



Managing the co-creation of accessible and inclusive family recreation retail encounters: A critical incident analysis

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ABSTRACT

Entertainment and recreation are pull factors for retail shopping malls and supercentres. For families in particular, recreation is a relevant part of their retail visits. However, families with children with disabilities (FCwD) continue to face access challenges in retail service environments. In this paper, we empirically explore how a value co-creation process undertaken with FCwD can enhance their perception of an accessible and inclusive family recreation retail visit. Our findings are based on a collaborative research project conducted in 2019 with a major shopping mall in the city of Barcelona, Spain. The methodology consisted of focus groups with stakeholders, ethnographic techniques and interviews with 20 FCwD using a constant comparative technique. The research design included two studies: Study 1, on the design of accessible and inclusive recreation retail encounters for FCwD, and Study 2, on the design of accessible and inclusive recreation retail encounters with FCwD. Using critical incident techniques (CIT), we found that the families perceived the recreation retail encounters in Study 2 to be more inclusive and accessible. From this research, we provide retail managers with recommendations for the successful design of inclusive family recreation retail opportunities in shopping malls.

1. Introduction

Families as a consumption unit represent a major customer segment for shopping malls (Pospěch, 2017) and are increasingly demanding family recreation retail opportunities to enhance their family shopping mall visits beyond shopping itself (Sadachar and Fiore, 2018; Elmash-hara and Soares, 2020). Families with children with disabilities (FCwD) report that their participation in recreation retail, as with any other family activity, is essential to feel included in society (Demoulin and Willems, 2019).

A recent review of 859 articles on consumer vulnerability research identified well-being, ethics and disability as major themes (Basu et al., 2023). However, despite recognizing the importance of accessibility in leisure and recreation retail environments (Vilnai-Yavetz et al., 2022; Chavez, 2023; Dodds and Palakshappa, 2022), research has not yet examined the recreation retail experiences of families with disabilities. This gap exists despite the World Health Organization's urgent call to address inequalities in access to services for people with disabilities (WHO, 2014; 2021) and Edwards et al.'s (2018) research agenda call to advance research on designing accessible retail experiences for vulnerable consumers.

Yet, retail service environments are designed for "normal" families (Rosenbaum et al., 2017; Vilnai-Yavetz et al., 2022; Swaine et al., 2014), and therefore pose challenges for FCwD, who experience limitations in community participation despite the health benefits for children and their families (WHO, 2014). This is supported by Vilnai-Yavetz et al. (2022), who found that FCwD face challenges in their daily lives in shared service environments such as retail and recreation. For example, Schaaf et al. (2011) reported that families with children on the autism spectrum (Bottema-Beutel et al., 2021) have difficulty accessing entertainment and find visits to such environments stressful and challenging because their children are more sensitive to multisensory stimuli (Seepersad, 2016) than their neurotypical counterparts (Schaaf et al., 2011; Baker et al., 2007; Mason and Pavia, 2006). Likewise, Vilnai-Yavetz et al. (2024) found that lack of accessibility was one of the irritating aspects of the shopping experience for people with disabilities.

Previous retail and customer service literature has addressed issues of shopping mall accessibility for various segments of customers with disabilities (Stead et al., 2022; Furrer et al., 2023; Klaus, 2022), including people with physical disabilities (McClain, 2000), visual impairments (Baker et al., 2007), hearing impairments (Dehling, 2023), learning disabilities (Hall, 2011), and adolescents with cerebral palsy

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(Shikako-Thomas et al., 2013). However, to the best of our knowledge, the FCwD segment has rarely been a specific segment observed in recreation retail customer service environment research (Vilnai-Yavetz et al., 2022). The few studies that do focus on the FCwD segment use the health lens (King et al., 2003) rather than the customer service lens in their research. Given the persistent barriers to FCwD's access to recreation retail environments, our study hopes to provide insight into how the access needs of this unobserved market segment can be better met.

Arnold and Reynolds (2003) provided a strategy to help managers better understand customers with disabilities, arguing that identifying different segments is useful for retailers in designing store environments and marketing communication strategies. Bäckström and Johansson (2006) also criticized the view of recreational shoppers as a homogeneous segment. Our aim is to offer a better understanding of the under-researched FCwD segment, namely their perceptions of and behaviour in recreation retail encounters, which have not been observed to date.

According to Stone and Woodcock (2014), successful management of customer encounters in recreational environments requires inclusive management, this requires an extensive knowledge of the customer base including sociodemographic, psychographic, demand requirements, service idiosyncrasies and whether or not the enterprise is able to service their needs. This is more challenging for vulnerable market segments such as FCwD, where previous research is limited (Kastenholz et al., 2015).

One strategy for designing successful and inclusive family recreation encounters when dealing with challenging population segments (Cerdan Chiscano and Darcy, 2023) is to carry out a value co-creation process (Payne et al., 2008) using service-dominant (S-D) logic. This is a "logic process that creates customer value" (Vargo and Lusch, 2008, p. 3) from a variety of stakeholders and leads to mutual benefits (Busser and Shulga, 2018). To improve service delivery and product quality, companies can integrate S-D logic by engaging with customers and considering their needs in a win-win process requiring few resources (Gardiazabal and Bianchi, 2021).

Gaining deeper insight into the lives and realities of FCwD through value co-creation can benefit shopping mall managers wishing to tap into this market segment. According to Vilnai-Yavetz et al. (2024), the co-creation process is essential to finding accessibility solutions for people with disabilities, who have a unique "lived experience" perspective to bring to the design of retail environments if they are engaged to assist in co-designing research. Despite this, the value co-creation process has rarely been studied in the context of retail and well-being (Gardiazabal and Bianchi, 2021). There is also a lack of empirical evidence on how to implement the value co-creation process in the context of recreation retail for FCwD.

Payne et al. (2008) explain how service providers can manage the value co-creation process. Our aim is to explore this process through customer encounters (communication, usage and service) in family recreation retail to gain a better understanding of how recreation retail encounters can be made more accessible and inclusive for customers with disabilities in the shopping mall environment. This entails designing services and facilities for all *with* the customer rather than *for* the customer. We aim to fill the gap in the literature of empirically tested S-D logic frameworks through a value co-creation process in which accessible and inclusive recreation retail encounters are created for FCwD in order to extend our knowledge of these types of encounters (Andreu et al., 2010; Lusch et al., 2007).

The paper is structured as follows: in Section 2 we provide some background and set out our research questions. We then describe our methodology in Section 3, followed by our findings in Section 4. Finally, in the last section, we engage in discussion, draw conclusions and present the limitations of our research.

2. Background and research questions

Shopping malls have become places for social recreation and entertainment in addition to retail (Reimers and Clulow, 2004; Warnaby and Medway, 2018). Our focus is on family shoppers who are attracted to shopping malls for the recreational activities (Heung and Cheng, 2000) that they offer on a regular or one-off basis (Anselmsson, 2016), as these are very popular among families. Few empirical studies have examined types of entertainment, particularly special event entertainment (Sit et al., 2003), in relation to the disability market. Our aim is to fill this gap in the literature.

Previous literature has provided three main insights into the factors that influence people with disabilities' perception of customer service during positive or negative encounters in shopping malls. Firstly, Coelho (2022) identified a variety of incidents that can lead to service failures in retail environments, most of which are related to staff responses to customer requests and needs. We aim to underpin the critical incidents that take place in such encounters when the customer units are FCwD, to better understand service encounter failures in the recreation retail servicescape, using a value co-creation process focused on this group's perceptions. Retailers tend to understand and manage accessibility reactively, whereas customers with disabilities would prefer accessibility issues to be resolved in advance (Goodrich and Ramsey, 2012; Baker and Kaufman-Scarborough, 2001). In service encounters, retail managers prioritize personalized customer service through helpful advice and trust (Andreu et al., 2010); however, retailers focus on managing complaints.

Secondly, the literature shows that physical factors such as signage, design, ambient conditions, access and facilities can influence how customers with disabilities perceive their shopping mall encounters in the servicescape (McClain, 2000; El Hedhli et al., 2013; Singh and Sahay, 2012; Dogu and Erkip, 2000), a concept that combines environmental factors, including physical factors, that may influence customer responses. Despite advances in universal design – "the systemic process of adapting and creating new products and services for all" (Story, 2001, p. 10) – people with disabilities still face barriers to participation in recreation and entertainment retail activities. While some research has focused on people with disabilities (El Hedhli et al., 2013; Goodrich and Ramsey, 2012), there is insufficient empirical evidence on the design of recreation retail encounters involving FCwD. Moreover, applying universal design standards does not guarantee "welcoming" encounters for people with disabilities (Baker et al., 2007). Research has shown that built environment professionals have different understandings of inclusive design, which is conceptualized as "a set of good intentions, a basic attitude that seems to be associated with accessibility and functionality" (Heylighen et al., 2017, p. 507). As a result, customers continue to perceive challenges in these environments.

Thirdly, regarding the social environment, Baker et al. (2007) reported that people with disabilities and their families want to participate and feel that they belong and fit in, and that they are understood by staff and other customers as customers with special accessibility needs. Therefore, training and awareness raising are key to welcoming this customer segment and making service encounters more inclusive (El Hedhli et al., 2013; Goodrich and Ramsey, 2012).

While service inclusion is still an emerging theme in transformative service research (Anderson and Ostrom (2015), which focuses on improving consumer well-being and positive outcomes through service delivery including social inclusion (Rosenbaum et al., 2017; Wilton et al., 2018; Edwards et al., 2018; Dodds and Palakshappa, 2022), the value co-creation process has proven to be a useful tool for designing service encounters as transformative enablers of well-being and positive outcomes for customers (Fisk et al., 2020; Frow et al., 2014).

Indeed, value co-creation has been recognized as a strategic tool for service providers to address accessibility issues for people with disabilities and to improve the perceived quality of accessible and inclusive recreation encounters for this population segment (Cerdan Chiscano and

Darcy, 2023). According to Voorberg et al. (2017), in this process, people become value creators. However, value is a complex concept to measure. Citing Gronroos (2009), value for customers is when, “after they have been assisted by a self-service process [...] or a full-service process [...] they are or feel better off than before” (p. 303). Meanwhile, Edvardsson et al. (2006) found that value is reliant on customers’ broader perceptions of the service provider. For our empirical study, we draw on the “features-and-benefits” approach to value in the recreation and retail marketing literature (Tronvoll et al., 2011), taking value as a central concept. As such, we use participants’ perceptions of their interactions with recreation retail service encounters (positive versus negative) as an outcome to ensure a positive behavioural response (Anisimova et al., 2019).

Given the lack of studies in recreation retail research on value co-creation outcomes for the unobserved market segment of FCwD and the importance of retail servicescapes in people’s lives (Edwards et al., 2018), our study aims to fill this gap in the literature. To this end, we follow the work of Gardiazabal and Bianchi (2021), who applied a value co-creation process based on service-dominant logic to retail services (Vargo and Lusch, 2008). This is an appropriate focus considering that value co-creation is processed by customers seeking to improve their well-being and achieve positive outcomes such as social inclusion (Kuppelwieser and Finsterwalder, 2016; Dodds and Palakshappa, 2022; Andreassen et al., 2016).

However, as Heidenreich et al. (2015) explained, if value co-creation is not properly managed, it can lead to negative outcomes due to the effort and expectations that customers have to put into the process (Maxham, 2001). Therefore, because managers have little knowledge about people with disabilities (Björnsdóttir et al., 2015), there is a higher risk of sidelining them from the process or leading them to perceive negative outcomes of their participation in the value co-creation process. This supports the appropriateness of investigating the integration of S-D logic when customers have disabilities. Some people with disabilities may also reject opportunities to participate in society, even when accessibility is ensured, due to intrinsic constraints such as those identified by Nazari Orakani (2020), e.g. when people perceive adverse outcomes as a mental state, such as themselves and their families not fitting in.

For our study, we draw on Payne et al.’s (2008) framework, which describes three encounters that occur during the value co-creation process: communication encounters, or “activities which are primarily carried out in order to connect with customers, and promote and enact dialog” (e.g. information provided on websites or an accessible guide for people with disabilities); usage encounters, which “refer to customer practices in using a product or service and include the services which support such usage” (e.g. access to a shopping mall, signage or other information displays); and service encounters, which include “customer interactions with customer service personnel or service applications” (p. 90).

Against this background, we pose the following research questions.

RQ1: How can we ensure the successful design of accessible and inclusive recreation retail encounters for FCwD in value co-creation – by designing *with* customers (Study 1) or designing *for* customers (Study 2)?

RQ2: What critical encounters create the most value for FCwD in recreation retail?

3. Methodology

3.1. Research design

The aim of the study is to comparatively explore the positive and negative incidents perceived by FCwD when interacting with communication, usage and service encounters through a value co-creation process carried out in two stages: Study 1, designing *for* FCwD, and

Study 2, designing *with* FCwD. To this end, we use critical incident analysis (Gremler, 2004; Flanagan, 1954) to analyse the impact of the value co-creation process on FCwD in the context of recreation retail.

First, we drew on Payne et al.’s (2008) framework of encounters and critical encounters (Gremler, 2004) to empirically understand how to manage the value co-creation process with FCwD to design successful and inclusive encounters. Qualitative methodological techniques (Lamers et al., 2017) were used to analyse data from multiple sources, including ethnographic notes and observations and post-visit interviews. In the online focus groups in Phase 1, Study 2, the association representing FCwD in Barcelona – the Municipal Institute for People with Disabilities (IMPD) – reported low participation of FCwD in family activities at shopping malls, based on their findings from previous workshops with the families. The use of ethnographic techniques (Cole, 2005), as opposed to surveys administered to shoppers, was therefore essential in understanding the participants’ expectations of their interactions with encounters. We also sought to limit the problem of human bias in the assessment of accessibility metrics (Giannotti et al., 2022) by giving a voice to the participants in our study.

Thus, as part of an academic-industry collaboration, two inclusive recreation retail visits were carried out at the (*name withheld to protect anonymity*) shopping mall on October 20, 2019 (Study 1) and December 14, 2019 (Study 2). Twenty FCwD were recruited by the IMPD to take part in these visits (10 different FCwD for each visit), which involved participation in a family workshop for children with disabilities and their families, with the opportunity to make a Christmas craft to take home. These activities are very popular with families during the festive season. (*Name withheld to protect anonymity*) is one of the largest and busiest shopping malls in the city of Barcelona. The complex includes two hotels, 170 shops, a sports centre, a public park, a car park, a dance hall and restaurants.

In addition to the 20 participating FCwD, the project involved several stakeholders, namely three managers from (*name withheld to protect anonymity*), a major shopping mall in Barcelona; four officials from Barcelona City Council; and two representatives from the Municipal Institute for People with Disabilities (IMPD), a public disability advocacy organization. The three research phases were: (1) pre-visit focus groups, (2) ethnographic techniques during the visits, and (3) post-visit interviews.

The project was approved by the chair of the (*name withheld to protect anonymity*) Ethics Committee, with approval number withheld for anonymity. All participants signed an informed consent form via the IMPD prior to their recreation retail visit. Following the Ethics Committee protocol, the participants’ faces were blurred in the photographs to protect their anonymity.

3.2. Data collection: collecting incidents

The critical incident technique (CIT) was chosen because of its usefulness in capturing “unique subjective and processual qualities of services” (Grove and Fisk, 1997, p. 67) and because it focuses on the servicescape and is applied to “phenomena [of] which we have little knowledge” (Flanagan, 1954, p. 338). The CIT has been used in research on the customer-firm interface, including studies on the causes of service failures. The technique involves a set of procedures for collecting data from participants who can report positive or negative episodes after personal experiences in response to a research question (Gremler, 2004). Specifically, a “critical incident” occurs when “critical positive or negative episodes are experienced in demonstrating the issue in question” (Flanagan, 1954, p. 338). Thus, CIT is well suited to qualitative research. The researchers also took handwritten notes about the emotions they observed in the participants during the visits.

3.3. Participants

This study considers the family unit from the parents’ perspective.

Given the nature of the research, we focused on FCwD who were members of the IMPD and who were willing to take part in the visit. Sixteen sets of parents (mother and father) had two children, one of whom had a disability. The remaining four sets of parents had only one child with a disability. Eighty per cent of the families in the sample were regular customers of the shopping mall but had never participated in recreation retail activities due to their child's condition. The study sample included 20 FCwD with children aged between 6 and 14 years. Ten of the children had autism spectrum disorder, four had an intellectual disability, four had a physical disability and two had a hearing impairment.

We designed our research with the IMPD, who have a deep understanding of the children with disabilities involved in the project, particularly those with autism spectrum disorder. They understood the clinical context and were able to ensure that those recruited had the appropriate abilities to be included. The participants on the autism spectrum and intellectual disability were screened and recruited by the IMPD according to DSM-5 criteria (American Psychiatric Association, 2000). These children were mid-functioning, with autism levels 1 and 2 according to DSM-5 (American Psychiatric Association, 2013). We took care to explain the scope of our research and the types of questions we would be asking during the interview. The climate was friendly and participants appeared to feel comfortable sharing their experiences and perspectives with us. We also took an inclusive approach to the research. For example, we recognized that FwCD participating in interviews may need extra time and flexibility, and hence, work with each family to design the research schedule to suit their needs (Coons and Watson, 2013). Finally, under the terms of ethical approval for social science research, medicalized diagnoses were considered confidential and not essential for the purposes of this study.

3.4. Phases of the research project

Fig. 1 below illustrates the phases of the research project.

3.4.1. Phase 1. before the visit: focus groups

3.4.1.1. Study 1 focus groups (designing for). For Study 1, one focus

group was held in September 2019 with stakeholders and, unintentionally, without people with disabilities. The agenda was to prepare for the first visit, paying attention to universal accessibility regulations for compliance.

3.4.1.2. Study 2 focus groups (designing with). For Study 2, five focus groups were conducted in November 2019 with the same stakeholders who had participated in the focus groups in Study 1 and two parents with children with disabilities who were participating in the visits. The children in the two families who took part in the focus groups had autism spectrum disorder and were between the ages of 6 and 14. The purpose was to brainstorm ideas on how to improve the accessibility of the recreation retail encounters for FCwD during the second visit. Involving the families in the co-design process brought out new ideas for improving the FCwD's recreation retail visit in Study 2, which were implemented before the visit took place. For example, an accessible guide for the family workshop was developed on a trial basis; information about the level of accessibility of the family workshops was provided on a website; the materials used by the children in the workshop were adapted to meet their communication needs, including the use of pictograms in the activity and a flexible approach throughout the workshop; the children were allowed to take as much time as they needed to make the Christmas crafts during the workshop, which they could do in whatever way was best for them; a fast pass system with a disabled access sign was designed and implemented to give the families priority access; and finally, the workshop staff received 2 h of disability awareness training at (name withheld to protect anonymity). The adaptations were designed by the main researcher in collaboration with the IMPD and were produced and implemented by the shopping mall in collaboration with the stakeholders prior to the Study 2 visit. Changes were made continuously as the co-creation process progressed. By the fifth focus group, the process began to generate repeated suggestions, marking the theoretical saturation point (Strauss and Corbin, 1998).

3.4.2. Phase 2. collecting critical incidents during the visits using ethnographic and observational techniques

As the retail servicescape seems to be constructed for "normal" families, we used a diverse mix of qualitative methods to engage with

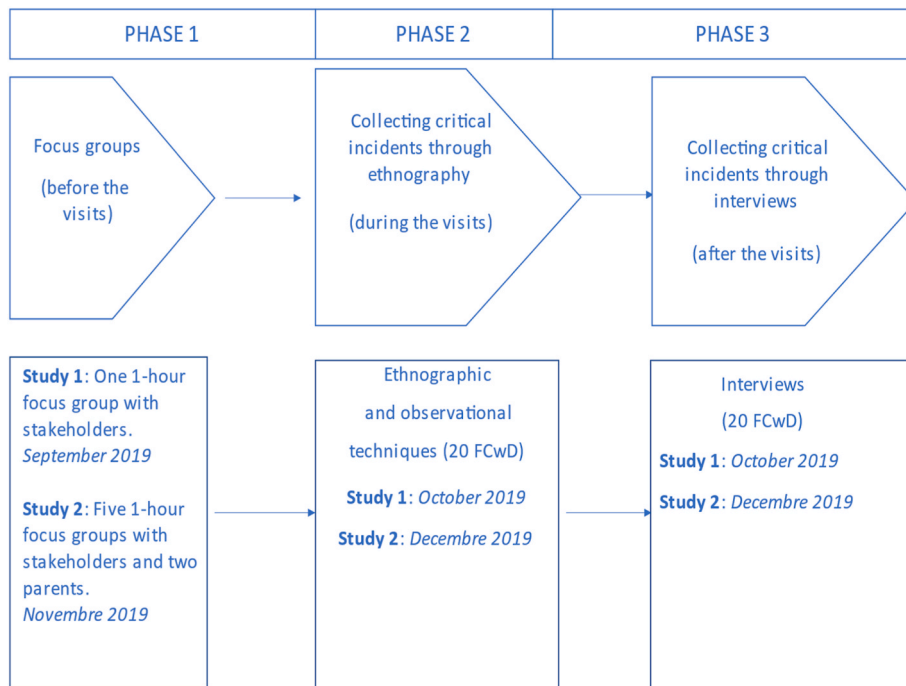


Fig. 1. Phases of the research project.

participants and gain deeper insights. Observational and ethnographic research is used when interactions and interpretations are the main focus, allowing the researcher to observe participants directly and contextualize their perceptions of the phenomena under investigation. By giving participants a voice during the visits, ethnographic techniques proved essential in capturing the positive and negative episodes they perceived while at the shopping mall.

As described above, we used [Payne et al.'s \(2008\)](#) framework of communication, usage and service encounters to collect critical incidents. The aim was to observe the participants' perceptions of positive and negative episodes in their interactions with encounters, and to do so comparatively between Study 1 and Study 2, focusing on accessibility and social inclusion. The two visits consisted of participation in an ordinary seasonal family workshop organized by the shopping mall (10 FCwD per visit). This recreational activity was chosen because the IMPD had reported typically low participation of FCwD in recreation retail activities.

A team of three researchers, one lead researcher and two research assistants from the IMPD, observed and collected the critical incidents ([Gremler, 2004](#)) that occurred during the participants' visits by taking notes and photographs and by speaking informally with the participants to ask them about the positive and negative incidents they perceived in their interactions with encounters, as well as other factors. Positive/negative critical incidents ([Gremler, 2004](#)) were identified when parents reported how their children were feeling during the activity and whether they were engaging positively or negatively with the visit, whether they were struggling or succeeding, and whether they were feeling or not feeling confident about their visit.

3.4.3. Phase 3. collecting critical incidents through semi-structured interviews

The ten FCwD who participated in the Study 1 workshop and the ten who participated in the Study 2 workshop agreed to be interviewed about their family visit upon exiting the shopping mall. As part of the critical incident technique, the interview included questions about the positive and negative episodes that the families had perceived in their interactions with encounters during the recreation retail activity.

3.5. Interviews

The participants were invited to take part in the post-experience interview if they wished to do so, and all 20 families agreed. The interviews with parents lasted 15 min each and were extremely useful in identifying reported episodes of critical incidents during the visit for FCwD in both studies (Study 1 and Study 2). The interviews took place at the exit of the shopping mall after each visit to the shopping mall. The interview questions were exploratory, i.e. the participants shared their own positive and negative accounts. Open-ended questions were used, e.g. "Can you describe any specific positive or negative episodes that occurred during your family visit to the workshop today?" To identify any major critical incidents and outcomes, we also asked participants about how accessible they perceived the shopping mall and workshop to be, and about their interactions with staff and others.

3.6. Data analysis

Data analysis was carried out by a team led by the lead researcher to identify and classify the critical encounters that influenced the participants' recreation retail outcomes. The findings were shared for further analysis and discussion with one of the research assistants from the IMPD who has a disability and assisted in data collection during the visits. All analysts had expertise in accessibility. The study used a comparative approach to compare the two studies – Study 1, designing *for* FCwD, and Study 2, designing *with* FCwD – in terms of the participants' positive and negative perceptions of communication, usage and service encounters during their family visit and the related value

outcome. After several readings and reviews of the data by the lead researcher and research assistant, it became apparent that there were many similarities in the positive and negative episodes reported by participants as occurring during their interactions with encounters.

The critical incidents were classified according to [Payne et al.'s \(2008\)](#) encounters and [Gremler's \(2004\)](#) critical incidents. Using a spreadsheet, the lead researcher converted quotes made by participants during data collection into positive and negative critical incidents, identifying a total of 402 mentions between Study 1 and Study 2 of satisfying or unsatisfying critical incidents with respect to their interactions with recreation retail encounters during the family visit. The lead researcher then determined how many and what percentage of the identified satisfying/unsatisfying incidents fit into each group of factors in the three critical encounters: communication, usage and service ([Payne et al., 2008](#); [Gremler, 2004](#)). The initial stages of classification were carried out by the lead researcher alone. In the final stage, the lead researcher discussed the findings with the research assistant mentioned above (IMPD coordinator) to address potential discrepancies.

After discussing and reaching consensus on the appropriate classifications for the incidents, the two researchers found that 12 critical incidents could not be classified according to the model provided by [Payne et al. \(2008\)](#) and [Gremler \(2004\)](#). However, four of these incidents could be classified under the intrinsic or intrapersonal factors that explain some FCwD's perceptions of how they fit into recreational activities beyond accessibility, which has to do with the context of their own daily lives. For example, one of the FCwD in Study 2 reported that participation in recreational activities was daunting for the family because of the child's condition, despite efforts to improve accessibility.

The researchers examined the critical incidents included in this new group to ensure a proper fit and to make sure that each group of critical incidents was distinct enough to merit separation ([Braun and Clarke, 2006](#)). With this new set of groups, the researchers found that the analysis was approaching saturation.

To ensure intercoder reliability, the lead researcher and the research assistant independently analysed the data, compared their interpretations and discussed discrepancies to arrive at the final classification. Once agreement was reached, the data analysis was considered complete.

In the end, 12 incidents did not fit any criteria for inclusion in the categories. The two researchers ensured the validity and reliability of the critical incident technique categories ([Braun and Clarke, 2006](#)) by independently analysing the data coding and resolving discrepancies ([Braun and Clarke, 2006](#)).

4. Findings

4.1. Identifying the positive and negative critical episodes perceived by FCwD in their interactions with encounters

In response to RQ1.

RQ1: How can we ensure the successful design of accessible and inclusive recreation retail encounters for FCwD in value co-creation – by designing *with* customers (Study 1) or designing *for* customers (Study 2)?

A total of 402 mentions of critical incidents (satisfying/unsatisfying episodes) were reported by the FCwD, 206 (51,3%) in Study 1 and 196 (48,7%) in Study 2. Of these, 191 were satisfying episodes, 32 from Study 1 and 159 from Study 2. Of the 211 unsatisfying episodes, 174 were reported in Study 1 and 37 were reported in Study 2. These figures indicate a higher rate of negative critical incidents ([Gremler, 2004](#)) in Study 1 than in Study 2, and a higher rate of positive incidents ([Gremler, 2004](#)) in Study 2 (see [Table 1](#)).

Similar patterns of critical incidents reported in the interviews were identified and grouped into three main encounters, as listed below.

Table 1
Frequency and types of critical encounters.

Encounters	Encounter description	Study 1: <i>Designing for FCwD</i> Satisfying/ Unsatisfying episodes with encounters	Study 2: <i>Designing with FCwD Satisfying/Unsatisfying episodes with encounters</i>
First encounter. Communication encounter	Adapted information on website	0/20	18/2
First encounter. Communication encounter	Accessible guide for people with disability	0/20	18/2
Second encounter. Usage encounter	Enabling or disabling built environment. Easy and accessible access to the building (reserved parking areas for PwD, accessible transportation, etc.)	5/15	5/15
Second encounter. Usage encounter.	Enabling or disabling built environment. Perceptible information (adapted signage to navigate the building, adapted signage to the access to the activity for PwD, etc.)	5/15	10/10
Second encounter. Usage encounter	Application of universal design standards. Equitable in use (the access and the activity are adapted to the needs of children with disability)	2/18	18/2
Second encounter. Usage encounter	Application of universal design standards. Flexibility in use and tolerance for error (the activity is developed considering the incidents children with disability may have due to their condition and is adapted to them)	2/18	18/2
Second encounter. Usage encounter	Application of universal design standards. Simple and intuitive in use (the materials used for the workshop are adapted for the autonomy of children with disability)	2/18	18/2
Second encounter. Usage encounter	Application of universal design standards. Size and space for approach and use of the workshop activity	2/18	18/2
Third encounter. Service encounter	Staff knowledge and attitude towards disability	10/10	18/2
Third encounter. Service encounter	Other visitors' attitudes and behaviour towards	4/16	18/2

Table 1 (continued)

Encounters	Encounter description	Study 1: <i>Designing for FCwD</i> Satisfying/ Unsatisfying episodes with encounters	Study 2: <i>Designing with FCwD Satisfying/Unsatisfying episodes with encounters</i>
	people with disability		
	Intrinsic factors		
Other mentions		0/6	0/6
Total mentions communication encounters (percentage)		0/40 (0%/22,9%)	36/4 (22,4%/10,8%)
Total mentions Usage encounters (percentage)		18/102 (56,2%/58,6%)	87/23(22,6%/62,1%)
Total mentions Service encounters (percentage)		14/26 (43,7%/14,9%)	36/4 (54,7%/10,8%)
Total Other mentions (intrinsic factors)		0/6 (0%/26,5%)	0/6 (0%/16,3)
Total of mentions		32/174 (100%/100%)	159/37 (100%/100%)

Factors outside the scope of the FCwD's interactions with encounters were identified and related to intrinsic factors affecting the families.

- Group 1: First critical encounter: communication encounter
- Group 2: Second critical encounter: usage encounter
- Group 3: Third critical encounter: service encounter
- Groups of factors outside the FCwD's interactions with encounters: intrinsic factors (FCwD's own life context).

Table 1 shows the number and types of critical encounters collected from the episodes reported by participants as positive or negative for accessibility during their recreation retail visit. Drawing on our data analysis, Fig. 2 shows how FCwD perceive their recreation retail interactions with critical encounters and other factors in the shopping mall environment (see Fig. 3).

In response of RQ2.

RQ2: What critical encounters create the most value for FCwD in recreation retail?

4.2. First critical encounter: communication encounter

Our data analysis revealed that adaptations to meet FCwD's access needs were expected by participants and that a significant proportion of unsatisfying episodes were concentrated in Study 1. For example, where participants found it daunting to search for information on the website to plan their visit, and where adapted communication needs were not considered, episodes perceived as negative by participants were common.

"We were invited to this workshop, which seemed cool to us, but we couldn't find any information about the shopping mall activity on the website, so we had to ask our association for further information in order to plan our visit [...] There was also no indication of the reserved parking areas for people with disabilities like us [...] It should have been easier for us to get the information we needed in advance" (Mother of a 6-year-old son with an intellectual disability, participant in Study 1)

"We were given a map showing the location of the workshop, which was helpful because there are three floors, it was a long way from the car park, and going to shopping malls causes us a lot of stress because

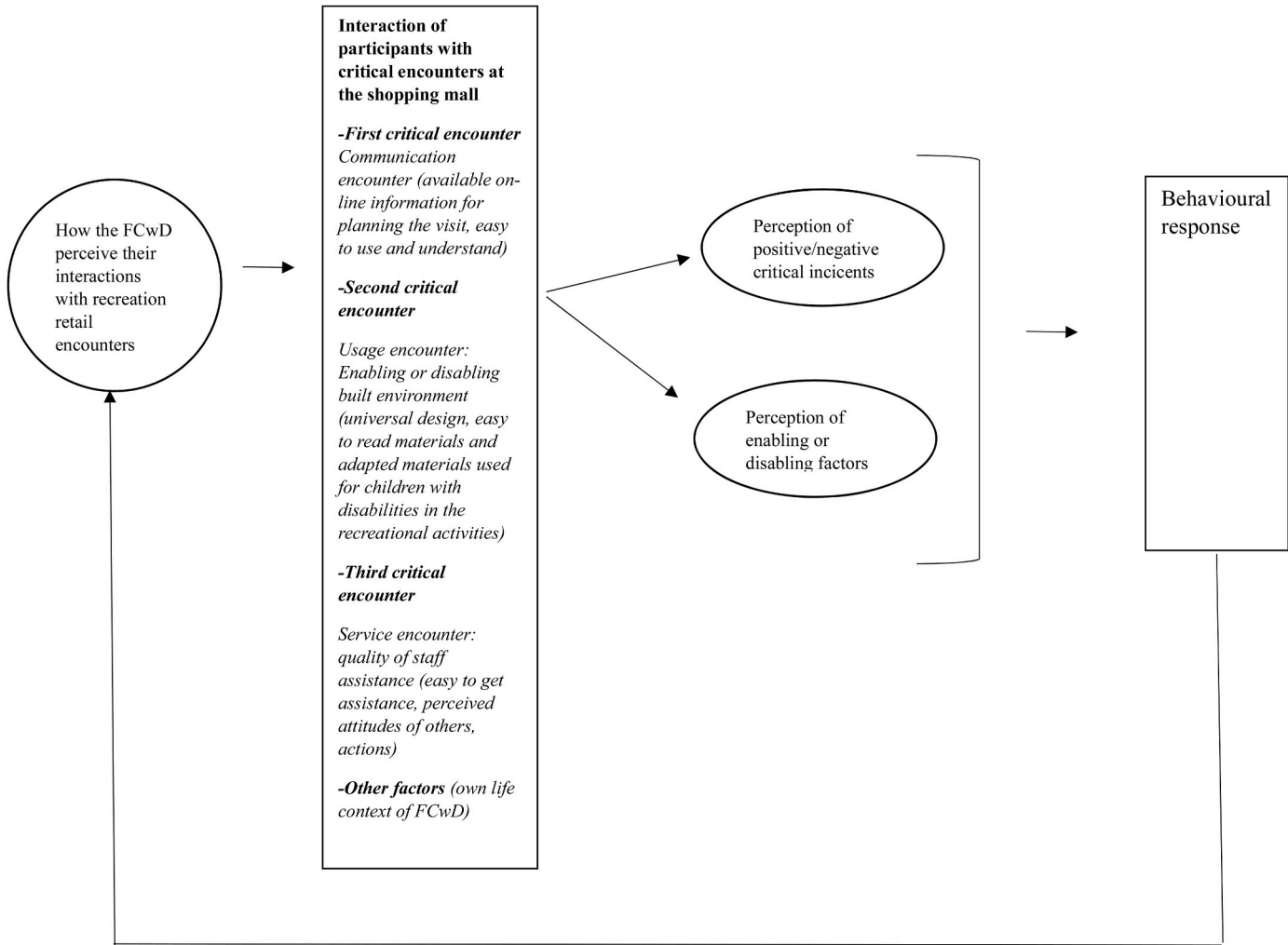


Fig. 2. Conceptual model.



Fig. 3. Participants of the recreation retail visit.

of my child’s condition” (Mother of a 12-year-old son with Asperger’s syndrome, participant in Study 2)

4.3. Second critical encounter: usage encounter

Our data analysis showed a lack of accessible design throughout the shopping mall, including poor signage, although the recently installed digital displays can be helpful. Some families reported more incidents when moving from the car park (Floor –1) to the workshop area (Floor

2) and that these incidents made it difficult for them to get to the right place. This provides insight into how easy or difficult they found it to understand the environment (Fig. 5) (see Fig. 4).

“I had trouble figuring out how to get to the activity because the directions were bad and the shopping mall is very big!” (Mother of a 12-year-old son with Asperger’s syndrome, participant in Study 1)

“We used the digital displays installed in the shopping mall, but we couldn’t find any indication of where the activity was taking place” (Father of an 8-year-old son with intellectual and physical disability, participant in Study 2)



Fig. 4. Participants of the recreation retail visit.

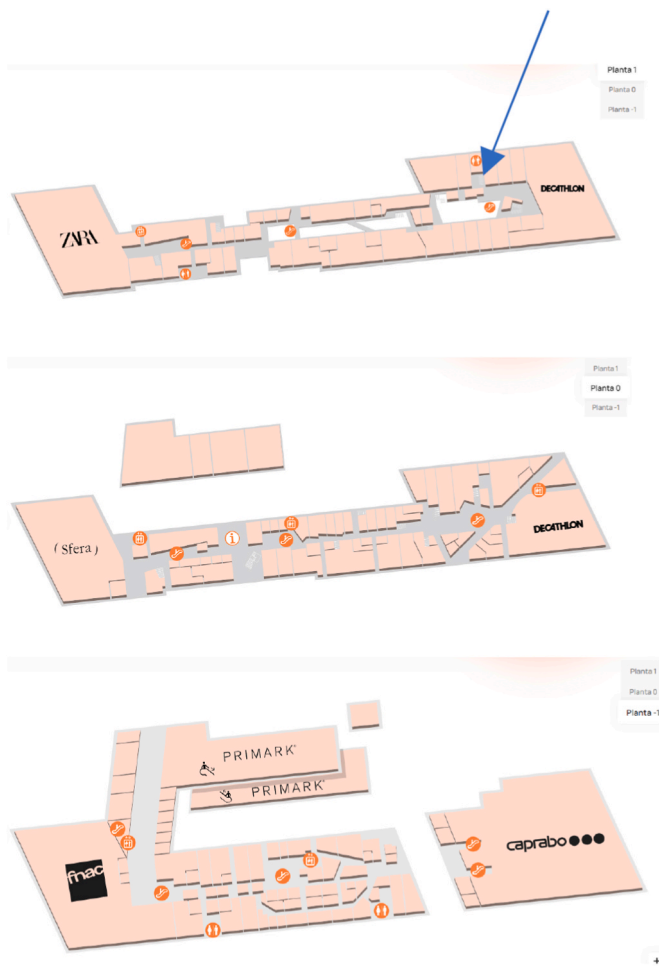


Fig. 5. A map of the shopping mall.

In terms of how easy the workshop materials were to use, how well they met the children's communication needs, and how friendly and accessible the workshop environment was, participants in Study 2 reported more positive incidents.

"The children were shown a short story with pictograms to help them understand what was going on, and the parents were able to follow along, explaining to our children all the steps to follow: first sitting down, then gathering the pencils and materials, then cutting the paper and colouring [...] We don't usually find these accommodations anywhere and I found it all very useful" (Mother of a 12-year-old son with an intellectual and physical disability, participant in Study 2)

"I had to struggle to explain to my son what was going on and what he was supposed to do, and I ended up helping him to make the craft [...] It's hard for my son to understand new activities" (Mother of a 10-year-old son with autism spectrum disorder, participant in Study 1)

4.4. Third critical encounter: service encounter

The quality of staff assistance was determined based on the participants' accounts and mentions of the attitudes, actions and words of the recreation retail staff and other staff at the shopping mall (mall security). Negative and positive episodes attributed to staff influenced how FCwD perceived the outcome of their visit. For example, when security staff became impatient with children with disabilities running and screaming, assuming that their parents were unable to control their

behaviour in a shared service environment, this made the FCwD feel alienated from the retail experience.

"What I liked least about the visit was the fact that the security guard treated me badly when I had problems with my child's behaviour [...] It was not my fault [...] and I felt very bad. I don't know why he treated me like that" (Mother of a 10-year-old son with autism spectrum disorder, participant in Study 1)

Participants reported that certain elements of their interactions with others (staff and other customers) influenced how they perceived the encounters that occurred during their visit to the shopping mall and their participation in the workshop. According to our findings, FCwD's perceptions of episodes in recreation retail encounters can be positively influenced by improving not only the staff involved in recreational activities, but also other staff in the shopping mall, through training programmes to raise staff awareness of disability when implementing inclusive policies and ensuring quality staff assistance to such customers on their visits to the shopping mall.

In Study 1, negative critical incidents were reported in relation to the expectation of a fast pass for people with disabilities, as children with disabilities find it difficult to wait in queues for long periods of time. Children's workshops are typically very crowded and the perceived attitude of other visitors without disabilities, who argued with the FCwD when they asked staff for a fast pass to the activity due to their child's condition, was at the root of the high rate of negative episodes mentioned.

"My family and I appreciate the workshop opportunity for my daughter, but I don't think it was adapted to our needs, as my daughter has problems waiting for a long time and there was no fast pass for us. I think the shopping mall should consider our needs" (Father of an 8-year-old daughter with autism spectrum disorder, participant in Study 1)

"When we arrived there was a very long queue, it was very crowded and there was no fast pass sign, although we were told we could get in quickly if we asked the staff [...] We had a terrible experience when we tried to go straight to the activity as one of the families in the queue was very rude to us and told us that there was a queue for the activity [...] It was very embarrassing and stressful and gave us a lot of anxiety because people don't understand that we are a special needs family. How could my child with autism wait an hour to get into the activity? The shopping mall should consider our special needs" (Mother of a 12-year-old son with Asperger's syndrome, participant in Study 2).

In Study 2, this encounter had far more positive critical incidents.

"We knew that this was a very busy and popular family activity and we were worried about how my child would cope in such a noisy and crowded place, but everything went well. We were able to spot the entrance sign for children with disabilities very quickly and all the staff were very attentive and kind to my children. They even used pictograms for the activity [...] We really enjoyed this adapted activity" (Mother of a 12-year-old son with Asperger's syndrome, participant in Study 2)

"It was really cool because we got through to the photo booth in no time and we didn't have to queue. We got through first" (Mother of a 12-year-old son with Asperger's syndrome, participant in Study 2)

An equal number of incidents were collected when it came to the expected quick assistance provided to parents upon request (critical incidents reported were positive in Study 2).

"When my son got tired of the activity, the recreation staff talked to him and started to help him to keep him engaged in the activity [...] They even gave him extra materials and gifts. It was really nice"

(Mother of a 12-year-old son with Asperger's syndrome, participant in Study 1)

"The workshop staff were really friendly. As soon as we arrived, they were very attentive to us. It's great to find staff who understand our personal circumstances" (Mother of a 12-year-old son with Asperger's syndrome, participant in Study 1)

"It was very easy because the booth took a photo and I went straight through" (Mother of a 6-year-old son with autism spectrum disorder, participant in Study 2)

5. Discussion and conclusions

5.1. Theoretical implications

Retail environments are designed by specialist architects who may or may not be aware of accessible and inclusive approaches through universal design. New approaches to designing retail services for the challenging and under-researched market segment of FCwD are therefore needed. However, the current literature does not provide sufficient knowledge of the critical factors influencing the encounters of such families in these environments to design inclusive family recreation retail opportunities more effectively. In fact, this is the first study to empirically explore FCwD's perceptions of critical encounters in a recreation retail setting, in this case in a shopping mall. Using a value co-creation process (Payne et al., 2008) and critical incident analysis (Grenler, 2004; Flanagan, 1954), we have obtained sufficient data to help retail managers understand how FCwD perceive recreation retail encounters in shopping malls as part of their daily lives.

We have also identified the critical incidents that FCwD face in their communication, usage and service encounters in this environment, and translated these into recommendations on how to successfully design inclusive and accessible recreation retail encounters to improve the shopping mall visits by FCwD with access needs. Using a value co-creation process, i.e. designing *with* FCwD, retail managers can identify how to allocate appropriate resources to accessibility and assess the results of the actions they take in terms of accessibility and social inclusion for these families (Mele, 2009; Gronroos, 2009). Specifically, we found that a value co-creation process *with* FCwD enabled the identification of families' access needs and the prioritization of issues to be addressed by retail managers in a recreation retail servicescape.

Through this process, we have uncovered and explored solutions to the three main insights provided by the previous literature regarding the factors that influence people with disabilities' perception of customer service during positive or negative encounters in shopping malls: (1) service failures resulting from staff responses to customer requests and needs; (2) physical factors; and (3) the social environment (Baker et al., 2007).

Firstly, with regard to service failures resulting from staff responses to customer requests and needs, our approach extends Coelho's (2022) theory, which models service failures by considering only "normal" customers and thus does not include customers with disabilities. Thanks to our study, we have identified a group of incidents related to the disability factor that may be responsible for service failures. For example, employee attitudes towards disability were found to be particularly relevant in preventing retail service failures involving FCwD.

Secondly, in terms of physical factors, there were better outcomes in terms of inclusive and accessible encounters when the application of universal design was ensured. For example, a fast pass sign for people with disabilities at the entrance to workshops, allowing children with autism spectrum disorder to skip the queue, was perceived to be of maximum value to FCwD and prevented negative interactions with other customers who may not be aware of a family's struggle to access crowded workshops with their children.

Thirdly, with respect to the social environment, we have gained insight into how retail managers can address what Baker and Kaufman-Scarborough (2001) reported, i.e. that people with disabilities and their families want to participate and feel that they belong and fit into shared service environments. For example, our results showed more positive outcomes in terms of incidents with other customers in Study 2, where a value co-creation process had been carried out, than in Study 1, where the process used to brainstorm ideas led to a high risk of negative interactions with other customers.

In summary, FCwD perceive positive or negative interactions with their recreation retail encounters by assessing a combination of factors that are relevant to them when navigating the shopping mall as a whole and participating in recreational activities. These factors are the application of universal design to the encounters, the attitudes of staff and other visitors towards disability, and other intrinsic personal factors not present in these encounters (such as the daily life context of each FCwD).

When retailers identify the behaviours of families with disabilities, they are better able to meet their needs. While it is widely recognized that shopping mall managers have the potential to improve the well-being of customers with disabilities (Rosenbaum et al., 2017), we found that the process of successfully designing inclusive encounters is achieved when a value co-creation process is rigorously applied *with* customers with disabilities to gain insights into social inclusion. Through the value co-creation process, retail managers can engage with this challenging market segment and develop a relationship that could impact FCwD's future behaviour of revisiting the shopping mall. This study makes a contribution to theory in this regard by empirically illustrating how recreation and entertainment services using a value co-creation process can positively influence the participation of a specific market segment, in this case FCwD, in terms of social inclusion and positive outcomes (Dodds and Palakshappa, 2022).

Furthermore, our findings show that the value co-creation process contributes to the understanding that all services, even less transformative encounters, need to be aware of the impact they have on customers' social exclusion when value co-creation activities are not carried out. This study underpins the idea that the retail industry can have an impact on the social inclusion of vulnerable people if the value co-creation process is well managed (Dodds and Palakshappa, 2022).

5.2. Practical implications

Based on the accounts provided by the FCwD in our study as part of the value co-creation process, we found that the social inclusion of families in recreation retail is relevant to the discussion on recreation retail management. A better approach to gaining insight into customers' views provides managers with clues on how to design high-value, inclusive and accessible family recreation retail encounters.

Specifically, this paper provides new knowledge on the role of FCwD's life context in creating value during their interactions with recreation retail encounters. In a practical sense, we aim to provide shopping mall managers with insights to help them engage in successful value co-creation processes to make their recreation retail activities and encounters more inclusive and accessible for FCwD.

Shoppers with disabilities are already a huge market segment and will only become more powerful in the future. Therefore, shopping mall managers should take a proactive approach to address their access needs (Goodrich and Ramsey, 2012). Our study has shown that the value co-creation process, i.e. designing *with* FCwD, is a successful way to gain a better understanding of the special needs of this segment. In particular, we found that co-creating accessible recreation design solutions with FCwD enhances these families' interactions with recreation retail encounters. Therefore, retail managers should provide adapted services and continuously improve their quality by designing *with* FCwD. Research has also recognized that children play a key role in family decision making (Gram, 2007). Thus, if children with disabilities are unable to participate in a recreation retail visit, they will be unable to

help shape their parents' retail purchasing behaviour.

Our aim was to explore how recreation retail encounters can be designed to ensure successful, accessible and inclusive FCwD visits. Although not all FCwD needs can be accommodated, and many challenges remained in the shopping mall in our study, the families adapted and established their recreation retail preferences. The updated model we have provided based on our findings can be used in different contexts within the recreation retail servicescape. Below are our managerial recommendations for designing successful family recreation retail encounters.

- (1) Before the visit takes place, communication encounters are relevant to accessibility. A prime example of this is adapted information that helps FCwD to decide whether visiting the shopping mall and participating in a particular recreation retail activity is right for them, to plan for the visit if they decide to go, and to save time in doing so. Appropriate information about the accessibility of the visit on the shopping mall website, with adaptations to the visitors' communication needs, will enhance their family recreation retail visit before it even takes place.
- (2) During the recreation retail visit, apart from communication encounters (such as accessible guides for people with disabilities), it is usage and service encounters that prove most relevant. Making reasonable adaptations to an activity, such as providing easy-to-use visual workshop materials, has been shown to enhance the family recreation retail visit. Additionally, adapted signage throughout the building to make it easier to navigate the mall and a fast pass for people with disabilities were found to be highly relevant to accessibility and in preventing negative interactions with others who may not understand FCwD's special access needs. In terms of service encounters, staff service was also reported to be relevant.
- (3) FCwD value the opportunity to solve accessibility problems and provide feedback after a recreation retail visit. This could be a differentiating factor because shopping malls do not usually do this.
- (4) During FCwD's recreation retail visits, what we call "moments of inclusion," based on the families' accounts, can be achieved when their needs are recognized, and they receive support from retailers and other customers. This comes from their desire to be part of the community.

Shopping mall redesigns can be implemented at different levels, for example through awareness-raising programmes or universal design improvements. Specifically, retail managers should ensure comprehensive universal design when developing strategies to increase the amount of time that FCwD spend at the shopping mall for recreation retail. If universal design is ensured for FCwD, any strategy developed to help them navigate the shopping mall and spend more time there could lead to more positive customer outcomes while also improving customer-related measures such as word of mouth, sales and loyalty. On the contrary, if universal design is not ensured in encounters for FCwD, strategies to improve navigation and increase their time spent at the shopping mall may result in negative customer-related measures.

Limitations and future research

The critical incident technique is useful for gaining insight into how customers perceive the critical episodes that occur during their interactions with recreational retail. However, the present study has two main limitations. Firstly, it took place in a single setting, so this issue should be explored in other locations. Geographically, this may involve other major metropolitan cities as well as regional and remote locations, including coastal islands that have higher levels of touristic use. Moving beyond the host city and nation, other countries in Europe, the Middle East, Asia, the Americas, Australasia and Africa provide social contexts

that may be more or less accessible and inclusive. Such comparative studies would be interesting given the globalisation of the shopping mall as a service environment with differing levels of understanding of access and inclusion for FCwD.

Secondly, the voices we heard were from the parents, so future research should include the voices of children with disabilities. Obtaining insights directly from children with disabilities provides further complexity to research design, and depending on the type of disability, this would include more stringent ethical considerations that need to be addressed (see Jenkin et al., 2020).

By giving a voice to FCwD, our aim was to help retail managers more clearly identify the main issues in their family recreation retail consumption activities. We believe that the findings of this paper can guide further research to underpin the access and inclusion issues faced by this under-observed market segment and ultimately improve the opportunities for FCwD customers to achieve greater social participation, quality of life and well-being. More research on customer-to-customer (C2C) co-creation social practices for FwCD would be valuable to delve deeper into this topic in the shopping mall context, as the families in this study reported that social interactions with staff and other people were important to them.

CRediT authorship contribution statement

Monica Cerdan-Chiscano: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Resources, Software, Validation, Visualization, Writing – original draft. **Simon Darcy:** Writing – review & editing, Supervision.

Declaration of competing interest

This manuscript has not been published previously, nor is it under consideration for publication elsewhere. We have no conflicts of interest to disclose, and the paper has been approved by the Ethics Committee of the University.

Data availability

Data will be made available on request.

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