or cultural baggage. Along this line, Pagán (2012) defined accessible tourism as the approach of enhancing the right of any person, either disabled or non-disabled, to experience tourism-related activities, therefore adapting these experience in order to

remove the difficulties. As well, Buhalis & Darcy (2011) on their research about accessible tourism agreed that a way of integration could be by introducing the Principles of Universal Design, which among other things, intends for applying design for tangible products and environments useful and usable for everybody (Center for Universal Design, 1997; Centre for Excellence in Universal Design, 2020). This implementation would benefit a wider range of visitors, from elder to people with special requirements, not having a disability (Preiser & Ostroff, 2001; Darcy, Cameron & Pegg, 2010) and UNWTO together with ENAT and Fundación ONCE (2016) stated that tourist sites should be aware of how beneficiary could be the accessibility improvements in all tourism sectors, for either residents or visitors, in order to enjoy better the destination's experiences (World Tourism Organization, 2016). Furthermore, Buhalis & Darcy (2011) insisted on the comprehension of these universal principles on how to apply it in accessible tourism. So firstly, it is important to understand correctly the disability and consider four conditions:

- "Types or dimensions of disability,
- Levels of support needs,
- Access enablers, and
- Universal Design" (Buhalis & Darcy, 2011).

Buhalis et al. (2005) described accessibility as the combination of services and facilities that boost and enables the access of people with disabilities in an environment. However, the accessibility concept should collect all different requirements according to each disability. In order to classify these requirements, Buhalis et al. (2005) differentiated:

- Physical access, defined as the combination of physical special needs, sensory requirements and communication accessibility for those collectives with interaction and language barriers (Darcy, 1998).
- Access to information, involving access to data that provides detailed information about travel, access enables for any type of requirements and a large range of information, which in many cases, if it is not too plural and accessible, people with disabilities are out of the tourism perspective (Buhalis et al., 2005).

Additionally, the accessibility in the industry is conditioned by all these different sectors that are part of it, and for this reason must be each one enabled: infrastructures, transport, services and information (Buhalis & Darcy, 2011).

2.1.2. Inclusive tourism

According to Scheyvens & Biddulph (2018), inclusive tourism can be defined as "transformative tourism in which marginalized groups are engaged in ethical production or consumption of tourism and the sharing of its benefits". Scheyvens & Biddulph (2018) said that inclusive tourism has been classified inside a whole group of different tourism overviews, which includes responsible tourism, social tourism and accessible tourism. Also inside accessibility, inclusive tourism is defined as the way of achieving and providing the accessibility (Yau, Mckercher & Packer, 2004; Darcy & Pegg, 2011; Scheyvens & Biddulph, 2017). When it comes to inclusive tourism, Darcy & Dickson (2009) stated that this term is usually used when involving accessible tourism and specifically indicates physical access or mobility needs. As well, inclusive tourism can be identified as the way of solving what for many years has been the exclusion of a number of people from tourism related-activities (Craven, 2016; Scheyvens & Biddulph, 2017). Scheyvens & Biddulph (2017) identified accessible tourism as the quality for a tourism proposal that involves a diversity of customers with all abilities; for this reason, including the accessible tourism as another key factor inside inclusive tourism.

Following on, Scheyvens & Biddulph (2017) noted some concepts in order to describe the inclusive tourism involvements: anticipating difficulties for disadvantaged people, spread and communicate responsibly the lifestyle of these collectives, include them in the industry in collaborative spaces, break roles of power, facilitate opportunities for new environments in the industry and promote the respect between all collectives. In this sense, the inclusion represents an opportunity for many collectives and among others, people with disabilities, for expanding their leisure interests and ways of living (Reynolds, 1993; Devine, 1997; Pagán, 2014). Pagán, (2014) pointed out the positive benefits of these opportunities in leisure-oriented activities for people with disabilities, and for this reason, either the tourism or leisure sector should encourage the inclusiveness and the creation of inclusive tourism and surroundings. When referring to the concept of inclusive tourism, Scheyvens & Biddulph (2017) take into account the production and the consumption of the whole tourism perspective. These authors highlighted the importance of leaving restrictive tourism tendencies aside through an inclusive tourism development, which allows to welcome a diverse tourism demand (Scheyvens & Biddulph, 2017). However, stated that inclusive business can be the way in which businesses claim their corporate social responsibility. Therefore, this view of businesses approaches are based on an economic model, which supposes the integration of excluded groups in the market as a tool of impoverishment palliation. For this reason, is important to differentiate the inclusive tourism from an inclusive business or growth (Scheyvens & Biddulph, 2017). Buhalis & Darcy (2011) considered that inclusive industry conditions need to enable the:

- "Mobility,

- Vision,
- Hearing,
- Cognitive/Learning (involving issues of speech or understanding),
- Mental Health,
- Sensitivities (including respiratory, food and chemical), and
- Other" (Buhalis & Darcy, 2011).

Poria, Reichel & Brandt (2011) on their study about the experience of people with disabilities in the hotel industry, concluded that since the inclusion of people with disabilities is much considered and looked after in the hospitality industry, it has opened a wide and extended range of options when it comes to inclusion for people with special needs. However, the study showed people with disabilities have to face a number of barriers and the only way of changing this is through the awareness of management directions who need to make the step in order to create responsible and inclusive firms (Poria, Reichel & Brandt, 2011). Therefore, inside the inclusive tourism, there are a lot of developments yet to come and to be implemented (Scheyvens & Biddulph, 2018).

2.1.3. Lack of accessibility

Small & Darcy (2010) highlighted that tourism involves a period of time, which integrates different facilities and services that need to be accessible to obtain a complete touristic experience in the destination. Buhalis et al. (2005) suggested that the reason of why still the accessibility requirements are not accomplished is because there is a lot of information missed, that directly affects tourism proposals. Thus, there is still a lack of suitable tourism offer. In fact, Pagán (2014) pointed out that although there have been researches on how to use the leisure-oriented activities to improve the health issues and expanding the quality of life, there is a lack of studies that contemplate how to adapt these activities to people with disabilities. Daniels, Drogin & Wiggins (2005) came to the conclusion the travelling difficulties that people with disabilities have along the way are not taken under consideration by the tourism stakeholders. Buhalis & Darcy (2011) on their research about accessibility, highlighted that in those cases that tourism is not able to effectuate some changes in the environment by reducing the number of accessibility barriers, the industry ends by losing an important amount of customers. Also, it is important to take into consideration that these existing barriers, if are not modified or treated, in most cases can lead to the appearance of new barriers (Marston & Golledge, 2003; Eichhorn et al., 2008).

Leisure constraints

When it comes to leisure limitations, which are restrictions influenced by perceptions that limit and forbid the experience's participation (Jackson, 1997; Hawkins et al., 1999), can be classified into three main dimensions: intrapersonal, interpersonal, and structural (Crawford & Godbey, 1987).

- Intrapersonal (intrinsic) are those limitations which its nature is related to the perception according to the individual's interest and behaviour, affected by psychological condition and attitudes (Crawford & Godbey, 1987; Crawford, Jackson & Godbey, 1991; Hawkins et al., 1999; Freund et al., 2018).
- Interpersonal (interactional) refers to the limitations emerged by the interaction with others, affected by the individual social skills and communication (Smith, 1987; Hawkins et al., 1999; Allan, 2015; Freund et al., 2018).
- Structural (environmental) refers to the resources and causes that interact and modify directly the activity and leisure choices (Raymore et al., 1993; Hawkins et al., 1999).

Hawkins et al. (1999) revealed that, when it comes to joining a leisure experience, people with mental health expressed the structural and interpersonal dimension as the most influential dimensions for refusing to participate, especially related with resources and equipment needed. On the contrary, Freund et al. (2018) on their research about families with children with ASD in the hotel industry, found that the most influential dimension was the intrinsic (intrapersonal). Hawkins et al. (1999) concluded that, in order to be aware of these limitations, it is important to anticipate before doing the activity and named the anticipation as the main condition, in matters of participating in the activity. In fact, Buhalis et al. (2005) and Stumbo & Pegg (2005) indicated that one of the most important barriers when planning a trip is the lack of consistent information, which people with disabilities find. In fact, Buhalis et al. (2005) highlighted that accessible websites could provide information about tourism and travelling and would benefit everyone. So, according to Buhalis & Darcy (2011), the best way to reach the collective accessibility is by understanding why they face these barriers, so gaining knowledge about their needs and enabling access procedures.
When it comes to access enables, Buhalis & Darcy (2011) divided it into three groups:

- Intrapersonal or interpersonal: refers to a generic term of approaches that increases the independence of people with special needs through assistive technologies.
- Surroundings: refers to the environment conception and the journeys in order to enable enjoyable experiences for people with disabilities

- Social attitudes: all those enablers that include the social behaviours patterns and institutional learning when interacting with people with disabilities (Buhalis & Darcy, 2011).

Tourism constraints

According to Darcy (1998), the major travelling barriers are:

- Access to accommodation, tourist sites and attractions.
- Uncertain communication towards information and economy.

Apart from the tangible barriers, customer service is a fundamental element in the tourism industry. People with disabilities have expressed their complaints about their treatment from service staff towards their disability (Small & Darcy, 2010). As well, according to the "European Disability Strategy 2010-2020", just 5% of the total public websites are completely designed considering accessibility standards (European Commission, 2010). Additionally, tourism-related websites are not accessible for people with disabilities (Buhalis et al., 2005). So, Daniels, Drogin & Wiggins (2005) suggested that collectives with disabilities come across with continuous travel limitations. Unexpected circumstances can occur during a trip, subject to the environment or services, which can be key for the continuation of the tourism action, taking into account the disability needs. Additionally, these authors stated that the lack of awareness can come from people without disabilities, who see travel experiences from their eyes (Daniels, Drogin & Wiggins, 2005). Darcy (1998) on his research, showed that people with disabilities are expecting to travel. However, the main barriers they face complicates the tourism experience and discourage them to accomplished.

Yau, Mckercher & Packer (2004) discussed people with disabilities' limitations come across when travelling and these challenges can be tangible and social, and start even before the trip. Thus, it requires much preparation than a person without special needs. Furthermore, it reduces the leisure options or increases the price, which can be frustrating. Mainly the society does not understand the complexity of being a traveller with special needs, and how these individuals live it in their own skins. So for these collectives, living a satisfactory travel experience goes much further, due to the positive inputs that are produced in these people. Therefore, tourism destinations are one of the main responsible of successful experiences (Yau, Mckercher & Packer, 2004). Overall, a fair amount of tourism products remain inaccessible for the diversity of collectives and still make a social difference (Scheyvens & Biddulph, 2017). And according to Kaganek et al. (2017), still remains this limitation, due to the lack of knowledge and interest on disabilities from the tourism industry and the whole society. Additionally, Packer, McKercher & Yau (2007) pointed out the intricacy, when it comes to the interrelation between the tourism approach, individuals and surroundings, and this

complexity reflects why people with disabilities cannot be included in the tourism sector as a customer.

2.1.4. Sustainable Development Goals (SDGs)

The 2030 Agenda for Sustainable Development

The "2030 Agenda for Sustainable Development" is the worldwide agreement for a near long-term global future perspectives, taking into account the prosperity and social and political harmony. Among others, the social progress has to be achieved with the naturalization of people with disabilities in all societal parts, such as employment, learning opportunities or economic growth. The agreement includes 11 indicators focused on improvements for collectives with disabilities. Among others, the SDGs (Goals 4, 8, 10, 11 and 17) looks for equal access opportunities for a fair and quality education, access to job positions, enable social inclusion, achieve safety environments and finish with segregation by disability. The collectives have to face physical limitations too, due that a lot of places are not accessible for everyone, limitations of supportive technology and services, which make them live more dependable (United Nations, 2015).

SDGs in tourism

According to Polat & Hermans (2016), sustainability is the path to achieve a responsible adaptation and an accessible tourism prototype. The Universal Design and Triple Bottom Line could be the framework to implement accessibility in the tourism industry, due to the economic and community benefits linked to accessibility improvements (Darcy, Cameron & Pegg, 2010). Universal Design is defined as the framework that projects a setting in order to be as much wide as possible conceptually taking into account a diverse society. The main goal of this framework is to be accessible and functional for everyone (Center for Universal Design, 1997; Centre for Excellence in Universal Design, 2020). Following this, the potential market who can beneficiate of this design wides enormously, from people with mobility needs to people who travel with a lot of suitcase or even everyone who prefers to use commodities, such as families or workers (Darcy & Dickson, 2009). The Triple Bottom Line (TBL) is a framework that highlights the importance of sustainability and social equality to achieve fair profitability economically (Darcy, Cameron & Pegg, 2010). In fact, in the tourism sector, the Universal Design was proposed, in order to increase the industry social sustainability as a step for establishing the Triple Bottom Line (Rains, 2004; Buhalis & Darcy, 2011). Furthermore, Darcy (2010b) stated that TBL approach should be the key of implementing sustainability for a long-term tourism in touristic sites and the main goal for many tourism enterprises should be related with efficiency and long-term financial planning and development.

Sustainable accessible tourism benefits collectively, thus regulations should provide the line to achieve its development and implementation (Polat & Hermans, 2016).

2.2. Disabilities

2.2.1. The concept of disability

Due to the increase of disabilities throughout the decades, we can define the concept of *disability* as a part of the human condition. The World Report on Disabilities of the World Health Organisation argued that almost all society will suffer a temporary or permanent impair at some point in their life (World Health Organisation, 2011).

According to Darcy (1998; 2010a), disability is understood as a multidimensional construct, and each dimension needs specific access requirements which are highly differentiated one and other. These dimensions of disability include: mobility, hearing, vision, cognitive or learning, mental health and sensitivities, and long term health conditions (Australia Human Rights Commission, 1992).

On the other hand, the World Health Organisation (2011) simplifies Darcy's classification of the disability construct and argues that what disability comprises: impairments, activity limitations and participation restrictions. The first one refers to the alteration of the functionality in the structure of the body (e.g. blindness); activity limitations are the issues in developing actions (e.g. reduced mobility, walking or eating); and the latter refers to difficulties when interacting in any area of life (e.g. Autism Spectrum Disorder with the relational issue).

2.2.2. Autism Spectrum Disorder (ASD)

The evolution of the term

Knowing that disabilities are a part of the human condition, we can argue that Autism Spectrum Disorder (ASD) refers to a diverse and complex one (Cuesta & Martínez, 2012).

The definition of *autism* has been evolving throughout the years and especially after the 1940s, since it faced numerous revisions as the knowledge of the spectrum has grown (Cuesta & Martínez, 2012). Kanner (1943) and Asperger (1944) were fundamental to understand ASD as we understand it nowadays, since they put the bases of autism attributes in the 1940s.

In 1943, Kanner identified four similarities in the disorder. The first one was the incapacity of the child to relate adequately, which Kanner (1943) defined as "extreme autistic solitude". The second similarity was the severe issues in the communicative and speech development, both in expression and comprehension. The third was the need to keep things equal, or as he called "persistent insistence in the invariability", which included the difficulty to face changes in the environment,

routines and being inflexible. The fourth similarity found was the early notice of the disorder, made evident around the first three years of life.

The next year, in 1944, Asperger added to the definition that the "autistic psychopathy" was only developed in man and that all of them showed social ineptitude, poor social relations and lack of feelings to others. And even though stereotypical conducts and motor disability were also evident, the author also said that these people have good linguistic aptitudes, specific and particular interests and special and surprising abilities linked to their interests.

The difference between both definitions fell here, where the contrast between Asperger disorder and the autism disorder is set: the level of performance. People with ASD manifest difficulties on communication, social relations, restricted interests and its detection is in the first phase of life, whereas people with Asperger disorder manifest the typical handicaps of ASD, but with the distinction of a good cognitive development and an apparently normal ligüistic development (American Psychiatric Association, 2002).

But both Kanner (1943) and Asperger (1944) coincided in the difficulties in social relations, in communication, in the inflexibility patterns on mentality and restrictive interests and the prompt appearance of the disorder.

During the 1950s and 1960s, autism was considered a kind of schizophrenia, but luckily in 1971, Kolvin showed that autism and schizophrenia differed in clinic characteristics, in their evolution and in the family history (Kolvin, 1971). In this moment, autism started to be seen from the cognitive and neurobiological perspective (Cuesta & Martínez, 2012). Rutter & Lockyer (1967) associated autism with epilepsy and intellectual disability. Wing & Gould (1979) in their epidemiologic study defined three deficits in autism: a) in the ability for a reciprocal social interaction, b) in communication, and c) in imagination.

According to Ornitz & Ritvo (1968), perceiving and responding to the environmental stimulus is an obstacle itself for people with autism, as their cognitive perspective varies from the people without autism.

Main characteristics

Cuesta & Martínez (2012) argued that as with all disorders, each person is different, but people with ASD present some attitudes that are common and divided the disorder into three main handicaps.

First of all, they found difficulties in social development, where interacting and establishing relationships seems so difficult because they stay in permanent isolation.

Second, this collective has issues in the communicating and linguistic development. It is very difficult for them to use adequately the gaze, the gestures, smile, guidelines for joint attention, meaning difficulties in the non-verbal patterns, both of expression but also comprehension (Cuesta &

Martínez, 2012). Paul & Wilson (2009) argued that people with ASD have less intention or initiative to imply others in their communicative exchanges.

And third, people with this disorder have mental inflexibility and repetitive behaviours. Cuesta & Martínez (2012) suggested that this comes from the rigidity and the rare adapting character. Szatmari et al. (2006) found persistence in the invariability and repetitive sensory and motor behaviours. Cuesta & Martínez (2012) argued that regarding this repetitive conduct, this collective can present: motor stereotypy, self-injury conducts, rituals and routines, resistance to change and restricted interests and worries. In addition, 75% of children with ASD present intellectual disability (American Psychiatric Association, 2002).

Palau (2017), in her book *La teva mirada parla*, explained her experience being the mother of a girl with autism of high performance. In the book, she mentioned a variety of dimensions that are characteristic of people with the Autism Spectrum Disorder, or at least, patterns that she found while seen her daughter grow. Palau (2017) mentioned:

a) the difficulty to keep eye contact, especially with strangers, since the gaze is a powerful tool to communicate and express feelings, one of the major issues faced by people with autism;
b) the high sensitivity of touch, as it is a big burden of stimulus;
c) understanding the concept of space, regarding the life in society, which sometimes limitates the abilities or behaviours of this collective;
d) the concept of time, meaning that each person has its own rhythm and due to societal limitations can lead to discordance towards neurotypicals;
e) the sum of sounds and noises can be annoying, irritating and difficult to bear. However, Palau suggested that sounds can be pleasant for people with ASD if they are listened isolated rather than all at the same time;
f) the memory capacity, where a person with ASD pays attention to specific things that probably a neurotypical person would not;
g) lack of emotional awareness or the issue to understand others' feelings;
h) what the author called "the theory of mind", where her daughter faced difficulties to understand lies, ironies, plays on words, second intentions or sarcasm;
i) order and routines are key concepts to understand ASD behaviours, as they need them to act accordingly and do not panic; and
j) obsessions or restricted interests on certain topics.

The psychologist Tamara Jiménez, in the prologue of Palau's book (2017), argued that people with ASD are "pragmatics, sincere and with common sense", while from the perspective of people with

ASD, neurotypical people are “illogical and complex”. Neurotypical is a term related to the autism disorder which refers to the characteristic of people that do not have neurodevelopmental disorders, especially ASD. A neurotypical person is “the most abound or the one that has more individuals” at a neural level (Dictionary of the English language, 2011). Moreover, Jiménez (Palau, 2017) called for the adaptation and adequation of the environment to ease autistic people’s lives.

ASD considerations

The last goal of the education is to achieve quality of life for this people, which means encouraging their self-determination capacity (Palomo, 2004; Tamarit, 2001; 2005). This calls for a structured and foreseeable environment where people with ASD can feel comfortable, to fit with its mechanical development.

María Frontera, in *Todo sobre el Autismo* (Cuesta & Martínez, 2012), listed four theories to follow when teaching ASD people: the social comprehension, the capacity in interacting with people, the common sense or being coherent and the executive dysfunction.

Besides, Cuesta & Martínez (2012) presented some principles and programmes to educate this collective, and Rivière (2001) emphasised in the importance of the subject, its evolutionary level, the motivations, competences, needs and its way of seeing and feel things, all from the specific person’s perspective; meaning putting the focus on the internal experience rather than in the strict conduct of the person with autism.

The principles and programmes suggested by Cuesta & Martínez (2012) are: individualized treat, establish positive relationships, structure the environment, ensure the comprehension, structure tasks, instruct on knowledge without error, motivate through special interests, ensure functional and generalized knowledge, have a good coordination with the family and promote social inclusion.

Regarding the individualization, authors put on the table the need of a formal and an informal evaluation of the child, to maximize strengths and minimize weaknesses (López, Marín & De La Parte, 2004). Establishing a positive relationship calls for creativity and a calmed and empathic behaviour. Kunce & Mesibov (1998) suggested creating daily routines and individualized agendas (for example with pictograms) to structure the environment. Also, when ensuring the comprehension, they suggest reducing distractions, adjusting the level of spoken language and using visual supports. Towards the knowledge without error, Rivière (1984; 1997) argued that mistakes maximize confusion, negativity and alterations on the conduct. That’s why he proposed adapting the goals to the evolutionary level of the child, as well as giving clear, direct and simple rules and instructions. Last but not least, encouraging the social inclusion of this collective is a key factor to give them quality of life (Tamarit, 2005). It is not enough for them to *be* in society, but being part of the community. For this reason, Belinchón’s prologue in *Todo sobre el autismo* mentioned that it is

important to coordinate with the families or experts, so they can create a unique and individualized framework for the person with the condition (Cuesta & Martínez, 2012).

As an overall view (Cuesta & Martínez, 2012), can be concluded that the Autism Spectrum Disorder is a neurobiological human condition which is growing rapidly on society and its main particularities are: the early appearance, the need for simplicity as most of them face difficulties on communication, expression and comprehension, the obstacle on developing social relations, the restricted interests and lastly, the inflexibility, rigidity and repetitive behaviour.

However, it is key for society to be aware that not every person with autism follows the same behaviour or has the same interests, as every neurotypical person does. There is not human equal than another. Otherwise, thinking that all people with ASD is equal would be discriminatory and non-ethical (Cuesta & Martínez, 2012). Therefore, the experience of Palau (2017) is just one example and each case is different.

2.3. Heritage

2.3.1. Cultural Tourism Experience

Right to culture

According to the Council of Europe (2005), cultural heritage can be defined as "a group of resources inherited from the past which people identify, independently of ownership, as a reflection and expression of their constantly evolving values, beliefs, knowledge and traditions. It includes all aspects of the environment resulting from the interaction between people and places through time" (Council of Europe, 2005). Each individual can benefit itself of cultural heritage knowledge for its learning or the community, and promotes the education and active engagement for anyone interested in cultural heritage aspects (Council of Europe, 2005). As follows, the society has taken over the cultural sites as inherent part of our culture, because of its historical meaning, and for this reason access to it is fundamental (Georgieva, 2018). In 1948, The Universal Declaration of Human Rights was adopted by the General Assembly of the United Nations and it expounded the right of people with disabilities to be participative in culture. Besides, it pointed out the profit for this collectives to be involved in cultural environments and encouraged the cultural heritage accessibility and development of accessible content and awareness (United Nations, 1948). Thus, tourism industry in each destination, included heritage sites should be the main supporters and help to make satisfactory the experiences of these collectives, taking into account the uniqueness and necessities that this community requires (Cerdán & Binkhorst, 2019). According to Deng (2015), from the cultural sites there are developments to include the participation of collectives, who for a long time

nobody had on the cultural mindset. This author (2015) also highlighted the importance of understanding that cultural sites can contribute to educate a society, therefore everyone must be free to obtain these knowledge. As Ivanovici & Pană (2020) suggested, cultural aims have been adapted to society changes, so had an intellectual background, which met with different societal sectors; education, active engagement, collaboration, gain knowledge and recently inclusion of people with disabilities.

Benefits of cultural accessibility

The UNESCO's Universal Declaration on Cultural Diversity (2001) established that culture is key for a cognitive, emotional, ethical and mystique human progress (United Nations Educational, Scientific and Cultural Organization, 2001). In 2005, the Council of Europe stated that cultural heritage can be a tool for a continuous changing civilization, to increase a long-term development and level of life (Council of Europe, 2005). Arenghi & Agostiano (2017) expressed that a cultural heritage experience must become life lesson emotional journey that bring meanings to society, through feelings.

Fox (2014) established that high quality experiences in museums, through innovative sources and creative environments, which allows individual participation and individual's artistic expression and recognition of discriminated groups through self-expression, produces new working paths and useful education profit. Therefore, museums acquired a critical point of view to made communities think and debate, which made it an integrative space for everyone (International Council of Museums, 2020). According to Braden (2016), through museums experience people can obtain positive inputs, which can contribute to develop better their lifes, but for people with disabilities these kind of experiences go much further. On their research, Argyropoulos & Kanari (2015) obtained that museums itself produce experiences, which makes people socialize and emerge their interests to the content. So, museums are a fundamental integration tool, because of its socialization characteristics (Lussenhop et al., 2016). Ginsburg & Rapp (2017) said that people with disabilities are being included in society through other paths. Additionally, Deng (2015) on his research showed that museums are an alternative way of education, by adapting the participation of each individual by its own timing, independence and stimulating the curiosity of each one. To be accessible for everyone, it important the integration of complementary offer.

UNESCO argued that intangible cultural heritage also benefits and promotes the understanding of a plural and global society, suggested that is a tool for spreading the knowledge on minor communities and encouraging the understanding between societies. For this reason, intangible cultural heritage is "inclusive, representative and community-based" (United Nations Educational, Scientific and Cultural Organization, 2003). Eichhorn et al. (2008) established that leisure activities produce several benefits for human beings, only if these products are well managed according to

necessities. Therefore is important to take into account individuals diversity, howsoever wants to eradicate ostracism.

2.3.2. Accessible cultural heritage to collectives with disabilities

As Georgieva (2018) stated, there are still a lot of limitations, either tangible or intangible, in cultural heritage. Among others, historical buildings for itself, structure do not allow easy mobility, due that it was conceived in that way for its main reasons of the heritage. However, for its values, accessibility should be taken into account in these sites (Georgieva, 2018). Handa, Dairoku & Toriyama (2010) said that accessibility included different aspects, from physical to social or communicative ones. Constantinou, Loizides & Ioannou (2016) stated that through the integration of technology in cultural heritage, can be a path of widening the experience itself to approach more individualized needs.

Physical Accessibility

Fernández & Miñarro (2019) stated that physical limitations have been the main focus of improvements for people with special needs. More so, Georgieva (2016) highlighted that only considering physical improvements, can leave aside many more disabilities.

As follows, Braden (2016) agreed on mobility barriers are the most extended improvements done by museums. Among others, it included wheelchairs friendly, adapted structure, elevators, toilets, access entrance and priority areas. Moreover, the author said that museums provide computer display, sign language translation, stream subtitles for visitors with hearing impairments. Additionally, Constantinou, Loizides & Ioannou (2016) studied a museum's application designed and tested in Cyprus for people with hearing limitations. The results were satisfying, deaf visitors were able to experience by their own with no need of any other support.

From another view, on their research on visual accessibility in Japan, Handa, Dairoku & Toriyama (2010), showed that social communication from the employees is essential for these collectives. This study revealed social skills are more important for people with visual impairments rather than accessible data or features when visiting a cultural site, even if they are important for their own development in the place. However, the research highlighted that social interaction is more valuable. For these collectives is also important the preparation of the visit. For this reason, how the cultural site enables information can make this collective visit or not (Handa, Dairoku & Toriyama, 2010). Following this, Mesquita & Carneiro (2016) based their article on how accessibility for people with visual special needs is applied in some European museums and concluded that the main improvements have been done simplifying mobility and the readable data.

Arenghi & Agostiano (2017) studied how the ICT technology, which are systems of information and electronics (European Commission, 2020), is applied in cultural heritage and reflect the case of Domus Romane in Palazzo Valentini, where a system was implemented that through visual content and sounds explained the history of the heritage. Also, Puyuelo et al. (2013) analysed the UNESCO Heritage Site, "La Lonja" implementation of augmented reality (AR) application based on 3-D visual models for explaining the site and concluded that these types of adaptations can expand the heritage experience of people with disabilities, especially the blind ones. Additionally, Argyropoulos & Kanari (2015) after analysing Greek museums improvements for people with visual impairments, highlighted the importance of touchable material, customized experiences, employees awareness and assistance.

Cognitive and Intellectual Accessibility

As Allday (2009) said, intellectual disabilities are the less assessed on heritage sites, as a consequence of the classification of these collectives by their educational and medical view. This author (2009) argued that there is a lack of cultural heritage adapted for these visitors and concludes that this situation promotes the discrimination and segregation of these communities. According to the Department of Health (2001), people with intellectual and learning difficulties are the most rejected in the society among others, due to misconceptions and absence of knowledge towards these collectives. Also, barriers to further education, how to be treated, limitations to participate in social activities and too many medical approaches towards them. On her research (2009), Allday concluded that intellectual disabilities require support, and time to achieve a good communication, because there is still a lack of understanding of how to treat or address to these collectives. So on, how to apply it into cultural heritage. In fact, Weiss, Bialik & Kizony (2003) said that technological tools implemented in leisure experiences are beneficial for collectives with intellectual disabilities, as well as physical, because these tools allow to engage the visitor into situations that are unfamiliar. Furthermore, these authors (2003) stated that museums can modify the tool's content according to the visitor's needs. Weiss, Bialik & Kizony (2003) showed that Gesture Xtreme video, which is a program that provides a full-body virtual experience, can improve positively an entertainment experience for people with cognitive and physical disabilities. Eardley et al. (2016) focused their analysis in a couple of museums located in Portugal which set up accessible practices based on creating inclusive and autonomous environment, in order to build museums where visitors can move around by their own capacities and appealing.

Allday (2009) also analysed the accessibility in British museums, and found that those few cultural spaces which had taken into account the collectives with intellectual disabilities, made the progress together with the collectives themselves.

Co-creation

Prahalad & Ramaswamy (2004) and Binkhorst & Den Dekker (2009), defined it as an experience based on an interaction between an individual and context, that provides value about the customer insights needs. According to Marlien et al. (2019) "co-creation provides space for customers and end users to be actively involved in design, product and service development, so that the products produced are manifestations of personal personality, experience of consumers and companies". In fact, Cerdán & Binkhorst (2019) on their research, studied which effects could have when including people with special needs through co-creation methodology in heritage services design. They concluded that people with special need to become part of the design (Binkhorst & Den Dekker, 2009; Tussyadiah, 2014; Jernsand, Kraff & Mossberg, 2015; Cerdán & Binkhorst, 2019) and it allows the creation of collaborative environments (Cerdan & Binkhorst, 2019). Following this method, the Museum Development North West, used the co-creation process as a tool for developing new programs and searching for other visitors (Museum Development North West, 2020). Also, the Museum of London has analysed its exhibition and content, counting with the assistance of collectives with disabilities who assessed according to their needs and redefining the museum (Allday, 2009). Chick (2017) explained the methodology done by The National Centre for Craft & Design (NCCD), redefining the accessibility for collectives with visual impairments, through participatory design. This method allowed collaborators with visual impairments could show at first hand which barriers they faced. Consequently, the collaborators without visual impairments live it, as well. The result of this collaborative design was an exhibition which took into account colours, a textured way-finding path, multi-sensory objects, accessible shelf which permitted touch, readable and light and was named '3D Printing: The Good, The Bad, and The Beautiful'. Additionally, Apropa Cultura, founded in 2006, is a Catalan platform aiming to deliver culture and offer better prices to people with disabilities and at risk of social exclusion. Among other things, it works collaboratively with entities and heritage spaces (Apropa Cultura, 2020).

Accessible cultural heritage adapted to ASD

As previously mentioned, in terms of cultural heritage, as time goes by the museology community is putting more efforts on creating inclusive environments. However, ASD needs are still undertaken (Magkafa & Newbutt, 2018). In matters of theatre and scenic arts, Fletcher-Watson (2015) said that these spaces are starting to take into consideration other types of customers, such as people with ASD. According to Woodruff (2019), one of the most important things in order to have a positive and rewarding cultural experience of ASD collectives, it is understanding the singularity of it. In fact, the people with autism disorder tends to look at things in another way, due that they are extremely

connected to visuals; for this reason, it could be challenging to understand this disorder (Grandin & Panek, 2013; Woodruff, 2019). Furthermore, is important to bear in mind that providing a pleasant experience can be related with art creation and practical learning, as well as offering content suitable for everyone to avoid stressful situations (Woodruff, 2019).

When it comes to theatres, Belloli, Morris & Phinney (2013) and Fletcher-Watson (2015) commented that in order to provide peaceful and comfortable experiences for these collectives, the quantity of audience should be less than a standard play. Fletcher-Watson (2015) stated that is important to avoid environmental stressors, such as noises, lighting and mass of audience and classified five main considerations when it comes to receive customers with ASD:

- Anticipation: using visual materials such as information guides with Makaton symbols, type of languages based on symbols for communicating (Makaton.org, 2020) or pictograms, graphic draw which describes a concept (Pictogramweb.com, 2020), and distributed the information before the play, anticipate possible surprises during the play and welcome from the artists when the performance starts.
- Sensitivities: avoid environmental effects and control of noises, reducing effects during the performance and controlling lights.
- Provide rest areas with entertainment materials and objects.
- Provide professional training for employees, in order to know how to help and interact with the collective and the families.

(Andrews & Begley, 2014; Stone, 2014; Kempe, 2014; 2015; Fletcher-Watson, 2015).

Fletcher-Watson (2015) considered relaxed performances, which are sensory plays adapted, could be a way of integrating people with ASD in theatre. According to Nerattini (2009) and Fletcher-Watson (2015), integrative activities in theatre performances, such as participatory experiences could be useful for these collectives. Fletcher-Watson (2015) suggested that including people with autism in the creation of performances (co-creation) could also be favourable, in order to increase the participation of these people. Along this line, Kim et al. (2015) on their study about the effects of participatory theatre in children with ASD, defined theatre as “a social and interpersonal art form that involves the rehearsal of coordinated interaction, it offers a promising avenue for increasing the interpersonal skills of youth with Autism Spectrum Disorder (ASD)” and concluded that scenic arts, such as theatre, produce beneficial impacts on the interaction abilities, increase the self-esteem and improve the relationships with others. Additionally, is also important to highlight the therapeutic and intrinsic benefits of theatre in people with ASD and intellectual disabilities (Sherratt & Peter, 2002; Ramamoorthi & Nelson, 2011; Godfrey & Haythorne, 2013; Lewis & Banerjee, 2013; Corbett et al., 2014; Fletcher-Watson 2015).

In matters of museums and exhibitions, Deng (2015) argued that the main barrier is the conventional education, which does not take into account impairments related to social and interaction skills. Woodruff (2019) on his research showed that considering the ASD patterns, the participatory design (PD), which is a similar method as co-creation, could be a way of identifying ASD special needs. Also, this author (2019) explained that like many other situations, museums could be challenged, due to its sensory overload and social environment. For instance, Woodruff (2019) alerted about reducing stimulus or stressors, such as sounds and lighting.

Following this, Lussenhop et al. (2016) studied how to provide a satisfactory experience for families with ASD children, and found that multi-sensory, physical experiences, exhibitions with different possibilities and spacious and peaceful spaces that do not impede taking their own time is well received. As well, the place's personnel is important too, because they can deliver a welcoming experience, understanding the needs of the children and explaining the museum's content according to their requirements. These authors (2016) also stated that families prepared the activity before, to know which challenges may face during the visit, so it is important to provide from the cultural sites, information about the areas, visual content, tools, services and help. According to Yaneva, Temnikova & Mitkov (2015), the information should be based on images and using symbols and easy read documentation. Easy Read "means a linguistic adaptation of a text that makes it easier to read than the average text but which does not make it easier to comprehend; the other definition means an adaptation that makes both reading and comprehension easier" (International Federation of Library Associations, 2010).

Deng (2015) concluded that museums can effectively increase their educational features for people with ASD, if they applied a more open-minded and unconventional museum definition, so it allows active involvement and liberty, so design and structure museums from a new perspective. A similar conclusion arrived Pablos & Fontal (2019), who stated that for a successful educational program, one of the most important things is including the interest, timing, preparation and organisation of ASD's collectives and the families in the experience.

Di Lello (2016) analysed the case of Guggenheim For All (GFA), a program created in Guggenheim Museum in New York, which was based on Universal Design for Learning (UDL) designed for children with ASD. GFA involved teaching options based on learning in the environment and best practices, leading to situations of decision making, the center of interest and strengthen the social and communication skills. Also, the teaching guides are an important pillar in the GFA, because they focused their educational methodology on obtaining their attentiveness before transmitting any message. Another way, suggested by Woodruff (2019), who pointed out the importance of adapted material, freedom, manipulative and touchable content. Thus, the benefits of enriching the

experience by implementing actions related with art and artistic background, because it allows self-expression and reflection. Another example was the development of a museum-based application carried out by Magkafa & Newbutt (2018), which showed that understanding the uniqueness in each person with ASD is as important as involving educators. Additionally, the autonomous feeling is also highly valued, because it allows self-creativity and open structure. Apart from this, Woodruff (2019) highlighted the importance of the psychological part of visiting a cultural site, such as the unpredictable behaviour of children with ASD and the main consequences, during the experience, feedback and perception of other visitors, which sometimes lead families turn down the option of visiting a cultural site. So, this author (2019) pointed out the essential role of cultural sites is delivering programs and visits, where families feel comfortable and included as one more.

2.4. Literature map

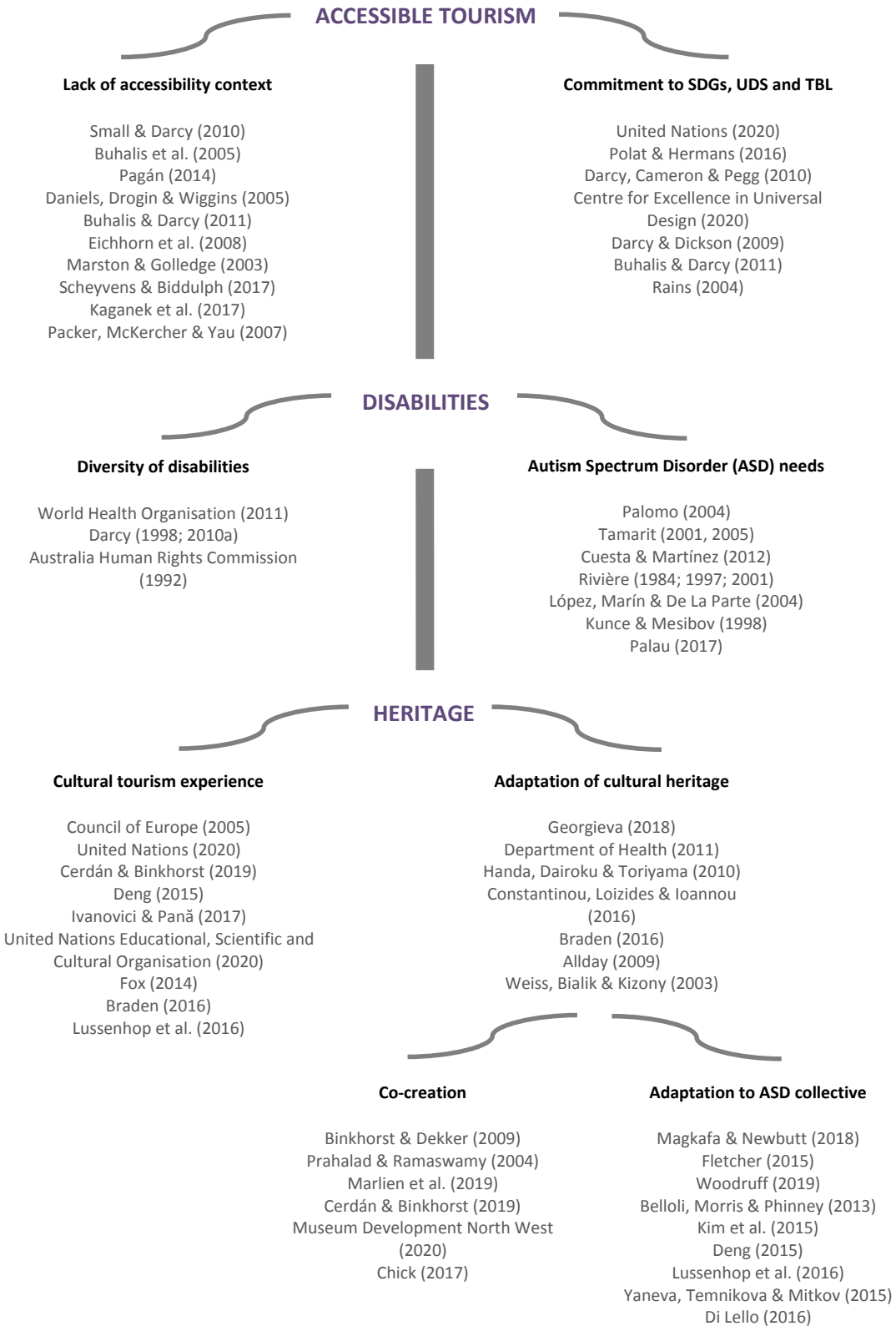

Figure 1. Literature map *(Appendix F.2.)*

2.5. Conceptual framework

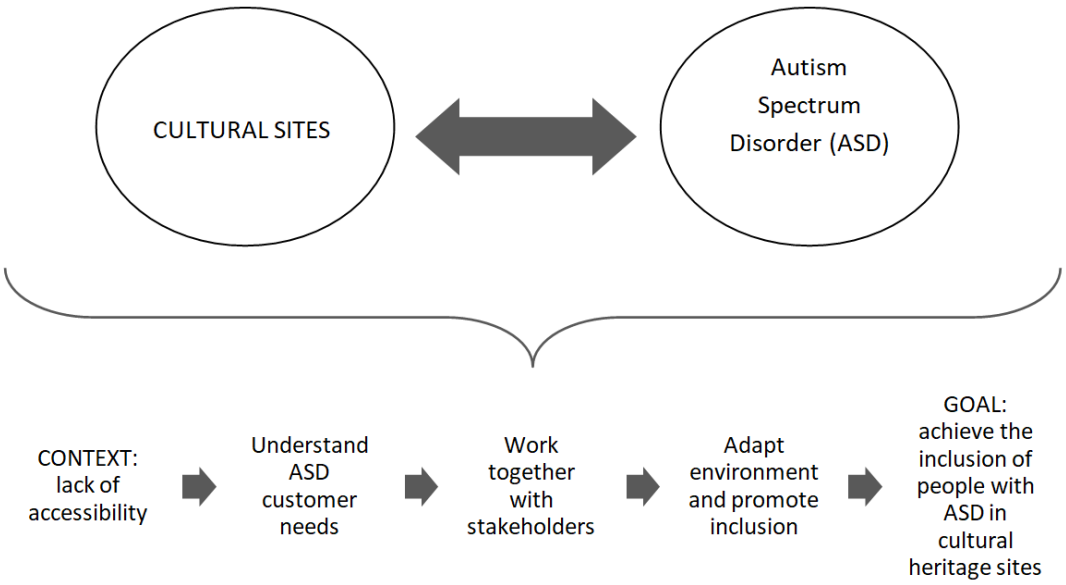

Figure 2. Conceptual framework *(Appendix F.2.)*

CHAPTER 3: METHODOLOGY

3.1. Overall Research Design

The nature of the research requires a phenomenological philosophy, which according to Saunders, Lewis & Thornhill (2009), it is a tendency inside the Interpretivism, which came up in order to face the positivism view. It is based on building knowledge, interpretations and understanding through observations of social behaviours and environments. Specifically, the phenomenological focus on the participant's view and experiences. So, the reason for choosing this philosophy is because this study focuses on a social collective and how heritage sites relates to them. Therefore, meanings and understanding the reality are key during the research. The study includes different actors that provided each one a singular view of the situation. It was followed a qualitative and primary data collection, as the main source of findings, but as well it was included secondary data, used in the literature review, with the purpose of comparing the results found (Hancock, 2002). According to Moore (2016), a qualitative approach is based on "what, how and why questions", in order to discover meanings, behaviours and opinions.

In order to understand people with ASD needs and views about cultural heritage, there were conducted open questions interviews to collectives with ASD, either families or associations, as well as psychologists and experts. An interview was conducted to a cultural site, with the goal of discovering the general and people with ASD accessibility, and improvements carried out.

The reason of choosing a qualitative and primary data collection is because it allows to understand deeper the topic through a reduced sample and build your findings through direct sources (Saunders, Lewis & Thornhill, 1997). Furthermore, the qualitative information was essential to carry out the study, because it prevails words rather than numbers and to understand the context of the situation (Hancock, 2002). Apart from this, it was followed by an inductive approach, as the aim of the study is discovering the opinions and problems of the participants towards the topic (Lester, 1999). According to Burney & Saleem (2008) and Merriam (1998), an induction approach aimed to be a bottom-up approach, as it goes from a specific topic to a general one, in order to start from observations and moving forward to general theories. This kind of method allows to research on meanings, subjective observations and critical thinking rather than rules, quantity or rationality.

3.2. Data collection techniques

The interview is the technique used for data collection in this research. According to Holstein & Gubrium (2003), an interview implies an oral connection, which creates an exchange of meaning and opinions. In this study, the interviews were designed in order to know different overviews about

what involves the Autism Spectrum Disorder and the issues this collective faces when visiting cultural sites. There are three types of interview: structured, semi-structured and in-depth (Saunders, Lewis & Thornhill, 2003). In this research is used the semi-structured for the fifteen interviews carried out, because it allowed having different open questions, which aim was knowing participants' opinions and combining a mixture of open and probing questions (Hancock, 2002). Compared to others, this technique provides better understanding the context of the collective and the problems they face, but it does not allow to do generalisation, due to the small sample (Saunders, Lewis & Thornhill, 2003). The interviews were structured in two parts *(Appendix D.1.).*

The first one consisted of six generic questions asked to all participants with any difference, regarding the participants' knowledge and opinions about the Autism Spectrum Disorder and accessibility. This section aimed to have the participants' overview of people with ASD. The second part is the specific one. This section was designed for each participant's group. Three groups were interviewed: families/entities, a cultural site and professional experts. For families and entities, the specific part consisted in six questions focused on knowing the participants' view about how cultural sites are accessible for people with ASD, their experience in cultural sites and in the accessibility improvements. Then, for the cultural site were eight specific questions with the purpose of knowing how the improvements and implementations towards accessibility have been carried out and the relationship with ASD collective. Finally, the professional experts' group were asked about three specific questions, with the same purpose as families and entities questions, but differently designed, in order to present them from a professional perspective. At the end of the interview, each participant was asked to add any information they could consider suitable and useful for the better credibility of the research. The semi-structured interview allowed to ask or go deeper in some questions, as well as it was not established a timing for each question and it made the interview more fluid and interactive (Hancock, 2002). Although was designed in order to keep a dynamic conversation, the authors of this study agreed to establish the last question, which aimed to include free comments from participants and express themselves in something that they found important. As previously said, secondary information was also included, in order to compare the results. The criteria for choosing the secondary data was searching for other studies, all included in the literature review about accessibility improvements, and specifically for people with ASD.

3.3. Research context and participants

3.3.1. Selection Criteria

The study was developed using a qualitative method where fifteen people were interviewed and the different participants are grouped according to the interview type. Due to the length of the interviews, they have been distributed into two types: the main and the complementary interviews. All interviews were done to individuals coming from different regions of Catalonia, even though the sample includes associations and entities. The study aims to discover the customers' accessibility in cultural sites from the customer's view, therefore the authors made the participant's selection based on having a very diverse sample; including families and relatives with a member who has ASD, entities or associations that work with people with ASD and intellectual disabilities, and also a school was included. The selection was made under the criteria of the authors searching for the main local entities, as well as the contacts the authors had. In order to discover many opinions related with people with ASD when visiting a cultural site, the authors included in the sample people with different relationships with ASD, but having in common the experience of treating people with ASD continuously, so they could provide their knowledge of how accessibility should be according to their experience. Additionally, the criteria for choosing Liceu for a case study was because they started a program for people with ASD and Conde's study (2017).

3.3.2. The sample

They were interviewed three families with a member with ASD and four associations, mainly employees or members of the associations. It was also included in the sample one school specialized in students with ASD, aged between 3 and 20, and the interview was conducted to the school's director. In order to analyse a real case study, the main cultural site's interview was to Gran Teatre del Liceu, which currently provides accessibility facilities, especially ASD adaptations. The interview was conducted to an employee of the site, who works on the social service program of Liceu. Finally, the authors believed that the view of psychologists, psychiatrist and academic expert was also interesting to have on the research. So, four psychologists, one psychiatrist and one academic expert were interviewed. The aim of these interviews was discovering a much professional and theoretical overview of ASD accessibility, as well as it allowed to have a wider perspective about the disability. The following table presents the sample, distributed by the main and complementary interviews.

MAIN INTERVIEWS				
INTERVIEW TYPES	**PARTICIPANT**	**PARTICIPANT GROUP**	**NAME**	**EXPERIENCE WITH ASD**
CULTURAL SITES	P1	Cultural Site	Gran Teatre del Liceu	Personal and Professional
ASSOCIATIONS	P2	Family	Carme Perarnau	Personal and Professional
	P3	Association	Fundació Aprenem	Professional
	P4	School	Escola Bellaire	Professional
	P5	Family	Anonymous	Personal
	P6	Association	Anonymous	Personal and Professional
	P7	Association	Anonymous	Professional
PROFESSIONAL EXPERTS	P8	Psychologist	Dincat	Professional
	P9	Psychiatrist	Anonymous	Professional
	P10	Psychologist	Anonymous	Professional
	P11	Academic Expert	Anonymous	Professional
COMPLEMENTARY INTERVIEWS				
FAMILIES AND ENTITIES	P12	Association	Anonymous	Personal
	P13	Family	Maria Queralt Palau Castro	Personal
PROFESSIONAL EXPERTS	P14	Psychologist	Anonymous	Professional
	P15	Psychologist	Anonymous	Professional

Table 2. The sample *(Appendix F.1.)*

3.4. Data Analysis

As commented in the section *Data collection techniques*, the tool used in this research has been the interview. There were conducted fifteen semi-structured interviews, which were recorded fifteen of them, of which eleven lasted at least 30 min (main interviews) and four lasted less than 30 min (complementary interviews). Due to the length of the complementary interviews, these four interviews have not been taken into consideration in the results as main interviews, just to reinforce the findings.

Then, in order to analyse and understand deeply each interview, the recordings were transcripted The transcriptions were essential to codify and obtain the key messages expressed in the interviews, and included in the results and conclusions. According to Hancock (2002), a qualitative study is important to sustain its data analysis in procedures that allows the researcher to identify and obtain the data from the transcriptions to find the common aspects between all the interviews.

Following this, in order to identify the key aspects and then being able to build the discussion with the primary sources and related with secondary ones, this research followed a *content analysis* methodology defined as "a procedure for the categorisation of verbal or behavioural data, for purposes of classification" by "coding and classifying data" (Hancock, 2002).

The authors analysed the data manually: first, analysing the transcripts and establishing the main themes in codes (selective codes), which are the topics of the findings. Then, they were able to identify the common patterns between all interviews, named axial codes, which allowed the authors to classify these patterns and have an overview in much detail about the participants opinions. These codes helped the authors to decide which information was more repeated from the participants, in order to obtain the results. In matters of the presentation of the findings, the data was transferred into some tables of quotes, which showed the participant opinion of each theme (selective codes). The same procedure was followed for analysing, and then codifying Liceu's interview. Additionally, there were added more selective and axial codes focused on the accessibility implementation, in order to present them in the case study separately from the other findings. In this case, the axial codes were used in order to have sub-themes in each theme, and based on the interview most highlighted considerations.

The following tables show the selective and the axial codes used in order to codify the interviews:

All Interviews	
Selective Codes	Axial Codes
ASD	Lack of social abilities
	Communication Difficulties
	Rigid Patterns
Limitations and Constraints	Lack of general accessibility
	Absence of social awareness
	Difficulties in content comprehension
	Lack of professional training
	Unforeseen situations
Accessibility	Accessibility based on physical improvements
	Does not consider sensory accessibility
	Positive evolution
	Inexistence accessibility for people with ASD
Collective Considerations	Content's planification and adaptation
	Content's organisation
	Anticipation and sensory adaptation
	Empathy
Accessible Cultural Offer	Timing and schedules
	Adapted material
Co-creation	Co-creation between associations and cultural sites
	Apropa Cultura's collaboration
	Interest from cultural sites towards people with ASD

Table 3. Selective and axial codes of research questions 1 and 2 *(Appendix F.1.)*

Case study: Gran Teatre del Liceu	
Selective Codes	Axial Codes
Adaptation	Physical adaptation
	Sensorial adaptation
	Intellectual/Mental Health adaptation
	ASD adaptation
Improvements	Visual Support
	Anticipation Material
	Easy Read
Friendly Performance (Relaxed Performance)	Lightning
	Rest Areas
	Use of pictograms
Facilities	Professional Training
	Reduced prices
	Websites
	Universal Design System
Co-creation	Associations/Entities
	Platform

Table 4. Selective and axial codes of research question 3 *(Appendix F.1.)*

3.5. Ethical considerations

In matters of ethical considerations, this research ensures that all the information provided during the study is treated and reported professionally and ethically. *The Declaration of Helsinki* (2013) is a "statement of ethical principles for medical research involving human subjects, including research on identifiable human material and data" established by the World Medical Association (2013). This framework proposes general principles, as well as other statements when carrying out research:

1. Risk and benefits
2. Protection towards vulnerable groups
3. Scientific Requirements and Research Protocols
4. Research Ethics Committees
5. Privacy and confidentiality
6. Informed consent
7. Use of Placebo
8. Post-Trial Provisions
9. Research Registration and Publication and Dissemination of Results
10. Unproven Interventions in Clinical Practice

Following this criteria, the general principles suggest that researchers need to protect all participants involved in a study, in order to keep the respect and rights of the humans involved, during the data collection, based on gaining knowledge about circumstances, opinions and participants' development.

Firstly, from the first time until the end, this study has followed all steps prioritizing the comfortability and prevention of *risks*, in order to protect all parts involved in the research, as well as this study, in no way aims to *benefit* only the researchers, otherwise wants to spread awareness of this collective and helping the further inclusion of them in society and surroundings, especially in leisure and cultural related activities.

Secondly, this study focuses on discovering the reality of a *vulnerable group*, for this reason, the authors set up different procedures, with the purpose of ensuring the protection of these collectives. Thirdly, and connected with the previous commit, the *Protection and confidentiality* of all actors involved directly and indirectly was essential. To keep the privacy and opinion's protection of all participants, it was distributed a consent document *(Appendix A)* before doing the interviews, with the purpose of allowing the participants to choose the interviews' conditions, which included anonymity and storing the interview, so if they allowed to be recorded. Furthermore, the collectives involvement were treated proportionally and respectfully during the research, in order to keep the

protection of the collective. This study used primary data to build up own original and reliable results and conclusions, as well as creating a comfortable situation free of judgement and allowing self-expression. Additionally, *Scientific Requirements and Research Protocols* were taken into consideration, in order to include secondary data from previous studies. Fourth, the *informed consent* (*Appendix A)* was basic in order to ensure the voluntary participation from the first time until the end. When contacting the participants, the interview's conditions were explained. Before the interview, the consent document was answered, which aims among others were giving consent to conduct the interview and express the voluntary participation. In this document, it is also explained the implication of participating in the study, which is informing about storing the final study in the university database. However, for this reason, the participant could opt for anonymity, if he or she wants to continue collaborating and to not be kept with the name. Apart from this, the document informs the participant's right of leaving the research whenever they want.

Fifth, following the *Research Ethics Committees*, the research methodology was communicated before starting the data collection to the university, as well as to the participants when contacting them for the first time. Additionally, it was explained deeply in the final written paper and also the findings and results. Following the *Research Registration and Publication and Dissemination of Results,* this paper will remain stored in the databases of the Universitat Ramon Llull. Finally, this study has not executed any clinical research or focused on the medical conditions. For this reason, the *Use of Placebo*, *Post-Trial Provisions* and *Unproven Interventions in Clinical Practice* commitments are not contemplated, considering that this study is focused on behavioural external experiences.

CHAPTER 4: FINDINGS AND DISCUSSION

This chapter is divided into two parts. The first section aims to answer the first and second objective of the research: the exploration of accessibility for people with ASD in cultural heritage sites and the second section is a case study of Gran Teatre del Liceu, giving an answer to the third objective.

4.1. Exploration of accessibility in cultural heritage sites for people with ASD

Throughout the first section are going to be presented and discussed the results obtained by the methodology explained previously and compared with the literature review. After analysing all the interviews, and then creating *Tables of quotes (Appendix E.2)*, it has been possible to identify the main concepts of the topics explored (*Selective codes*), in order to reflect the accessibility of people with ASD.

MAIN INTERVIEWS						
PARTICIPANTS	ASD characteristics	Limitations and constraints	Accessibility	Collective considerations to take into account	Accessible cultural heritage	Cocreation
P1	"Lack of social abilities and lack of empathy"	"they are not adapted"	"the physical accessibility is very developed"	"planning and forecasting [...] images or pictograms"	"friendly function four days ago"	"We work with Associació Aprenem"
P2	"Girls have a little more ability, because although they don't integrate, they can mimic"	"there is a lack of much understanding"	"nothing is adapted, thanks now that it is now beginning to be adapted for people in a wheelchair"	“they need more peace”	“understand a lot with pictograms”	"they have to submit prepared questionnaires"(cultural heritage)
P3	"restringed patterns, social difficulties, perseverances, routines”	"deregulating at any given time, the situation can be very difficult"	"mental ones [...] they were very forgotten, okay, and even more so the ASD"	"it is treated with naturalness, closeness and asking what is not known"	"visual support, for example that help them understand what is being offered"	"Connecta't [...] there are museums with who we do inclusive activity"
P4	"difficulties in communication and social interaction, [...] restricted interests, repetitive conductual patterns, stereotypies"	"people in charge of leisure is sometimes not trained"	"designed for neurotypical people"	"more dynamic, sensory things that they can touch, because if it is very difficult to understand it, [...] they become discouraged"	"visual support always, things to anticipate a little"	"the first experience we had, because there were things that had to be improved"
P5	"restricted interests"	“in the end it is a matter of social conditioning”	"accessibility to the museum or the installation for a person with a wheelchair accessibility is a ramp"	"possibility of moving"	"It doesn't need to be adapted all the time, if it fits into a time slot"	“they have to work with entities”

P6	"way of communicating is totally different"	"professionals"	"accessibility for physical disabilities. But not so for the rest"	"autistic group is so hypersensitive"	"personalized attention, in small groups, a quiet and cozy environment"	"diverse neuro collectives are taken into account, so that they can give their opinion"
P7	"social communication, such as reciprocity, that is, in communication."	"language comprehension is impaired"	"most difficult disorders to understand" (ASD)	"knowledge of autism is clear"	"Not only verbal anticipation, but also with videos and pictures"	"improve in autism eventually has a positive effect on the rest"
P8	"difficulty, in order to be able to interact, socialize, communication"	"physical or architectural, communication [...] attitude barriers "	"cognitive accessibility is beginning to be addressed"	"Keep in mind that accessibility is not only about ramps"	" incorporate the logic of universal design"	"Apropa Cultura is an entity that promotes culture"
P9	"three areas [...] social skills [...] communication [...] restricted interests"	"Logistics"	"does not take into account these type of patients"	"diminishing the stressors"	"visual, if they are manipulative"	"A lot of coordination with family associations"
P10	"communication, social interaction and patterns, both of interests and of restricted behaviors"	"they don't have a network"	"more opportunities for all of our collective to participate in certain cultural activities"	"organizational issue, how to get to the place, where to buy tickets"	"create opportunities for this group to be apart, but without having to specify that time is exclusively for them"	"we are part of a meeting [...] that work with the functional diversity"
P11	"communication disorders"	"ASD is not visible and suffers a lot of discrimination"	"it is better than it was in the past but there is still a long way to go"	"sensory adaptation"	"written communication [...] pictograms, explanatory drawings, etc."	"managing to create awareness and create improvements" (associations)
COMPLEMENTARY INTERVIEWS						
P12	"Communicating difficulties [...] They have a very rigid pattern in their behaviours"	"participate with other people is very difficult for them"	"I think everytime more, but is difficult to adapt spaces"	"they don't like crowded places, strident noises, lights blinking"	"can experiment, touch, caption that they are doing it"	"They do a session specially for us"
P13	"communicate and comprehend the things"	"people who have to attend us, most of the times do not know"	"physical barriers I think they have been improved a lot"	"is needed to be sensitive, empathetic"	"the explanations are shorter and more visual, supported by visual elements"	"organisators should also ask"
P14	"main areas: one is socialization [...] behavioral part"	"the unforeseen things"	"Many places are not adapted to Braille"	"If we can take into account all the sensory part"	"Especially when the visit is very structured"	"everyone was open [...] to be able to help and learn."
P15	"understand the emotions, they have little empathy, is difficult to initiate conversations difficulties [...] they have peculiar interests"	"The greatest difficulty is when it comes to relating"	"these problems are a little further away"	"ASD should not be associated only with mental retardation"	"what kind of activities could get a person with these kind of problems out of the house and relate more easily"	"*Friends*, [...] they do a lot of excursions to places like the ones you are mentioning"

Table 5. Key concepts identified from the "Table 8. Tables of quotes for research questions 1 and 2" *(Appendix F.1.)*

4.1.1. ASD characteristics

Most of the characteristics definer of the Autism Spectrum Disorder exposed in the literature appear to be in concordance with the answers given in the interviews.

First of all, almost all participants reinforced the condition of autism as a large spectrum, as the name of Autism Spectrum Disorder already says, meaning that its wide diversity of developments in each case makes it a complex disorder to be understood, as Cuesta & Martínez (2012) suggested. Participants related the disorder mainly with the social interaction difficulties, that leads to the "lack of empathy" mentioned by P1 or the "reciprocity" (P7). Kanner's definition (1943) of the spectrum, and supported by Asperger (1944), also suggested that socialization obstacle, as well as the early notice of the condition, the issues in communication and the persistence on the inflexibility. These three new characteristics were also mentioned in the interviews.

According to P4, autism is observed in the first months of life, when the child starts interacting with its environment. Communicating and comprehension skills' affectation was was also repeated by the sample, as well as the restricted interests (P4, P5, P9). In other words, the sample also called it "restringed patterns" (P3) or "repetitive behavioural patterns" (P4). This restriction on the behavioural patterns refers to the idea of having rigid behaviours previously noted in the literature review, by authors like Szatmari et al. (2006), Cuesta & Martínez (2012) and Palau (2017), is evident in the collective's need for routines, the obsessions or the restricted interests in certain topics (Palau, 2017) and the resistance to changes (Cuesta & Martínez, 2012). Kunce & Mesibov (1998) already suggested using routines to create a comfortable space for the person with autism.

Asperger (1944) added something new to the findings on the autism characteristics and said that ASD was only developed in boys. However, this study disagrees with Asperger statement. Some participants agreed that girls can also have autism but they are diagnosed later and present some variabilities in behaviours, which is another example of the complexity and amplitude of the disorder. Referring to sociability, P2 said girls with ASD, even though integration is difficult for them, they copy others' attitudes in order to interact. And even the considerable social misunderstanding about the disorder mentioned in most interviews of the sample, one participant of the sample showed the concern that ASD is sometimes associated to mental retardation, since the level of performance can vary between people with autism condition, as it is the case of Asperger (Asperger, 1944). As said in the literature, Asperger disorder shows the principle similarities on ASD people, but without communicating nor linguistic development issues.

4.1.2. Collective's considerations

In terms of people with ASD considerations, participants were asked about the specific needs in order to adapt cultural spaces properly. According to Tamarit (2001; 2005) and Palomo (2004), the goal of adaptation has to be achieving the quality of life of the collective, which was something common in some interviews. P3 suggested to directly ask the collective to treat people with ASD "with naturalness, closeness and asking what is not known" explored by López, Marín & De la Parte (2004) with the purpose of establishing comfortable links between the person with autism and the person with who is relating. Apart from that, as stated by P6 ("autistic group is so hypersensitive"), the main consideration found by participants was to take into account the sensorial sensitiveness needs, with the aim of "diminishing stressors" (P9) and "the need [for] peace" (P2). This sensory adaptation reinforces Szatmari et al. (2006) theory on the sensory and motor behaviours, and especially the sensitiveness in touch, eye contact and sounds and noises, considered irritating by Palau (2017).

Besides, participants asked for "planning and forecasting" (P1) the place previously, as well as making it easier to understand all the intrinsic processes faced to end up visiting the cultural site, meaning all the previous organisation on "how to get to the place, where to buy tickets" (P10). This call of the sample for previous adaptation reflects the suggestion of Cuesta & Martínez (2012), on having defined a structured environment, either physical or organisational: using pictograms (P1), having "possibility of moving" (P5), doing "more dynamic" activities and "sensory things that they can touch" (P4). P4 stated that activities must be of the interest of the person with autism and with easy explanations. Otherwise, they would be "discouraged", supported by earlier authors like Rivière (2001), who said that having motivations and individualised processes were key for a good development of this people.

Finally, other aspects mentioned by the participants were having staff in cultural sites aware of autism knowledge and needs (P7), but also aligning activities to the age of the person to not fall into infantilism conducts (P4). Rivière already suggested in 1984 and 1997, adapting education to the evolutionary level of the child (Rivière, 1984; 1997).

4.1.3. Accessibility

Regarding the accessibility in cultural heritage, the participants were asked about how they see the current accessibility. First of all, the main interviews showed that the major accessibility improvements are focused on physical enablers and adaptations. Developments related to physical accessibility appears to be the most developed ones according to this study, which reinforces previous research about accessibility noting that physical accessibility is the most extended one

(Braden, 2016; Fernández & Miñarro, 2019). In addition, some participants expressed their concern, in matters of physical accessibility being the only one taken into consideration in cultural heritage. Furthermore, it was commented that the cognitive and mental disabilities are one of the forgotten requirements not yet implemented, and in some cases, it is still beginning to consider these disabilities inside accessibility improvements, reinforced by complementary interviews and previous research (Allday, 2009). For instance, P3 suggested that considering the gap of mental disabilities' accessibility, people with ASD is much more forgotten, and P5 pointed out that there are disabilities requiring other types of improvements rather than the physical ones. Confirming studies mentioned in the literature, which stated that intellectual disabilities need of support and good communication (Allday, 2009), and considering only physical access, other needs could be forgotten (Georgieva, 2016). Concerning ASD, P7 commented that this disorder is one of the "most difficult disorders to understand" which is also noticeable when it comes to accessibility, and appears to be in concordance with previous studies that highlighted the complexity of understanding ASD disorder (Cuesta & Martínez, 2012; Grandin & Panek, 2013; Woodruff, 2019). Other participants went much further and mentioned that the majority of cultural heritage is not designed for people with disabilities, because were conceived and "designed for neurotypical people" (P4).

On the contrary, P11 highlighted the positive evolution of accessibility improvements carried out by cultural heritage compared to some years ago, but confirmed that "there is still a long way to go" in terms of accessibility, mentioned in Magkafa & Newbutt's research (2018). Additionally, P10 commented on the growth of "more opportunities" for people with ASD in leisure and cultural activities.

4.1.4. Limitations and constraints

This research has identified highly likely constraints that people with autism and their companions face and limit the accessibility in cultural heritage. The main interviews suggested that the major limitation is associated with a lack of understanding from the cultural sites, which reinforces previous literature (Allday, 2009; Kaganek et al., 2017). Furthermore, participants identified it as an absence of social awareness and conditioning. Thus, it confirms studies that related to social ignorance, being the main cause of unawareness (Yau, McKercher & Packer, 2004; Daniels, Drogin & Wiggins, 2005). Additionally, it was commented, due to the fact ASD disorder does not involve physical evidences, generally, people with the disorder "suffers a lot of discrimination" (P11) as a result of the lack of knowledge of how to treat them.

Another relevant constraint expressed by the participants was specifically focused on the professionals and people in charge of customer service being a barrier itself, reinforced by complementary interviews, and agrees with previous studies that reflect some of the complaints of

people with disabilities in the tourism industry are related to staff treatment (Small & Darcy, 2010). For instance, P4 argued that professionals "in charge of leisure activities are sometimes not trained" about people with ASD. Furthermore, some barriers that are still not removed were mentioned, such as physical, communication, attitude, leading to complications in accessibility, as identified in other studies, as a remain of tangible and intangible limitations (Handa, Dairoku & Toriyama, 2010; Georgieva, 2018). On this matters, P1 claimed the absence of adapted cultural proposals. Regarding the lack of adaptations, P7 mentioned that people with ASD have issues with language, as previously mentioned in the literature review, so it is a barrier for them when understanding and enjoying the activity.

Other participants pointed out other limitations, such as when unforeseen situations occur and then how to manage the reaction of people with ASD. For instance, P3 commented "deregulating at any given time, the situation can be very difficult". Reinforcing research presented in the literature, which identified the unpredictable behaviours of people with ASD as one of the main cause of families in turning down activities (Woodruff, 2019). In addition, "logistics" (P9) requirements to go to cultural heritage with people with ASD and reduced social network, were also identified as a limitation. Taking into consideration the three dimensions (intrapersonal, interpersonal and structural) explained already in the literature review, this study suggests that the most influential dimension is interpersonal, due that the major concern is related to the interaction with others. So, it appears to be in concordance with the research carried out by Hawkins et al. (1999), but not major evidences were found towards the intrapersonal dimension, which verifies important differences with the results of Freund et al. (2018).

4.1.5. Accessible cultural offer

Another result that this research reflects, is how participants consider accessibility should be, in order to engage and achieve the expectations of people with ASD in cultural heritage. As previously mentioned in the literature review, in matters of content, most participants expressed the importance of taking into consideration visual interfaces rather than non-visual ones, reinforced by the complementary interviews. On the one hand, it was extremely highlighted the visual content based on pictograms, videos, pictures and drawing. Some participants mentioned that is always preferable using visual content rather than a verbal interface, if not, it is better to combine both. For instance, P3 commented that visuals "help them [people with ASD] understand what is being offered". On the other hand, findings also reflect that regarding the content materials, the participants recommended to include manipulative things, such as "exploratory drawings" (P11). Additionally, it was also commented to consider the anticipation, either verbal or through a visual interface. For instance, P4 highlighted the importance of anticipation and providing visual material

before the activity, in order to guide people with ASD. This study seems in line with the literature review that considered physical and visual content, as well as anticipation, key elements in order to provide a comfortable experience for people with disabilities (Andrews & Begley, 2014; Stone, 2014; Kempe, 2014; 2015; Fletcher-Watson, 2015; Lussenhop et al., 2016; Chick, 2017).

Regarding the environment, some participants mentioned the possibility of considering schedules and timings which contemplates and prioritizes the necessities of people with ASD. These participants suggested that this consideration should "create opportunities" (P10) for these people in the space, but without creating specific hours exclusively for them. For instance, P1 suggested creating friendly hours, open to all publics, but prioritizing their necessities, also proposed in the literature review by Fletcher-Watson (2015). Also, P5 commented that is not necessary any extraordinary adaptation; otherwise creating slots for people with ASD every month. Furthermore, P6 mentioned the possibility of providing more "personalized attention", in matters of groups, reducing the number of people and enable a "quiet and cozy environment". Bearing that in mind, reinforces previous research that identified as key elements, reducing the number of audience and adapting the environment (Belloli, Morris & Phinney, 2013; Fletcher-Watson, 2015).

Additionally, P8 suggested incorporating the logic of universal design, previously mentioned in the literature review, which claimed to apply this design in the tourism industry and cultural heritage (Rains, 2004; Buhalis & Darcy, 2011; Di Lello, 2016).

4.1.6. Co-creation

Finally, this research certainly highlights the importance of the co-creation concept. As explained in the literature review, co-creation is defined as an experience aiming for the value outcome produced from the interaction between an individual and a context (Prahalad & Ramaswamy, 2004; Binkhorst & Den Dekker, 2009). Taking into consideration the participants insights about collaborating between entities and how they think cultural heritage institutions should approach the accessibility, this study has identified common insights which suggest being co-creation the path of integrating accessible practices for people with ASD. As well as, it encourages the implication of cultural heritage sites in these procedures while agreeing with previous studies explored in the literature review about the application of co-creation design in heritage sites.

Most of the participants expressed the significance of taking into account the entities and family associations when it comes to develop or design activities for people with ASD. On one hand, some participants explained their current experiences collaborating with heritage sites, such as P3, who mentioned "we do inclusive activity" and explained that they are actively working with museums. Also, P10 explained, "we are part of a meeting" with other entities with functional diversity, with the purpose of creating accessible spaces and activities in Vic (Catalonia, Spain), agreed with

institutions. Additionally, P4 commented on their experience as a school helping and giving advice in order to improve an activity proposed, in concordance with a similar strategy exposed in the literature review (Allday, 2009). On the other hand, P11 highlighted all previous work done by associations, in order to “create awareness” of ASD disorder and indicated that associations have been essential, in matters of creating improvements. For instance, P6 expressed their concern about including people with ASD in decision-making processes and suggested that these people needs to be taken into consideration, “so that they can give their opinion”. In addition, as previously explained in the literature review, P8 indicated the importance of “Apropa Cultura” in the Catalan cultural scenario being a collaboration network for either cultural heritage or people with disabilities, to meet their necessities.

4.2. Case study: Gran Teatre del Liceu

The second section aims to examine and discuss the accessibility for people with ASD in Liceu. The following table shows the results of the analysis of Liceu's interview. It was created a Table of quotes *(Appendix E.2.)*, and then it has been possible to present key concepts exposed.

Selective	Axials	Quote
Adaptation	Physical adaptation	"six armchairs reserved for them in the main floor and six armchairs for their companions"
	Sensorial adaptation	"Braille and relief"
	Intellectual/Mental Health adaptation	"Apropa Cultura program"
	ASD adaptation	"four friendly shows"
Improvements	Visual Support	"changing the signage of the public spaces"
	Anticipation Material	"anticipation of the itinerary [...] with photos and in pictos"
	Easy Read	"the argument summaries are in our website following the international criteria on easy reading"
Friendly Performance (Relaxed Performance)	Lightning	"the room will be lit at 30%, it will not be in the dark"
	Rest Areas	"Enable two resting areas"
	Use of pictograms	"we put posters in different places of the theatre, [...] with pictograms"
Facilities	Professional Training	"three training sessions through Fundació Desenvolupament Comunitari"
	Reduced prices	"we are giving entry to the main floor or amphitheater and pay only €3 to enter and have access to the stable programming" (APROPA CULTURA)
	Websites	"make the websites accessible taking into account the different disabilities"
	Universal Design System	"we considered the diagnosis made by DINCAT "
Co-creation	Associations/Entities	"We work with Associació Aprenem"
	Platform	"a conference and workshops in order to allow accessibility for people with autism"

Table 6. Key concepts identified from the "Table 9. Table of quotes for research question 3 *(Appendix F.1.)*

The first topic analysed was the adaptation of the space at all levels of disability publics, including either physical, sensorial, intellectual (mental health) or autism. In terms of physical accessibility, among other things, Liceu offers reserved spaces for them, confirming previous studies that identified priority areas as one of the mobility improvements (Braden, 2016). Specifically, they have a total of twelve armchairs available in privileged areas (low mobility), which six of them are intended for persons with mobility impairments and six for their companions. In matters of sensory accessibility, Liceu offers "Braille and relief" tools, for example in the historic lobby there is an orientation plan which shows the different parts of the building, and as well, there are guides distributed around the building, also adapted with touchable materials. It is in line with other previous studies explored in the literature review, which alerted the weight of touchable tools for people with sensory impairments, especially the visual ones (Argyropoulos & Kanari, 2015). When it comes to intellectual disabilities, Liceu is part of "Apropa Cultura" program, already explained in the literature review. It offers exclusive prices for this collective. Finally, in terms of people with ASD, Liceu has started to program "friendly shows" for this collective, also named in the literature review as "relaxed performances" and considered the inclusive path of people with ASD in theatre (Fletcher-Watson, 2015). Besides, this season Liceu has done four "friendly shows", which will be explained in much detail further on.

Considering the specific requirements in each disability, it was necessary to understand and to adapt Liceu's different areas, as stated in the literature (Buhalis et al., 2005).

As previously mentioned in the literature review, people with ASD need some requirements, when it comes to information presentation and materials (Grandin & Panek, 2013; Andrews & Begley, 2014; Stone, 2014; Kempe, 2014; 2015; Fletcher-Watson, 2015; Lussenhop et al., 2016; Chick, 2017; Woodruff, 2019). For this reason, the second topic analysed was the permanent information materials and improvements provided. In matters of visual support, Liceu "changed the signage in the public spaces" based on pictograms. Furthermore, throughout the website, they provide anticipation materials in a guide format with visual content: photos and pictograms with an Easy Read format. These guides ensure that people with ASD anticipate each encounter in Liceu and know in advance the steps to follow, as suggested in the literature review to provide tools, to advance possible situations (Andrews & Begley, 2014; Stone, 2014; Kempe, 2014; 2015; Fletcher-Watson, 2015). Regarding the easy read implementations, its usefulness with people with ASD in the literature review as suggested (Yaneva, Temnikova & Mitkov, 2015). Commented previously, the anticipation material is designed using this framework, as well as the plot summaries, which are

available in the website and the standard format (paper), at the end of the summary, available through a QR code.

When it comes to ASD considerations, Liceu started an initiative to invite people with ASD to become more participative in the cultural sector. This initiative is called “friendly show”, also named "relaxed performances" in the literature review to refer the plays in theatre appropriately adapted to ASD needs (Fletcher-Watson, 2015).

In the third step of Liceu’s adaptation, changes regarding the sensitiveness of sensorial stimulus were done so it could be less upsetting for the collective. This reinforces Woodruff’s idea of reducing stressor elements of the environment (Woodruff, 2019). Authors in the literature pointed out other factors to accommodate people with ASD, such as first of all, being one step ahead with the provision of anticipated visual supports like pictograms or Makaton symbols to the public, and tell them about future unexpected elements. To adjust this anticipation need, Liceu placed explanatory posters with pictograms around the theatre, especially in the areas where people with ASD were located, like the main floor and the amphitheatre. Second, regarding the hypersensitiveness of people with ASD, Liceu tried to adapt sensorial elements. For example, lightning the room at the 30%, instead of leaving the room totally in the dark. Authors already mentioned this control of the lights, and also being aware of sounds and noises or other environmental factors. Third, the authors also recommended equipping the place with peaceful areas, which Liceu implemented properly. According to the interview, the theatre offered “two resting areas” to go if anyone faced any upsetting circumstance, and these zones had an amalgam of different anti-stress materials, such as softballs, blocks, puzzles and animal drawings of the characters of the show.

Last but not least, training the staff about how to assist clients with ASD, was a factor outlined by the authors. Liceu did three trainings with a foundation, whose aim was assisting companies in terms of accessibility in professional environments. Unfortunately, these sessions were focused on physical and sensorial accessibility rather than ASD accessibility (Andrews & Begley, 2014; Stone, 2014; Kempe, 2014; 2015; Fletcher-Watson, 2015). However, all these changes were only seen in the four friendly sessions Liceu did.

Although there was people familiarized with the disorder in the friendly performances, more trained staff would have been key to offer a pleasant experience to the collective, as well as letting them investigate the place with all its diverse options (Lussenhop et al., 2016).

In the literature, website’s accessibility gap was brought out, since the 95% of the total public websites are still not standardized to be accessible for all (European Commission, 2010), nor tourism websites are (Buhalis et al., 2005). Liceu interviewee also stipulated the requirement of adapting websites with the triple-A to all kind of disabilities. As mentioned above, they adapted the synopsis

which is uploaded in their website, but they have not adapted the entire website yet. Lastly, concerning the Universal Design thinking, Liceu co-worked with an association that watches over the full defence of the rights of people with disabilities. Furthermore, another facility provided to welcome visitors with ASD or other disabilities is selling tickets for the main floor and amphitheatre at the price of three euros if visitors buy them through the Apropa Cultura initiative, which permits these vulnerable collectives to attend all the supply in Gran Teatre del Liceu.

Finally, the interview findings appear to be considered relevant to the co-creation concept, previously mentioned in the literature review (Prahalad & Ramaswamy, 2004; Binkhorst & Den Dekker, 2009) and in the first part of the findings. In terms of associations and entities, Liceu works actively with Fundació Aprenem to improve the cultural proposal for people with ASD, in line with other researches exposed in the literature review (Fletcher-Watson, 2015; Chick, 2017; Woodruff, 2019). Additionally, as previously mentioned Liceu is part of Apropa Cultura, this network already commented, and through Apropa Cultura, Liceu attended to "a conference and workshops" about the accessibility for people with ASD, which counted with the participation of entities like Fundació Aprenem and Fundació Mascasadevall, both of them associations of people with ASD.

CHAPTER 5: CONCLUSIONS

5.1. Summary of the findings

The present paper has attempted to explore the reality of accessibility for people with ASD when they visit cultural heritage sites, as well as the limitations they face in these spaces. Furthermore, this research aimed to reflect the cultural considerations and needs, accessible cultural offer, to achieve their inclusion and their expectations.

First of all, the study is aligned with Georgieva (2016; 2018), who stated that there have been improvements in accessibility in cultural heritage sites, although they have been focused on physical access improvements, and suggesting that other disabilities with other needs have been left aside.

The findings and discussion obtained in this study reflected that people with ASD face lots of limitations along the way in cultural heritage, as a result of the absence of accessibility. However, the lack of understanding followed by the human factor is affecting especially the experience of people with ASD, in line with other studies suggesting the lack of understanding as a main barrier (Yau, McKercher & Packer, 2004; Daniels, Drogin & Wiggins, 2005; Allday, 2009; Buhalis & Darcy, 2011; Kaganek et al., 2017). However, in line with Hawkins et al. (1999) ideas, it can be concluded that only the interpersonal dimension has been identified as a major influence.

In terms of considerations and characteristics of people with ASD, the discussion and findings above, confirmed most of the theories presented in the book written by Cuesta & Martínez (2012) and Palau (2017), in matters of educational needs, considerations to take into account and characteristics of people with ASD.

Furthermore, the overall findings are following other studies in terms of accessible cultural offer. The findings show the importance of considering visual content, which strengthens other studies which pointed out the usefulness of visual content for people with disabilities (Andrews & Begley, 2014; Stone, 2014; Kempe, 2014; 2015; Fletcher-Watson, 2015; Lussenhop et al., 2016; Chick, 2017).

As a matter of fact, and demonstrated in the findings and discussion, this study has verified the importance of enabling co-creation experiences between heritage sites and associations, confirming other studies that highlighted the importance of including people with disabilities into the design of cultural offer (Binkhorst & Den Dekker, 2009; Tussyadiah, 2014; Jernsand, Kraff & Mossberg, 2015; Cerdán & Binkhorst, 2019).

Finally, the case study appears to be in concordance with the rest of the findings and other researches, in terms of improvements and accessible cultural offer (Andrews & Begley, 2014; Stone, 2014; Kempe, 2014; 2015; Fletcher-Watson, 2015).

5.2. Recommendations

As concluded above, accessibility in cultural heritage sites is a topic still in the development process, within all its accessibility variables, but especially concerning the needs of people with Autism Spectrum Disorder. Even though the researchers of this study are not experts on the topic, the findings showed a sort of improving ways which could be applicable to other cultural sites and thus, enhance people with ASD's quality of life.

First of all, the first recommendation is encouraging cultural sites coordinators and managers to listen which are the limitations and needs of people with disabilities. Thus, researchers consider that is important to learn about this collective. For this reason, the co-creation process could be a potential tool for cultural sites, mentioned both in the literature and reinforced in the findings. Working with entities, families or people with ASD will allow cultural sites to realise that implementations and accessibility tools are useful for the collective. The feedback and suggestions given by these people would have as much credibility as anyone else's, and having a voice would probably be very meaningful for them. Plus, their information would also help to understand what kind of adaptation practices would be necessary according to the gender of people with ASD (if applicable), as findings shown different patterns are developed whether the person with ASD is a woman or a man.

Answering one part of the second research question, the application of the Universal Design System (UDS) could be a recommendation for improving the experience, as literature review (Rains, 2004; Darcy, Cameron & Pegg, 2010; Buhalis & Darcy, 2011) and the sample suggested, in such a manner that whatever accessibility improvement is done, it will be helpful for everyone, having a disability or not (Center for Universal Design, 1997; Centre for Excellence in Universal Design, 2020). Also considering, anticipation and provision of all kind of information -which should be simple and readable, the use of visual supports -including pictograms, videos, pictures or drawings-, touchable and manipulative elements and setting new schedules -maybe private slots, friendly ours but open to all publics or guided tours for the collective.

Finally, as society is every time more dependant and likely to use digital tools, and accurate process of adaptation to accessibility would need to consider the accessibility on websites as well. For instance, in the case study, Liceu's interviewee mentioned they uploaded adapted argument synopsis of the shows they were offering. So, it would be key to adapt websites with triple-A design, simplified language and visual tools for people with ASD too.

5.3. Limitations and further research

This research suffers several limitations, which researchers have encountered while doing the investigation and analysing the results.

The principal limitation that has affected the most in the investigation process has been the scarce time, influenced by the unexpected conditions, created due to COVID-19 pandemic. As the researchers did not have enough time, only fifteen interviews were carried out, which only eleven of them could count as main interviews to consider in the findings. The researchers would like to interview more people, especially people with the condition and more heritage sites. Additionally, the COVID-19 pandemic has limited the research, which initially counted with more interviews programmed, and conducting them orally has complicated its realisation and expected length, as well.

Another limitation that the researchers have encountered is the sample. Throughout the interviews, it was especially highlighted the amplitude of this disorder and the differentiation according to the degree of affectation, which meant a challenge for the researchers, to achieve as many interviews to reflect it. However, the final sample is not representative. Even though it includes participants with different experiences with ASD, it does not reflect the whole disorder and all the affectation degrees. A recommendation for further researchers could be to contact the participants much more time in advance and include in the sample more people with different degrees of affectation, to captive the differences.

Related with the previous limitation, the sample has had limitations regarding the number of interviews. Usually, qualitative research needs more than twelve interviews (Baker & Edwards, 2012). However, especially influenced by the insufficient time and COVID-19 pandemic, the actual useful sample was limited to eleven interviews.

Throughout the interviews and then analysing the results, the researchers have noticed that the topic is a limitation itself, to establish general assumptions of accessibility. As previously mentioned in the literature review by Cuesta & Martínez (2012) and confirmed in the discussions and findings chapter, this topic involves an amplitude of affectation among people with ASD, which has challenged the researchers of this study. Since they are not experts in the field, and due to the reduced sample, which does not consider all affectations. As a result, researchers consider that findings cannot be generalised, considering the complexity of the disorder. On this matters, for future research in accessibility for people with ASD, it should be taken into account this complexity; for this reason, the recommendation collects previous suggestions, which is having a wider and more expanded sample, in matters of defining general accessibility assumptions. Finally, as the sample is in Barcelona, it could be interesting to do the same research in other heritage sites, to get

to know the accessibility facilities for ASD, as well as conducting similar researches in other parts of the world, as means to see if the accessibility for people with ASD is much more expanded.

CHAPTER 6: REFERENCES

Agència Catalana de Turisme (2007). Turisme accessible - Turisme per a tothom. [ONLINE] Available from: http://act.gencat.cat/wp-content/uploads/2012/07/PresentacioTurismeaccessible2011.pdf. [Accessed 13 April 2020].

Allan, M. (2015). Accessible tourism in Jordan: Travel constraints and motivations. *European Journal of Tourism Research*, 10 (1), 109–119.

Allday, K. (2009). From changeling to citizen: learning disability and its representation in museums. *Museum and Society*, 7 (1), 32–49.

Allison, M. (2000). Leisure, Diversity and Social Justice. *Journal of Leisure Research,* 32 (1), 2-6.

American Psychiatric Association (2002). *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR). Barcelona: MASSON Editorial.

Andrews, L. & Begley, J. (2014). *Show time: a guide to creating amazing relaxed performances for people with autism*. Birmingham: Autism West Midlands.

Apropa Cultura (2020). Apropa Cultura | Una porta a la inclusió. [ONLINE] Available from: https://www.apropacultura.cat/. [Accessed 13 April 2020].

Arenghi, A. & Agostiano, M. (2017). Cultural heritage and disability: Can ICT be the "Missing piece" to face cultural heritage accessibility problems?. *Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, LNICST*, 195 (7), 70–77.

Argyropoulos, V. & Kanari, C. (2015). Re-imagining the museum through "touch": Reflections of individuals with visual disability on their experience of museum-visiting in Greece. *Alter, European Journal of Disability Research*, 9 (2), 130–143.

Asperger, H. (1944). Die Autistischen Psychopaten im Kindersalter. *Archiv für Psychiatrie und Nervenkrankheiten,* 117, 76-136.

Australia Human Rights Commission (1992). Disability Discrimination Act. [ONLINE] Available from: https://www.humanrights.gov.au/sites/default/files/GPGB_disability_discrimination.pdf. [Accessed 13 April 2020].

Baker, S. & Edwards, R. (2012). How many qualitative interviews is enough?. *National Centre for Research Methods Review Paper*, 1–42.

Belloli, J., Morris, L. & Phinney, S. (2013). *Small size annual book 3: 2012-13*. Bologna: Edizioni Pendragon.

Binkhorst, E. & Den Dekker, T. (2009). Agenda for Co-creation tourism experience research. *Journal of Hospitality Marketing and Management*, 18 (2), 311-327.

Braden, C. (2016). Welcoming All Visitors: Museums, Accessibility, and Visitors with Disabilities. *Working Papers in Museum Studies*, 12 (12), 3-15.

Buhalis, D. & Darcy, S. (2011). *Accessible Tourism: Concepts and Issues*. Bristol: Channel View Publications.

Buhalis, D., Eichhorn, V., Michopoulou, E. & Miller, G. (2005). Accessibility Market and Stakeholder Analysis, One-Stop-Shop for Accessible Tourism in Europe (OSSATE). Surrey: University of Surrey.

Burney, S. & Saleem, H. (2008). Inductive & Deductive Research Approach. In: *Inductive & Deductive Research Approach.* University of Karachi, Karachi, Pakistan: 1-22.

Center for Universal Design (1997). What is universal design?. North Carolina State University. [ONLINE]. Available from: http://www.design.ncsu.edu [Accessed 28 February 2020].

Centre for Excellence in Universal Design (2020). What is Universal Design | Centre for Excellence in Universal Design. [ONLINE]. Available from:http://universaldesign.ie/What-is-Universal-Design/. [Accessed 28 February 2020].

Cerdán, M. & Binkhorst, E. (2019). Heritage sites experience design with special needs customers. *International Journal of Contemporary Hospitality Management*, 31 (11), 4211–4226.

Chick, A. (2017). Co-creating an accessible, multisensory exhibition with the National Centre for Craft & Design and blind and partially sighted participants. In: *REDO*: *2017 Cumulus International Conference.* Kolding, Denmark: 1-17.

Conde, M. (2017). *Òpera per a tothom. Criteris d'accessibilitat i eliminació de barreres als continguts*. Professorship in responsible tourism, Ramon Llull University.

Constantinou, V., Loizides, F. & Ioannou, A. (2016). A Personal Tour of Cultural Heritage for Deaf Museum Visitors. *Springer nature*, 10059 (4), 214-221.

Corbett, B., Swain, D., Coke, C., Simon, D., Newsom, C., Houchins- Juarez, N., Jenson, A., Wang, L. & Song, Y. (2014). Improvement in social deficits in autism spectrum disorders using a theatre-based, peer-mediated intervention. *International Society for Autism Research*, 7 (1), 4–16.

Council of Europe (2005). Convention on the Value of Cultural Heritage for Society. *Council of Europe Treaty Series The Encyclopedia of Archaeological Sciences*, 199, 1–9.

Craven, C. E. (2016). Refusing to be toured: Work, tourism, and the productivity of 'Life' in the Colom- bian Amazon. *Antipode*, 48 (3), 544–562.

Crawford, D. & Godbey, G. (1987). Reconceptualizing barriers to family leisure. *Leisure Sciences*, 9 (2), 119–127.

Crawford, D., Jackson, E. & Godbey, G. (1991). A hierarchical model of leisure constraints. *Leisure Sciences*, 13 (4), 309–320.

Cuesta, J. & Martínez, M. (2012). *Todo sobre el Autismo. Los Trastornos del Espectro del Autismo (TEA). Guía completa basada en la ciencia y en la experiencia*. Spain: Publicaciones Altaria, S. L.

Daniels, M., Drogin, E. & Wiggins, B. (2005). "Travel Tales": An interpretive analysis of constraints and negotiations to pleasure travel as experienced by persons with physical disabilities. *Tourism Management*, 26 (6), 919–930.

Darcy, S. (1998). *Anxiety to access: tourism patterns and experiences of New South Wales people with a physical disability*. Sydney: Tourism New South Wales.

Darcy, S. (2010a). Inherent complexity: Disability, accessible tourism and accommodation information preferences. *Tourism Management*, 31 (6), 816–826.

Darcy, S. (2010b). Accessible Tourism: A question of trust, strategic knowledge management and a commitment to sustainability. In: *International Conference on Mobility and Transport for Elderly and Disabled Persons.* Hong Kong, China: 1-9.

Darcy, S., Cameron, B. & Pegg, S. (2010). Accessible tourism and sustainability: A discussion and case study. *Journal of Sustainable Tourism*, 18 (4), 515–537.

Darcy, S. & Dickson, T. (2009). Tourism, A Whole-of-Life Approach to Tourism: The Case for Accessible Experiences. *Journal of Hospitality and Tourism Management*, 16 (1), 32-44.

Darcy, S. & Pegg, S. (2011). Towards strategic intent: Perceptions of disability service provision amongst hotel accommodation managers. *International Journal of Hospitality Management*, 30 (2), 468–476.

Deng, L. (2015). Inclusive museum and its impact on learning of special needs children. In: *ASIST '15 Research in and for the Community, American Society for Information Science, American Society for Information Science*. St Louis, Missouri: 52 (1), 1–4

Department of Health (2001). Valuing people - A new strategy for learning disability for the 21st century: How may it impinge on primary care?. *British Journal of General Practice*, 51 (471), 788–790.

Devine, M. (1997). Inclusive leisure services and research: Consideration of the use of social construction theory. *Journal of Leisurability*, 24 (2), 3–11.

Di Lello, C. (2016). Guggenheim for All: Museum Education for Students on the Spectrum. *Occasional Paper Series*, 2015 (33), 26-37.

Dictionary of the English Language (2011). 5th Ed. Houghton Mifflin Harcourt Publishing [ONLINE]. Available from:https://www.thefreedictionary.com/neurotypical [Accessed 13 April 2020].

Disabled World (2016). [ONLINE]. Available from: https://www.disabled-world.com/disability/types/cognitive. [Accessed 13 April 2020].

Disabled World (2019). [ONLINE]. Available from: https://www.disabled-world.com/disability/types/. [Accessed 13 April 2020].

División de Estadística y Estudios, S. G. T. M. de C. y D. (2018). Statistics Statistics on Museums and Museum 2016. [ONLINE]. Available from: https://www.culturaydeporte.gob.es/servicios-al-ciudadano/estadisticas/cultura/mc/naec/portada.html. [Accessed 01 March 2020].

División de Estadística y Estudios, S. G. T. M. de C. y D. (2020). Estadística de Museos y Colecciones Museográficas 2018. [ONLINE]. Available from: https://www.culturaydeporte.gob.es/servicios-al-ciudadano/estadisticas/cultura/mc/naec/portada.html. [Accessed 01 March 2020].

Eardley, A., Mineiro, C., Ride, P. & Neves, J. (2016). Redefining Access: Embracing multimodality, memorability and shared experience in Museums Curator. *The Museum Journal*, 59 (3), 263–286.

Eichhorn V., Miller, G., Michopoulou, E. & Buhalis, D. (2008). Enabling access to tourism through information schemes?. *Annals of Tourism Research*, 35 (1), 189–210.

España. Real Decreto Legislativo 1/2013, de 29 de noviembre, por el que se aprueba el Texto Refundido de la Ley General de derechos de las personas con discapacidad y de su inclusión social. *Boletín Oficial del Estado*, December 2013, 95635-95673. [ONLINE]. Available from: https://www.boe.es/buscar/doc.php?id=BOE-A-2013-12632. [Accessed 13 April 2020].

European Commission (2010). European Disability Strategy 2010-2020. [ONLINE]. Available from: https://ec.europa.eu/social/main.jsp?catId=1484&langId=en. [Accessed 01 March 2020].

European Commission (2014). 2015-18 Work Plan for Culture. [ONLINE]. Available from: http://ec.europa.eu/culture/policy/strategic-framework/index_en.htm. [Accessed 01 March 2020].

European Commission (2020). Information and Communication Technologies | Horizon 2020. [ONLINE] Available from: https://ec.europa.eu/programmes/horizon2020/en/h2020-section/information-and-communication-technologies. [Accessed 13 April 2020].

European Commission DG Enterprise and Industry (2014). Economic Impact and Travel Patterns of Accessible Tourism in Europe. [ONLINE]. Available from: https://ec.europa.eu/ [Accessed 01 March 2020].

Fernández, A. B. & Miñarro, P. (2019). Physical accessibility, key factor for entrepreneurship in people with disabilities. *Suma de Negocios*, 10 (22), 58–64.

Fletcher-Watson, B. (2015). Relaxed performance : audiences with autism in mainstream theatre. *Scottish Journal of Performance,* 2 (2), 61–89.

Fodness, D. & Murray, B. (1997). Tourist Information Search. *Annals of Tourism Research,* 24, 503-523.

Fodness, D. & Murray, B. (1999). A Model of Information Search Behavior. *Journal of Travel Research,* 37, 220-230.

Fox, A. (2014). Inclusive arts practice: Collections as a catalyst for inclusivity. In: MuseumsEtc (ed). *10 must reads: Inclusion: Empowering new audiences*. Boston; Edinburgh: Museumsetc.

Freund, D., Cerdán, M., Hernández, G., Guix, M., Iñesta, A. & Castelló, M. (2018). Enhancing the hospitality customer experience of families with children on the autism spectrum disorder. *International Journal of Tourism Research*, 21 (5), 606-614.

Georgieva, D. (2016). Rethinking Accessibility to Cultural Heritage: Sensing Archaeology. *Modern Conservation, ICOMOS Serbia*, 91-105.

Georgieva, D. (2018). Ethical and Philosophical Dimensions of Accessibility to Cultural Heritage or why we need a different perspective. In: *International Scientific Conference THE BASILICA OF ST SOPHIA DURING THE TRANSITION FROM PAGANISM TO CHRISTIANITY.* Sofia, Bulgaria: 1-11.

Ginsburg, F. & Rapp, R. (2017). Cripping the new normal: Making disability count. *Alter, European Journal of Disability Research*, 11 (3), 179–192.

Godfrey, E. & Haythorne, D. (2013). Benefits of dramatherapy for autism spectrum disorder: a qualitative analysis of feedback from parents and teachers of clients attending Roundabout dramatherapy sessions in schools. *Dramatherapy*, 35 (1), 20–28.

Grandin, T. & Panek, R. (2013). *The autistic brain: Thinking across the Spectrum*. Boston: Houghton Mifflin Harcourt.

Gursoy, D. & Chen, J. (2000). Competitive Analysis of Cross Cultural Information Search Behavior. *Tourism Management*, 21, 583-590.

Gursoy, D. & McCleary, K. (2004). An Integrative Model of Tourists' Information Search Behavior. *Annals of Tourism Research,* 31, 353-373.

Hancock, B. (2002). Introduction to qualitative research. *Research and Development Group of NHS Executive Trent*, 1–31.

Handa, K., Dairoku, H. & Toriyama, Y. (2010). Investigation of priority needs in terms of museum service accessibility for visually impaired visitors. *The British Journal of Visual Impairment*, 28 (3), 221–234.

Hawkins, B., Peng, J., Eklund, S. & Hsieh, C. M. (1999). Leisure constraints: A replication and extension of construct development. *Leisure Sciences*, 21 (3), 179–192

Holstein, J. A. & Gubrium, J. F. (2003). *Inside interviewing*. California: SAGE Publications, Inc.

Institut d'Estadística de Catalunya (2018). Indicadors anuals. Persones amb reconeixement legal de discapacitat. Per tipus de discapacitat. 2018. Idescat. Indicadors anuals. Persones amb reconeixement legal de discapacitat. Per tipus de discapacitat. [ONLINE]. Available from: https://www.idescat.cat/indicadors/?id=anuals&n=10435. [Accessed 22 February 2020].

Instituto Nacional de Estadística (2008). Sociedad / Salud / Encuestas sobre discapacidades / Resultados. 2008. INEbase / Sociedad / Salud / Encuestas sobre discapacidades / Resultados. [ONLINE]. Available from: https://www.ine.es/dyngs/INEbase/es/operacion.htm?c=Estadistica_C&cid=1254736176782&menu=resultados&idp=1254735573175#. [Accessed 22 February 2020].

International Council of Museums (2020). Museum Definition - ICOM - ICOM. [ONLINE]. Available from: https://icom.museum/en/standards-guidelines/museum-definition/. [Accessed 01 March 2020].

International Federation of Library Associations (2010). Guidelines for easy-to-read materials. International Federation of Library Associations and Institutions IFLA Professional Reports 120. Available from: https://www.ifla.org/files/assets/hq/publications/professional-report/120.pdf. [Accessed 22 February 2020].

Ivanovici, M. & Pană, M. C. (2017). 'From Culture to Smart Culture. How Digital Transformations Enhance Citizens' Well-Being through Better Cultural Accessibility and Inclusion. *IEEE Access*, 8, 37988 - 38000.

Jackson, E. L. (1997). A critique of leisure constraints: Comparative analyses and understandings. *Journal of Leisure Research*, 29, 458–468.

Jernsand, E. M., Kraff, H. & Mossberg, L. (2015). Tourism experience innovation through design. *Scandinavian Journal of Hospitality and Tourism*, 15 (1), 98-119.

Kaganek, K., Ambroży, T., Mucha, D., Jurczak, A., Bornikowska, A., Ostrowski, A., Janiszewska, R. & Mucha, T. (2017). Barriers to Participation in Tourism in the Disabled. *Polish Journal of Sport and Tourism*, 24 (2), 121–129.

Kanner, L. (1943). Autistic disturbances of affective contact. *The Nervous Child*, 2, 217-250.

Kempe, A. (2014). Developing social skills in autistic children through 'relaxed performances'. *Support for Learning*, 29 (3), 261–274.

Kempe, A. (2015). Widening participation in theatre through 'relaxed performances'. *New Theatre Quarterly*, 31 (1), 59–69.

Kim, A., Stembridge, S., Lawrence, C., Torres, V., Miodrag, N., Lee, J. & Boyns, D. (2015). Neurodiversity on the Stage: The Effects of Inclusive Theatre on Youth with. *International Journal of Education and Social Science*, 2 (9), 27–39.

Kolvin, I. (1971). Studies in the childhood psychoses. Diagnostic criteria and classification. *British Journal of Psychiatry,* 168, 904-912.

Kunce, L. & Mesibov, G. B. (1998). Educational approaches to high-functioning autism and Asperger syndrome. In: Schopler, E. & Mesibov, G. B. (Eds.). *Asperger syndrome or high-functioning autism?* Chapter 11. New York Plenum Press.

Lester, S. (1999). *An introduction to phenomenological research*. England: Stan Lester Developments.

Lewis, J. & Banerjee, S. (2013). An investigation of the therapeutic potential of stories in Dramatherapy with young people with autistic spectrum disorder. *Dramatherapy*, 35 (1), 29–42.

López, M. A., Marín, A. I. & De La Parte, J. M. (2004). La Planificación centrada en la persona, una metodología coherente con el respeto al derecho de autodeterminación. *Revista Siglo Cero, 35* (1), 1-15.

Lussenhop, A., Mesiti, L. A., Cohn, E. S., Orsmond, G. I., Goss, J., Reich, C., Osipow, A., Pirri, K. & Lindgren, S. A. (2016). Social participation of families with children with autism spectrum disorder in a science museum. *Museums and Social Issues*, 11 (2), 122–137.

Magkafa, D. & Newbutt, N. (2018). The process of involving children with autism in the design of a museum-based application. In: *MW18: Museums and the Web 2018*. Vancouver, Canada.

Makaton.org - Snapper CMS - www.snapperworld.com (2020). The Makaton Charity: Home page. [ONLINE]. Available from: https://www.makaton.org/. [Accessed 23 April 2020].

Marlien, R., Alimuddin, R. R., Priyanto, S. H. & Andadari, R. K. (2019). Co-synergy and Co-creation Value on Customer Behavioural Outcomes. *Atlantis Press*, 55-59.

Marston, J. & Golledge, R. (2003). The Hidden Demand for Participation in Activities and Travel by Persons who are Visually Impaired. *Journal of Visual Impairment and Blindness,* 97, 475-489.

Merriam, S. (1998). *Qualitative research and case study applications in education*. San Francisco, USA: Jossey-Bass.

Mesquita, S. & Carneiro, M. J. (2016). Accessibility of European museums to visitors with visual impairments. *Disability and Society*, 31 (3), 373–388.

Moore, F. (2016). *Qualitative vs Quantitative Research Completing the PhD-level Research Design course at NCU View project Completing the IT Data Communications Management course at NCU View project*. Assignment, Northcentral University.

Morris, J. (1996). Encuentros con desconocidas. Feminismo y discapacidad. Madrid: Narcea.

Museum Development North West (2020). Museum Development North West | A programme delivered by The Manchester Partnership and the Cumbria Museums Consortium. [ONLINE]. Available from: https://museumdevelopmentnorthwest.wordpress.com/. [Accessed 15 March 2020].

Nerattini, F. (2009). *Theatre and Early Years: stories of artistic practice. Small size papers*. Bologna: Edizioni Pendragon.

Ornitz, E. & Ritvo, E. (1968). Perceptual inconstancy in early infantile autism. *Archive of General Psychiatry,* 18, 76-98.

Pablos G. L. & Fontal M. O. (2019). Evaluación de programas de educación patrimonial en museos para personas con TEA / Evaluation of heritage education programs in museums for people with ASD. *RIDE Revista Iberoamericana para la Investigación y el Desarrollo Educativo*, 9 (18), 234–253.

Packer, T., McKercher, B. & Yau, M. (2007). Understanding the complex interplay between tourism, disability and environmental contexts. *Disability and Rehabilitation*, 29 (4), 281-92.

Pagán, R. (2012). Time allocation in tourism for people with disabilities. *Annals of Tourism Research*, 39 (3), 1514–1537.

Pagán, R. (2014). How Do Leisure Activities Impact on Life Satisfaction? Evidence for German People with Disabilities. *Official Journal of the International Society for Quality-of-Life Studies*, 10 (4), 557–572.

Palacios, A. (2008). *El modelo social de la discapacidad: Orígenes, caracterización y plasmación en la Convención Internacional sobre los Derechos de las Personas con Discapacidad*. CERMI.

Palacios, A. & Romañach, J. (2006). *El modelo de la diversidad. La Bioética y los Derechos Humanos como herramientas para alcanzar la plena dignidad en la diversidad funcional*. Madrid, España: Diversitás Ediciones.

Palau, M. Q. (2017). *La teva mirada parla. L'experiència de viure l'autisme*. Capellades: Quorum Llibres.

Palomo, R. (2004). Autodeterminación y Autismo. *Siglo Cero*, *35* (1), 51-68.

Paul, R. & Wilson, K. P. (2009). Assessing speech, language, and communication in autism spectrum disorders. In: Goldstein, S. Naglieri, J. A. & Ozonoff S. (Eds.). *Assessment of autism spectrum disorders*. New York: The Guildford Press.

Pictogramweb.com (2020). La solución para personas con dificultades comunicativas. 2020. La solución para personas con dificultades comunicativas. [ONLINE]. Available from: https://pictogramweb.com/. [Accessed 23 April 2020].

Polat, N. & Hermans, E. (2016). A model proposed for sustainable accessible tourism (SAT). Tékhne. Instituto Politécnico do Cávado e do Ave (IPCA), 14 (2), 125–133.

Poria, Y., Reichel, A. & Brandt, Y. (2011). Dimensions of hotel experience of people with disabilities: An exploratory study. *International Journal of Contemporary Hospitality Management*, 23 (5), 571–591.

Prahalad, C. K. & Ramaswamy, V. (2004). *The future of competition: co-creating unique value with customers*. Boston: Harvard Business School Press.

Preiser, W. F. E. & Ostroff, E. (2001). *Universal design handbook*. New York: McGraw-Hill.

Puyuelo, M., Luís, J., Merino, L. & Contero, M. (2013). Experiencing Augmented Reality as an Accessibility Resource in the UNESCO Heritage Site called "La Lonja". Valencia. *Procedia Computer Science*, 25, 171–178.

Rains, S. (2004). Universal design and the international travel & hospitality industry. In: *Designing for the 21st Century III*. Rio de Janeiro, Brazil.

Ramamoorthi, P. & Nelson, A. (2011). Drama education for individuals on the autism spectrum. In: Schonmann, S. (ed). *Key concepts in theatre/drama education*. Rotterdam: Sense Publishers.

Raymore, L., Godbey, G., Crawford, D. & von Eye, A. (1993). Nature and process of leisure constraints: An empirical test. *Leisure Sciences*, 15, 99–113.

Reich, C., Price, J., Rubin, E. & Steiner, M. (2010). Inclusion, Disabilities, and Informal Science Learning. A CAISE Inquiry Group Report. *Center for Advancement of Informal Science Education (CAISE)*, 1–82.

Reynolds, R. (1993). Recreation and leisure lifestyle changes. In: Wehman, P. (Ed.). *Use ADA mandate for a social change*. Baltimore: Paul H. Brookes

Rivière, A. (1984). La modificación de conducta en el autismo infantil. *Revista Española de Pedagogía*, 164-165, 283-316.

Rivière, A. (1997). Tratamiento y definición del espectro autista. In: Rivière, A. & Martos, J. (comp.). *El tratamiento del autismo. Nuevas perspectivas*. Madrid: IMSERSO.

Rivière, A. (2001). *Autismo. Orientaciones para la intervención educativa*. Madrid: Trotta.

Rutter, M. & Lockyer, L. (1967). A five to fifteen year follow-up study of infantile Psychosis. I: Description of sample. *British Journal of Psychiatry, 113*, 1169-1182.

Saunders, M., Lewis, P. & Thornhill, A. (1997). *Research Methods for Business Students*. Pitman Publishing, London.

Saunders, M., Lewis, P. & Thornhill, A. (2003). *Research method for Business Students*. 3rd edition. New York: Prentice Hall.

Saunders, M., Lewis, P. & Thornhill, A. (2009). *Research Methods for Business Students*. 5th Edition. London: Pearson Education.

Scheyvens, R. & Biddulph, R. (2017). Inclusive tourism development. *Tourism Geographies*, 20 (4), 589–609.

Scheyvens, R. & Biddulph, R. (2018). Introducing inclusive tourism. *Tourism Geographies*, 20 (4), 583–588.

Sherratt, D. & Peter, M. (2002). *Developing play and drama in children with autistic spectrum disorders*. Abingdon: David Fulton Publishers.

Small, J. & Darcy, S. (2010). Tourism, Disability and Mobility. In: Cole. S & Morgan. N. *Tourism and Inequality: Problems and Prospects*. Wallingford: CABI.

Smith, R. W. (1987). Leisure of disabled tourists: barriers to participation. *Annals of Tourism Research*, 14 (3), 376–389.

Stone, K. (2014). *Autism-friendly 'Into the Woods' is new tack for Old Globe*. Times of San Diego. [ONLINE blog]. Available from: https://timesofsandiego.com/arts/2014/07/28/autism-friendly-into-the-woods-is-new-tack-for-old-globe/.

Stumbo, N. J. & Pegg, S. (2005). Travellers and Tourists with Disabilities: A Matter of Priorities and Loyalties. *Tourism Review International*, 8 (3), 195-209.

Szatmari, P., Georgiades, S., Bryson, S., Zwaigenbaum, L., Roberts, W., Mahoney, W., Goldberg, J. & Tuff, L. (2006). Investigating the structure of the restricted, repetitive behaviours and interests domain of autism. *Journal of Child Psychology and Psychiatry*, 47 (6), 582-590.

Tamarit, J. (2001). Propuestas para el fomento de la autodeterminación en personas con autismo y retraso mental. In: Verdugo, M. A & Urríes, J. (Eds). *Apoyos, autodeterminación y calidad de vida*. Salamanca: Amarú.

Tamarit, J. (2005). Autismo: modelos educativos para una vida de calidad. *Revista de Neurología*, 40 (1), 181-186.

Tussyadiah, I.P. (2014) Toward a theoretical foundation for experience design in tourism. *Journal of Travel Research*, 53 (5), 543-564.

United Nations (1948). Universal Declaration of Human Rights | United Nations. [ONLINE]. Available from: https://www.un.org/en/universal-declaration-human-rights/. [Accessed 01 March 2020].

United Nations (2015). Transforming our world: the 2030 Agenda for Sustainable Development .:. Sustainable Development Knowledge Platform. 2020. Transforming our world: the 2030 Agenda for Sustainable Development .:. Sustainable Development Knowledge Platform. [ONLINE]. Available from: https://sustainabledevelopment.un.org/post2015/transformingourworld. [Accessed 13 April 2020].

United Nations (2019). Disability and Development Report: Realizing the Sustainable Development Goals by, for and with persons with disabilities, Disability and Development Report. [ONLINE]. Available from: https://www.un.org/development/desa/dspd/2019/04/un-disability-and-development-report-realizing-the-sdgs-by-for-and-with-persons-with-disabilities/. [Accessed 01 March 2020].

United Nations Educational, Scientific and Cultural Organization (2001). Universal Declaration on Cultural Diversity: UNESCO. 2001. UNESCO Universal Declaration on Cultural Diversity: UNESCO. [ONLINE]. Available from: http://portal.unesco.org/en/ev.php-URL_ID=13179&URL_DO=DO_TOPIC&URL_SECTION=201.html. [Accessed 01 March 2020].

United Nations Educational, Scientific and Cultural Organization (2003). - Intangible Heritage Home - intangible heritage - Culture Sector - UNESCO. Intangible Heritage Home - intangible heritage - Culture Sector - UNESCO. [ONLINE]. Available from: https://ich.unesco.org/en. [Accessed 13 April 2020].

Van Horn, L. (2002). Travellers with Disabilities: Market Size and Trends. [ONLINE]. Available from: http://ncpedp.org/access/isu-travel.htm. [Accessed 01 March 2020].

Vogt, C. & Fesenmaier, D. (1995). Tourist and Retailers' Perceptions of Services. *Annals of Tourism Research,* 22, 763- 780.

Vogt, C. & Fesenmaier, D. (1998). Expanding the Functional Information Search Model. *Annals of Tourism Research,* 25, 551-578.

Weil, S. E. (1999). From being about something to being for somebody: The ongoing transformation of the American museum. *Daedalus*, 128 (3), 229-258.

Weiss, P. L., Bialik, P. & Kizony, R. (2003). 'Virtual reality provides leisure time opportunities for young adults with physical and intellectual disabilities. *Cyberpsychology and Behavior*, 6 (3), 335–342.

Wing, L. & Gould, J. (1979). Severe impairments of social interaction and Associated abnormalities in children: epidemiology and classification. *Journal of Autism and Development Disorders, 9*, 11-29.

Woodruff, A. W. (2019). Finding Museum Visitors with Autism Spectrum Disorders: Will Art Help In The Search?. *Museum and Society*, 17 (1), 83–97.

World Health Organisation (2011). World report on disability. [ONLINE]. Available from: https://www.who.int/disabilities/world_report/2011/report.pdf. [Accessed 01 March 2020].

World Medical Association (2013). WMA DECLARATION OF HELSINKI – ETHICAL PRINCIPLES FOR Scientific Requirements and Research Protocols. [ONLINE]. Available from: https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/. [Accessed 01 March 2020].

World Tourism Organization (2016). Manual on Accessible Tourism for All: Principles, Tools and Best Practices – Module V: Best Practices in Accessible Tourism. [ONLINE]. Available from: https://webunwto.s3-eu-west-1.amazonaws.com/2019-08/modulev13022017.pdf. [Accessed 01 March 2020].

Yaneva, V., Temnikova, I. & Mitkov, R. (2015). Accessible Texts for Autism: An Eye-Tracking Study. In: *17th International ACM SIGACCESS Conference on Computers & Accessibility. Association for Computing Machinery*. Lisbon, Portugal: 49–57.

Yau, M., McKercher, B. & Packer, T. L. (2004). Traveling with a disability - More than an Access Issue. *Annals of Tourism Research*, 31 (4), 946-960.

CHAPTER 7: APPENDICES

APPENDIX A. Information Sheet and Consent Form templates

FULL INFORMATIU

TREBALL DE FINAL DE GRAU: ANÀLISI DELS ESPAIS CULTURALS DES DE LA VISIÓ DEL COL·LECTIU AMB TRASTORN D'ESPECTRE AUTISTA (TEA)

PROJECTE

Participar en el nostre projecte implica respondre una entrevista, en la qual són lliures d'expressar la seva opinió i experiències sobre l'objectiu del projecte. Aquesta entrevista serà enregistrada, a no ser que la persona entrevistada demani el contrari.

LES DADES SERAN TRACTADES DE FORMA CONFIDENCIAL

Tota la informació aportada durant l'entrevista serà tractada de forma anònima i confidencial en la publicació del projecte de final de grau. La persona entrevistada podrà desistir de participar en la recerca en qualsevol moment

Per resoldre qualsevol dubte respecte a l'entrevista o la investigació, podeu contactar amb Gisela Mora Sorribes: gisela.mora@htsi.url.edu o Roser Sors Planas: email: roser.sors@htsi.url.edu

Moltes gràcies per participar en el nostre projecte d'investigació.

_____, _____ de 2020

FULL DE CONSENTIMENT

TREBALL DE FINAL DE GRAU: ANÀLISI DELS ESPAIS CULTURALS DES DE LA VISIÓ DEL COL·LECTIU AMB TRASTORN D'ESPECTRE AUTISTA (TEA)

☐ Accepto participar en el TREBALL DE FINAL DE GRAU: ANÀLISI DELS ESPAIS CULTURALS DES DE LA VISIÓ DEL COL·LECTIU AMB TRASTORN D'ESPECTRE AUTISTA (TEA).

☐ Accepto que l'entrevista sigui enregistrada.

☐ Vull que les declaracions o comentaris que realitzi en el marc de la investigació és tractin de forma anònima.

☐ Accepto que les dades quedin registrades de manera confidencial a HTSI.

Nom del participant:

……

Data: ……

Signatura: ……

APPENDIX C. Ethics form

Risk category 1	**Yes**	**No**
Use any information OTHER than that which is freely available in the public domain?		X
Involve analysis of pre-existing data which contains sensitive or personal information?		X
Involve direct and/or indirect contact with human participants?	X	
Require consent to conduct?	X	
Require consent to publish?	X	
Have a risk of compromising confidentiality?		X
Have a risk of compromising anonymity?		X
Involve risk to any party, including the researcher?		X
Contain elements which you OR your supervisor are NOT trained to conduct?		X
Risk Category 2		
Require informed consent OTHER than that which is straightforward to obtain to conduct the research?		X
Require informed consent OTHER than that which is straightforward to obtain to publish the research?		X
Require information to be collected and/or provided OTHER than that which is straightforward to obtain?		X
Risk category 3		
Involve participants who are particularly vulnerable?		X
Involve participants who are unable to give informed consent?		X
Involve data collection taking place BEFORE consent form is given?		X
Involve any deliberate cover data collection?		X
Involve risk to the researcher or participants beyond that experienced in everyday life?		X
Cause (or could cause) physical or psychological negative consequences?		X
Use intrusive or invasive procedures?		X
Include a financial incentive to participate in the research?		X

Table 7. Ethics form *(Appendix F.1.)*

IF APPLICABLE:

List agreed actions with your tutor to be taken to address issues raised in questions Risk Category 2:

……

Student Declaration: I confirm that I will undertake the Degree Thesis as detailed above. I understand that I must abide by the terms of this approval and that I may not make any substantial amendments to the Degree Thesis without further approval.

Name: Gisela Mora Sorribes **Signed:** ID: **Date:** 24/04/2020

Name: Roser Sors Planas **Signed:** ID: **Date:** 24/04/2020

Agreement from the supervisor of the student:

Name: Mónica Cerdán Chiscano **Signed:** ID: **Date:** 28/04/2020

Risk Category 1: If you answered NO to all the questions, your study is classified as Risk Category 1. In this case:

- The supervisor can give immediate approval for undertaking the field work for the Degree Thesis.
- A copy of this signed Form MUST be included in the Degree Thesis.

Risk Category 2: If you answered YES only to questions in Risk Category 1 and/or 2, your study is classified as Risk Category 2. In this case:

- You must meet with your supervisor and clarify how the issues encountered are going to be dealt with before taking off with the field work.
- Once clarified, the actions taken must be stated in the Form. Then the supervisor can guarantee approval for the field work for the Degree Thesis.
- A copy of this signed Form MUST be included in the Degree Thesis.

Risk Category 3: If you answered YES to questions included in Risk Category 3, your study is classified as Risk Category 3. In this case:

- You must discuss with your supervisor how to re-direct the research and data collection thesis to avoid risks mentioned in Category 3.
- You must complete the Ethical Form again until Risk Category 1 or 2 is obtained.
- A copy of this signed Form MUST be included in the Degree Thesis.

A copy of this signed form MUST be included in the Degree Thesis.

APPENDIX D. Data collection instruments

D.1. Interview questions

Generic questions

- What is your knowledge and/or what relation do you have with the Autism Spectrum Disorder (ASD)
- Which characteristics/patterns do you think people with ASD develops?
- Do you think that the cultural spaces (like museums, theatres or visitable cultural heritage) are accessible for the collectives with specific physical and mental needs? Why?
- What kind of leisure activity do you think is more adequate to people with ASD?
- What specific needs do you think people with ASD face when participating in leisure activities, like visiting a museum?
- Which is the principal issue when visiting leisure activities?
- Would you like to add any information that you consider can be useful?

Specific questions

Museums

- Which options of accessibility does you space offer?
- Which changes/adaptations have you done in the place and in the cultural offer? And with what goal?
- Does the staff have received any kind of training to know how to relate and to address to this collective? If it is affirmative, which one?
- What adapted materials or accessibility to the information do you have?
- Do you consider the ASD collective a potential customer/public?
- What procedure or strategy have you used to do the adaptations for this collective? Did you had into account the 7 principles of the Universal Design?
- Do you work with any association of TEA? If affirmative, what agreement do you have? And with the collective of intellectual disabilities? For instance, organised visits, adapted activities, etc.
- What feedback do you receive from the families with children with ASD?

Entities and Families:

- How often do you visit cultural sites?

- Do you do activities with other people with these educating needs?
- Which cultural sites do you recommend that are adapted to the needs of people with ASD? Why?
- Which ones you do not recommend? Why?
- Do you think that the coordinators of the cultural sites are conscious about the needs of this collective?
- What do you think they have to take into account? What is your perception?

Psychologist and Psychiatric:

- What kind of activity do you think is strategic for the good development of people with ASD?
- Do you think that the coordinators of the cultural sites are conscious about the needs of this collective?
- What do you think they have to take into account?

D.2. Templates of tables of quotes

Template for Tables of quotes for research questions 1 and 2

PARTICIPANT X. "NAME"	
Quotes	**Selective codes**
	ASD's characteristics
	Limitations and constraints
	Accessibility
	Collective considerations to take into account and needs
	Accessible cultural heritage
	Cocreation

Template for Tables of quotes for research question 3

Selective	Axials	Entire Quote
Adaptation	Physical adaptation	
	Sensorial adaptation	
	Intellectual/Mental Health adaptation	
	ASD adaptation	
Improvements	Visual Support	
	Anticipation Material	
	Easy Read	
Friendly Performance (Relaxed Performance)	Lightning	
	Rest Areas	
	Use of pictograms	
Facilities	Professional Training	
	Reduced prices	
	Websites	
	Universal Design System	
Co-creation	Associations/Entities	
	Platform	

E.2. Tables of quotes

Tables of quotes for research questions 1 and 2

Table 8. Tables of quotes for research questions 1 and 2 *(Appendix F.1.)*

MAIN INTERVIEWS

Cultural sites

PARTICIPANT 1. GRAN TEATRE DEL LICEU	
Quotes	**Selective codes**
"There are several characteristics and patterns that usually repeats, such as the lack of social abilities and empathy"	ASD's characteristics
"because activities are not adapted and it has not been informed that the activity is specific for people with ASD"	Limitations and constraints
"the physical accessibility is very developed"	Accessibility
"Everything that is planning and forecasting is fantastic, and if that forecasting and planning is also accompanied by images or pictograms, much better"	Collective considerations to take into account and needs
"this season, we did a friendly function four days ago: the room will be lit with 30%, it will not be dark to avoid, "	Accessible cultural heritage
"We work with Associació Aprenem"	Cocreation

Associations

PARTICIPANT 2. CARME PERARNAU	
Quotes	**Selective codes**
"Girls have a little more ability, because although they don't integrate, they can mimic. "	ASD's characteristics
"there is a lack of much understanding from all population about the group and its needs"	Limitations and constraints
"No, no, no, although it is wrong to say, no, neither aspergers nor people with mental health or anything, nothing is adapted, thanks now that it is now beginning to be adapted for people in a wheelchair, but not that"	Accessibility
"they need more peace, more peace of mind, more guidance, let them do it and they have a choice"	Collective considerations to take into account and needs
"these children are very visual and understand a lot with pictograms"	Accessible cultural heritage
"they have to submit prepared questionnaires [...] and then at our level prepare the children so they can go"	Cocreation

PARTICIPANT 3. FUNDACIÓ APRENEM	
Quotes	**Selective codes**
"They have restricted patterns, the social difficulties, the perseverances, the routines, all a little ... all the mainly social part and the more affect they have more within the phantom they are, that is to say the level 3 would be more, and the less affectation they have in these areas, the more out of the spectrum they find to be level 1"	ASD's characteristics
"families do not feel comfortable, if their son or daughter is deregulating at any given time, the situation can be very difficult.	Limitations and constraints
"accessibility is the most physical aspect: wheelchair users, for example, afterwards have also done a lot of work on the sensory part of the visual and	Accessibility

auditory, but mental ones, whether they are disorders mentally or mentally disabled people, they were very forgotten, okay, and even more so the ASD"	
"it is treated with naturalness, closeness and asking what is not known"	Collective considerations to take into account and needs
"visual support, for example that Help them understand what is being offered or participate in what is being offered"	Accessible cultural heritage
"Now with the Connecta't we do different things with these museums: now there are museums with who we do inclusive activity"	Cocreation

PARTICIPANT 4. ESCOLA BELLAIRE	
Quotes	**Selective codes**
"there are difficulties in communication and social interaction, which would be one of the areas, and the other would be restricted interests, repetitive conductual patterns, stereotypes"	ASD's characteristics
"The main disadvantage is that people in charge of leisure are sometimes not trained to provide a good experience"	Limitations and constraints
"These cultural spaces are designed for neurotypical people, who have no sensory difficulties, who have no relationship difficulties"	Accessibility
"more dynamic, sensory things that they can touch, because if it is very difficult to understand it, then they lose and they become discouraged and they do not see it, and they lose interest because they do not understand it."	Collective considerations to take into account and needs
"visual support always, things to anticipate a little, to go to the theater earlier, families use some material to explain to their children"	Accessible cultural heritage
"the first experience we had, because there were things that had to be improved and but that was why, they asked for some help and others and other schools"	Cocreation

PARTICIPANT 5. ANONYMOUS	
Quotes	**Selective codes**
"restricted interests, which means that when they are interested in one thing, they are very interested in that thing and may not be interested in other things"	ASD's characteristics
in the end it is a matter of social conditioning, because we have been taught that they are so, when you have an element that does not condition social norms, it is broken and the distortion of the norm is very big"	Limitations and constraints
"When we talk about accessibility to the museum or the installation for a person with a wheelchair accessibility is a ramp, our children need preparation"	Accessibility
"Obviously if they have no mobility difficulties, all those that require the possibility of moving, they can circulate: sitting sitting listening to something you are told, this does not work, not because the verbal part, the verbal explanation she is the one who is also very affected"	Collective considerations to take into account and needs
""It doesn't need to be adapted all the time, if it fits into a time slot of one day a month or every two months is the same, to give the opportunity to try"	Accessible cultural heritage
"I think what they need to look for is expert advice, that is, they have to work with entities that know autism and try it."	Cocreation

PARTICIPANT 6. ANONYMOUS	
Quotes	**Selective codes**

"I would say the most important thing is that their way of communicating is totally different from most, to neurotypical people, it is another form of communication"	ASD's characteristics
"Professionals, we need professionals, we need people who know the autistic condition. At least understand, that they minimally understand what they are and adaptations"	Limitations and constraints
"Almost all spaces, there is an accessibility for physical disabilities. But not so for the rest."	Accessibility
"autistic group is so hypersensitive at the level of external stimuli, because it would have to be conditioned the level of sound, the level of capacity of people"	Collective considerations to take into account and needs
"personalized attention, in small groups, a quiet and cozy environment and that people who are at that time know about this condition"	Accessible cultural heritage
"that the diverse neuro collectives are taken into account, so that they can give their opinion, families do not have to say, many of them have opinion"	Cocreation

PARTICIPANT 7. ANONYMOUS	
Quotes	**Selective codes**
"We find that there are alterations in social communication, such as reciprocity, that is, in communication, we also have or alterations in some cases of language, in some cases we have much more technical language, which seems like a book ... And on the other hand we have the restricted and stereotyped patterns, which would be the stereotyped behaviors or the ecol areas, which are the verbal repetitions."	ASD's characteristics
the problem is that many people with autism whose language comprehension is impaired	Limitations and constraints
·It's hard to know. It is one of the most difficult disorders to understand and it is also very inaccessible people with ASD "	Accessibility
"knowledge of autism is clear. Break the myths of course. And then, a little, the few strategies that you can know in your cultural space that work, whether visual schedules, visual aids, visual timers.."	Collective considerations to take into account and needs
"Not only verbal anticipation, but also with videos and pictures. And then during the activity, because it would be nice if there was a timetable or a timer that knows when the activity will end. There are also other alternatives such as being able to go out when necessary, to have a space where this exit is easy, other than in the middle or some theater chairs..."	Accessible cultural heritage
"I am sure that everything you can improve in autism eventually has a positive effect on the rest"	Cocreation

Professional experts

PARTICIPANT 8. DINCAT	
Quotes	**Selective codes**
"the most characteristic traits would be related to this difficulty, in order to be able to interact, socialize, communication theme and surely how to live certain stimuli as well, as to respond to certain stimuli that come from the environment."	ASD's characteristics
"There are three major barriers: physical or architectural, communication and here we must distinguish what is sensory accessibility on the one hand and cognitive accessibility on the other, and attitude barriers."	Limitations and constraints
"At the level of sensory impairment, quite a lot, although there is a long way to go, but the whole topic of magnetic loops, the whole Braille theme ... and what	Accessibility

happens? The issue of cognitive accessibility is beginning to be addressed and is gaining more and more interest, but there is almost everything to do."	
"Keep in mind that accessibility is not only about ramps and lifts and adapting toilets but also that accessibility goes far beyond";	Collective considerations to take into account and needs
" incorporate the logic of universal design, from scratch, so that it is accessible to all groups, always, because accessibility is positive for everyone";	Accessible cultural heritage
"Apropa Culture is an entity that promotes culture and brings culture closer, as this to groups at risk of exclusion and intellectual diversity"	Cocreation

PARTICIPANT 9. ANONYMOUS	
Quotes	**Selective codes**
"the symptomatology profile is very variable, but basically affects three areas (...) social skills ... (communication) ... (restricted interests)	ASD's characteristics
"Logistics, when parents think about leisure activities, sometimes makes them lazy to think about everything they have to organize"	Limitations and constraints
"Then I think that the access of stimuli in these centers does not take into account these types of patients"	Accessibility
"then all these stressors, bad, so diminishing the stressors, are the things that you should always think about"	Collective considerations to take into account and needs
"That they can access and that each can experience it with their interest, if they are visual, visual, if they are manipulative, manipulative, I think it is very enriching"	Accessible cultural heritage
"So a lot of coordination with family associations, they are really those who know the cases firsthand and they have it day after day at home, I think it is essential"	Cocreation

PARTICIPANT 10. ANONYMOUS	
Quotes	**Selective codes**
"its difficulties are in three areas, which are in communication, social interaction and patterns, both of interests and of restricted behaviors"	ASD's characteristics
"One of the main disadvantages is the fact that they are someone more personal, they don't have a network"	Limitations and constraints
There are more and more opportunities for all of our collective to participate in certain cultural activities, because for a while it limits, for example, the whole theme of sounds and music,"	Accessibility
"the most organizational issue, how to get to the place, where to buy tickets, they need to be clear."	Collective considerations to take into account and needs
"Then it is in all the offer and all the hours, to be able to create opportunities for this group to be apart, but without having to specify that time is exclusively for them."	Accessible cultural heritage
"we are part of a meeting that we do every half month, something like this, with all the entities of the Osona region, especially of Vic, of the city of Vic, that work with the functional diversity"	Cocreation

PARTICIPANT 11. ANONYMOUS	
Quotes	**Selective codes**
"it is a very wide disorder where in some way the common characteristic in these communication disorders"	ASD's characteristics

"the case of ASD is not visible and suffers a lot of discrimination and many times people do not know how to treat it, react"	Limitations and constraints
"There have been improvements, that is, it is better than it was in the past but there is still a long way to go"	Accessibility
"sensory adaptation"	Collective considerations to take into account and needs
"At the communication level, the subject of pictograms is usually very beneficial, especially what is written communication, it can be a challenge. What works very well are the pictograms, explanatory drawings, etc."	Accessible cultural heritage
"they are the ones that are giving it somehow and are managing to create awareness and create improvements" (les associacions)	Cocreation

COMPLEMENTARY INTERVIEWS

Families and entities

PARTICIPANT 12. ANONYMOUS	
Quotes	**Selective codes**
"there are three things that people with ASD have with more or less grade: Communicating difficulties [...] They have a very rigid pattern in their behaviours, they are not very resistant to changes, [...] yes, this is what all of them have, they are very rigid with some things. On the other hand, this people normally have some kind of stereotypy fixed"	ASD's characteristics
"find leisure activities that they like and participate with other people is very difficult for them, because normally they don't know how to participate"	Limitations and constraints
"I think everytime more, but is difficult to adapt spaces, and spaces are how they are so you cannot do a lot of adornments"	Accessibility
"They have to take into account that they don't like crowded places, strident noises, lights blinking, things that can be manipulable, participable, that they can sing, clap, things in which they can be participants"	Collective considerations to take into account and needs
"When they go to museums, they love manipulable museums where they can experiment, touch, caption that they are doing it, that they are elaborating things. These are the ones they like."	Accessible cultural heritage
"Cinema TEA, which is going to the movies at Cinemes Bages, the movies that they already have programmed, they do a session specially for us"	Cocreation

PARTICIPANT 13. MARIA QUERALT PALAU	
Quotes	**Selective codes**
"The characteristics they can develop are very different from each other, but the main one is the way we communicate and comprehend the things is not the same as the majority of people"	ASD's characteristics
"people who have to attend us, most of the times do not know or misunderstands what is the autism"	Limitations and constraints
"physical barriers I think they have been improved a lot in the access of the different public spaces in the last years"	Accessibility
"is needed to be sensitive, empathetic, to put yourself in our shoes, look at it from our perspective"	Collective considerations to take into account and needs
"that groups have a limited number of audience or spectators, preferably known in the environment of the person with ASD, that the explanations are shorter and more visual, supported by visual elements"	Accessible cultural heritage

"if the person does not comment it, organisators should also ask "is there any person who we have to treat special and differently so his/her visit can work better for everyone?"	Cocreation

Professional experts

PARTICIPANT 14. ANONYMOUS	
Quotes	**Selective codes**
"There are two main areas: one is socialization, also what would be the part of language and within here we would have language and socialization, and the other would be the behavioral part."	ASD's characteristics
"the unforeseen things that can happen to you in the same place"	Limitations and constraints
"Depending on where you go the topic of being able to help people who have some kind of deafness is not resolved with any type of physical disability is not resolved, many places are not adapted to Braille"	Accessibility
"If we can take into account all the sensory part he was saying, avoid moments of more atmosphere there or to do a parallel circuit or something like that so that they do not meet many people"	Collective considerations to take into account and needs
"Especially when the visit is very structured: now we will do this, then we will do the other, and that somehow the children will know in advance."	Accessible cultural heritage
"when we did it and called in advance explaining the casuistry and everything, everyone was open to say, "Wow, what you need" and to be able to help and learn."	Cocreation

PARTICIPANT 15. ANONYMOUS	
Quotes	**Selective codes**
"Problems of social relationship, for them is difficult to understand the emotions, they have little empathy, is difficult to initiate conversations difficulties [...] for understanding the social situations as they understand the others, and afterwards it has also been their characteristics that they have peculiar interests ... they say something, they are be obsessive with that thing"	ASD's characteristics
"The greatest difficulty is when it comes to relating"	Limitations and constraints
Perhaps a lot of work has been done on the issue of disability or reduced mobility, and these problems are a little further away, (ADS)	Accessibility
"ASD should not be associated only with mental retardation, there are many children with autism who are very smart."	Collective considerations to take into account and needs
"more than just finding a space, what kind of activities could get a person with these kind of problems out of the house and relate more easily."	Accessible cultural heritage
"The only thing I know is that associations do outings, for example Friends, [...] probably they'll know a lot more because they do a lot of excursions to places like the ones you are mentioning"	Cocreation

Table of quotes for research question 3

Table 9. Tables of quotes for research question 3 *(Appendix F.1.)*

Selective	Axials	Entire Quote
Adaptation	Physical adaptation	"we offer the possibility to enter from the ground floor, okay? Once they are inside, we offer six armchairs reserved for them in the main floor and six armchairs for their companions in the main floor"
	Sensorial adaptation	"one orientation plan located in the historic lobby, with relief and with Braille, about the Liceu's different areas, and also, Braille and relief guides on the public spaces of the theatre"
	Intellectual/Mental Health adaptation	"We adhere to Apropa Cultura program"
	ASD adaptation	"we did this season, we did four friendly shows:"
Improvements	Visual Support	"what we did was changing the signage of the public spaces at Liceu"
	Anticipation Material	"everything related to anticipation of the itinerary they will do... this makes a highly valuable information, and we have it with photos and in pictos"
	Easy Read	"the argument summaries are in our website following the international criteria on easy reading"
Friendly Performance (Relaxed Performance)	Lightning	"the room will be lit at 30%, it will not be in the dark, to avoid... you know that children or people with autism have hiper or hipo light sensitivity"
	Rest Areas	"Enable two rest areas, where there were anti-stress materials, rubber balls, cubes, animal drawings of Bremen Musicians to paint and figure puzzles"
	Use of pictograms	"we put posters in different places of the theatre, specially in the main floor and amphitheater, where these families were concentrated, with pictograms"
Facilities	Professional Training	"three training sessions through Fundació Desenvolupament Comunitari (Communitary Development Foundation), which is an entity dedicated to this, the trainings for companies, entities, etc, in accessibility"
	Reduced prices	"reasons of disability or vulnerability could not access the stable season of the Liceu, and we are doing so and they are the people who we are giving entry to the main floor or amphitheater and pay only €3 to enter and have access to the stable programming" (APROPA CULTURA)
	Websites	"how to make the websites accessible, there is the triple A, there is nobody who has it, then how to make the websites accessible taking into account the different disabilities"
	Universal Design System	"No, we considered the diagnosis made by DINCAT "
Co-creation	Associations/Entities	"We work with Associació Aprenem"
	Platform	"They organized it here in the Born, in the Born Cultural Center, a conference and workshops in order to allow accessibility for people with autism in museographics spaces"

APPENDIX F. Tables and figures

F.1. Tables

F.2. Figures