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Air travel experiences of autistic children/young people

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ABSTRACT

Despite the positive association between tourism and quality of life among the general population, a range of challenges has been found to prevent people with disabilities from participating in tourism. Participation in tourism is lower among families with a child diagnosed with Autism Spectrum Disorder than among comparable families. Although travelling by airplane has been identified as a particular challenge for these families, few studies investigating air travel experiences have been published. The present study surveyed 97 parents of autistic young people about their experiences of air travel. Participants identified stressors and enablers relevant to these experiences. In particular periods of waiting, crowds, and sensory stimuli emerged as significant stressors across every stage of the air travel process. These factors are discussed in the context of developing effective interventions to improve air travel experiences among autistic young people and their families. Building on these findings will allow researchers to better understand these experiences, better support families, and better address accessibility issues in tourism. Enhancing air travel experiences could allow a cohort of autistic people and their families to enjoy the improved quality of life outcomes that have been reported by tourists in the general population and increase family participation more broadly. A focus on improving customer experience could also entice new customers to air travel and encourage higher frequency of trips for returning customers.

1. Introduction

In the general population, tourism has been found to enrich the lives of tourists (e.g., Chen & Petrick, 2013; Dolnicar, Yanamandram, & Cliff, 2012; Uysal, Sirgy, Woo, & Kim, 2016). Quality of life refers to the stability of an individual's physical and psychological health and well-being, autonomy, relationships, beliefs, and relationship to aspects of their environment (The World Health Organization Quality of Life Assessment (WHOQOL) Group, 1995). Both short- and long-term effects of tourism on quality of life have been documented, and these benefits can be seen both in overall life satisfaction and in specific life domains including leisure, family, work, spirituality, marriage, and social and cultural life. In light of these beneficial effects, it has been argued that tourism is a necessity rather than a luxury and that it may be considered a social right (McCabe & Diekmann, 2015). However, people with

disabilities have been found to face a range of challenges while experiencing the travelling process that negatively affect their participation in tourism (e.g., Nyman, Westin, & Carson, 2017; Teacău et al., 2019). This indicates that tourism is not equally accessible to people with and without disabilities and that members of the former group may be denied an important social right.

More specifically, research suggests that participation in tourism is lower among families in which a child has been diagnosed with Autism Spectrum Disorder than among families with neurotypically developing children of the same age (Rodger & Umaibalan, 2011). Autism Spectrum Disorder is a neurodevelopmental disorder that is characterized by deficits in social communication and interaction and restricted and repetitive behaviors (American Psychiatric Association, 2013). The Centers for Disease Control and Prevention (2020) estimated that one in 54 eight-year-old children living within their Autism Monitoring Network

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sites / regions had been diagnosed with Autism Spectrum Disorder. More generally, estimates of the global prevalence of autism continue to increase (Chiarotti & Venerosi, 2020). It has been suggested that air travel in particular poses challenges for autistic people in light of core Autism Spectrum Disorder characteristics and common comorbidities such as anxiety, comprehension and executive functioning difficulties, and sensory sensitivities (e.g., Hamed, 2013; Lerner-Baron, 2007; Skillicorn, 2013). Given that travelling by airplane involves unpredictability, periods of waiting, and tolerating a range of sensory stimuli, these difficulties could prevent autistic people and their families from participating in tourism involving air travel.

1.1. Literature review

Hamed (2013) examined the role of tourism/holiday experiences in enhancing social inclusion and quality of life for autistic people. The author highlighted the specific challenges that can impact social experiences including travel and tourism such as sensory sensitivity, disrupted routines, communication difficulties and social interaction. The study proposed a series of strategic tips that travel companies could employ to assist autistic people in planning a tourism trip. In relation to travel by air, Hamed (2013) describes the process as potentially causing significant distress to an autistic person and to combat this, special services could be provided by an airline to improve experience/comfort and reduce stress for the individual. Information on what to expect during the air travel process is recommended in advance along with pre-visits and simulated travel scenarios within the airport. Other tips include utilizing sensory-assistive tools (e.g., sunglasses or headphones) to reduce sensory demands during the air travel process.

A study by Lv, Li, and McCabe (2020) investigated what shapes tourist's attitudes towards destinations investigating the unique role played by sensory impressions in understanding destination loyalty. Positive sensory impressions were found to have a positive effect on destination loyalty whereas negative sensory impressions had a negative effect. Sensory impressions were also found to relate to other outcome concepts such as perceived quality, value and satisfaction.

Sensory stimulation influences a person's arousal levels (Healy, Dempsey, Lydon, & Grealish, 2021). Sensory difficulties experienced by autistic people and resultant heightened or suppressed arousal levels can impact a person's reaction or response to stressor stimuli presented in an environment. Thus, arousal levels can contribute to stress and anxiety experienced in everyday environments (Healy et al., 2021). A person's behavioral responses, movement, socialization and ability to cope with their environment can be affected, influencing all facets of life and daily living, and this can have a profound effect on a person's wellbeing and life. These experiences can result in avoiding certain environments or situations (Lydon et al., 2014).

People with disabilities make decisions influenced by the accessibility of an environment and perceived barriers or supports in such environments (Baker, 2007). People with disabilities will decide based on cost benefit analysis as to whether an environment is either easily accessible or whether their efforts to navigate barriers in order to successfully navigate an environment are warranted. If the costs of participation are deemed too high a person will reject the environment and in the case of tourism choose for example not to undertake air travel.

As competition in the current global market escalates companies continually strive to secure competitive advantage to promote their survival. Customer experience is to the forefront of strategically marketing and promoting customer loyalty and satisfaction particularly in the air travel industry, where it is difficult to differentiate (Lipp, 2015).

Although, to our knowledge, no empirical investigations of air travel experiences among autistic people and their families have yet been published, there is some evidence that certain aspects of air travel pose particular challenges for this cohort. For example, Sedgley, Pritchard, Morgan, and Hanna (2017) interviewed six mothers of autistic children about their experiences of tourism. Unpredictability, sensory

overstimulation, and prejudice among other passengers were highlighted as stressful aspects of the air travel experience for these mothers and their children. This study found that unpredictability, spontaneity and disrupted routines caused significant distress to families and required detailed planning of all phases of the travel process by family members. Smith, Amorim, and Umbelino (2013) highlighted that major international airlines do not seem to provide specific supports on their websites that may assist the planning process for individuals with intellectual and developmental disabilities and their family members. In contrast, focus seems to be on supporting those with visual or mobility challenges in preparation for, and during, the air travel process. According to Sedgley et al. (2017) parents of autistic children often devise their own plans and supports to help prepare their children to navigate the travel process to a holiday destination and to ensure wellbeing and minimal distress when risk of unpredictability and disrupted routines is high. An unpublished dissertation in which McDermott and Fox (2020) interviewed three autistic adults about their respective air travel experiences identified the unfamiliarity of the airport, the behavior of other passengers, auditory overstimulation, security checks, and waiting as significant stressors. In addition, an unpublished survey of autistic people and their families concluded that being on an airplane was the most challenging part of the air travel experience, followed by security checks and the check-in process (Faulkner & Perr, 2020). Despite the limitations that are associated with these studies, taken together they provide some evidence that the air travel experience poses particular challenges for autistic people and their families.

Supporting autistic people and their families to overcome these challenges has two critical potential benefits. First, learning to travel by airplane could be considered a behavioral cusp in that this set of skills yields access to new environments in which further learning, and enrichment is likely (see Rosales-Ruiz & Baer, 1997). Prior research reported that tourists in the general population enjoyed enhanced quality of life outcomes through their travel experiences (Chen & Petrick, 2013; Dolnicar et al., 2012; Uysal et al., 2016). It may be the case that travelling by airplane would allow autistic people and their families to access new environments, participate in new activities, and learn new skills. As a result, they may also be more likely to experience some improvements in quality of life outcomes. Second, travelling by airplane involves many skills the importance of which transcends the air travel context. Waiting, coping with unpredictability, and tolerating a range of sensory stimuli are but three examples of skills that could be learned in the context of air travel but applied to a wide range of further situations. Interventions aiming to prepare autistic people for air travel could therefore support their participation in many other activities that could yield improved quality of life outcomes. These benefits could in turn improve family participation in activities and family quality of life (e.g., Boyd, McCarty, & Sethi, 2014; Schaaf, Toth-Cohen, Johnson, Outten, & Benevides, 2011). The air travel context brings together many critical skills which may be acquired and applied in other stressful situations and may benefit the person and their family long after their experience of air travel.

Despite these potential benefits, there are few published evaluations of interventions aiming to improve the air travel experiences of autistic people and their families (Skillicorn, 2013). However, there is evidence to suggest that preparing autistic people for air travel using virtual reality technology (Miller, Wiederhold, Miller, & Wiederhold, 2019) and video priming combined with natural environment teaching (Ruddy et al., 2015) can be effective in improving their air travel experiences. Each of these interventions provided opportunities for participants to familiarize themselves with the airport and airplane and practice the skills that would be required in these contexts, either virtually or in the actual setting. They do not appear to have been developed with regard to a specific set of stressors and enablers, which is unsurprising given the scant literature surrounding the air travel experiences of autistic people and their families. It is possible that focusing intervention efforts on factors that are known to be challenging or, conversely, supportive in

this context would yield more relevant and effective supports. In order to achieve this goal, a deeper understanding of the challenges that autistic people and their families face while travelling by airplane is required.

On the basis of the evidence presented, it may be concluded that air travel is likely to present challenges that limit participation in tourism among autistic people and their families. Understanding these challenges is central to improving the air travel experience for this cohort. However, to date no published studies have investigated the air travel experiences of autistic people and their families. The factors that influence these experiences therefore largely remain unknown. The present study surveyed families of autistic people about their air travel experiences in order to elucidate the perceived stressors and protective factors that exist for these families.

2. Method

2.1. Participants

Participants in the present study represented a convenience sample. They were recruited through advocacy and support groups, service providers, and networks across Ireland, who circulated information about the study on social media, via emails and posters, and during face-to-face interactions with prospective participants. In order to take part in the study, participants were required to exceed 18 years of age and to be a parent or guardian to a child under 18 years of age who had been diagnosed with Autism Spectrum Disorder. Participation in the study was voluntary, anonymous, and unpaid.

Nine males and 88 females completed the online questionnaires ($n = 97$). All were parents or guardians to a child (73 sons, 24 daughters) who had been diagnosed with Autism Spectrum Disorder. These children were aged between two and 17 years ($M = 8.2$ years, $SD = 3.68$ years). More than one third ($n = 33$) had also received a diagnosis of intellectual disability and 40% of the overall group ($n = 39$) presented with other comorbidities such as Attention Deficit Hyperactivity Disorder and/or anxiety. Two children lived in Northern Ireland and the remaining 95 children lived in the Republic of Ireland.

2.2. Measures

A survey was designed and distributed, along with information letters, consent forms, and debriefing sheets, using Survey Monkey, an online data collection platform. The 32-item survey was developed by the authors to investigate participants' history and experiences across five domains: demographic information; air travel history; air travel experiences; stressors, and enablers. The 32-item questionnaire contained an item on stressors and an item on enablers. Within these respective items there were 43 stressors and 16 enablers listed. Final comments were invited upon completion of the survey.

Demographic information was collected using questions relating to the participant (e.g., age, sex, relationship to the child) and relating to their child who had been diagnosed with Autism Spectrum Disorder (e.g., sex, age, diagnosis, co-morbidity with other conditions). Items relating to participants' air travel history and experience queried whether or not their autistic children had travelled by airplane in the past, the frequency, duration, and purpose of these flights, the degree to which participants found these flights challenging, the degree to which they felt that their children had been prepared, and the ways in which they had prepared their children for travelling by airplane. Participants rated a matrix of 43 potential stressors (i.e., factors that they and/or their children may have found challenging while travelling by airplane) using a 5-point Likert scale ranging from 'highly significant' to 'no effect'. These potential stressors were identified through inductive methods including interviews with airport and airline staff and families of autistic young people who had experienced air travel in the previous six months. Five domains were identified related to the air travel process

including check-in, security, pre-boarding, flight and general. Item generation from these domains yielded 32 potential questions that fitted across each relevant domain. This scale was also used to rate a matrix of possible stressors and enablers (i.e., supportive factors that may have improved their air travel experiences). Forty-three stressors and 16 enablers were identified through deductive methods of literature review. Participants rated each item using a 5-point Likert scale ranging from 'highly significant' to 'no effect'.

Ethical approval was obtained from the institutional review board before participants were recruited. Participants used their own electronic devices to access the online questionnaires. There was no obligation to participate. If a person did participate, they were free to decline to answer any question and could withdraw at any time by closing their Internet browser. After reading the participant information sheet and providing informed consent, participants completed the 32-item survey. They were then presented with a debriefing sheet and thanked for their contribution to the research. In total, the survey took between 15 and 20 min to complete. Submitted results were stored anonymously in a password protected electronic format. Data were collected from June – November 2019.

3. Results

3.1. Air travel history and experiences

Eleven respondents reported that their children had never travelled by airplane. Of the 70 respondents who indicated that they had travelled by airplane with their autistic children and gave further information about their previous air travel experiences, 63 (90%) reported that they travelled by airplane with their autistic child no more than once per year. Tourism and leisure were the most common reasons for air travel among these respondents (77%, $n = 54$). A total of 42 of 47 respondents (89%) indicated that they would travel by airplane with their child again in the future. However, the air travel experience was reported to be 'challenging' or 'very challenging' for 35 of 69 respondents (51%) and 35 of 47 respondents (74%) reported that their child had 'meltdowns' involving significant distress during their last air travel experience.

A small minority, two of 67 respondents (3%) reported that their children had been 'very unprepared' for their last flight and 53 (79%) reported that their children had been 'prepared' or 'very prepared'. A range of strategies was reported to have been used by respondents and their child / young person in preparation for travelling by airplane. Children's additional needs were noted during the booking process by 34 of 70 respondents (49%). Most of these respondents (59%, $n = 20$) requested general assistance for their children, three (9%) requested particular seating, and 11 (32%) noted specific needs relating to queuing during security checks, flagging the presence of an assistance dog, or requesting 'important flyer' wristbands from the airline in order to indicate a child had an additional need. Customer service representatives were contacted by 41 respondents (59%) prior to the travel experience. Online resources were used to prepare children according to 33 of 64 respondents (52%), and 38 of 71 respondents (53%) familiarized their children with the airport prior to the flight. In relation to preparation on the day of the flight, 49 of 51 respondents (96%) brought both their own food and drink for their autistic children. The same proportion of respondents brought electronic devices for their children. Other items that some respondents prepared included social stories explaining what would happen when the children travelled by airplane, which were used by 37 of these respondents (98%), noise cancelling headphones, which were used by 26 respondents (51%), and medication, which was used by 16 respondents (31%).

3.2. Stressors

Potential stressors were rated by 59 respondents in the study. Fig. 1 presents the proportion of these respondents who rated each potential

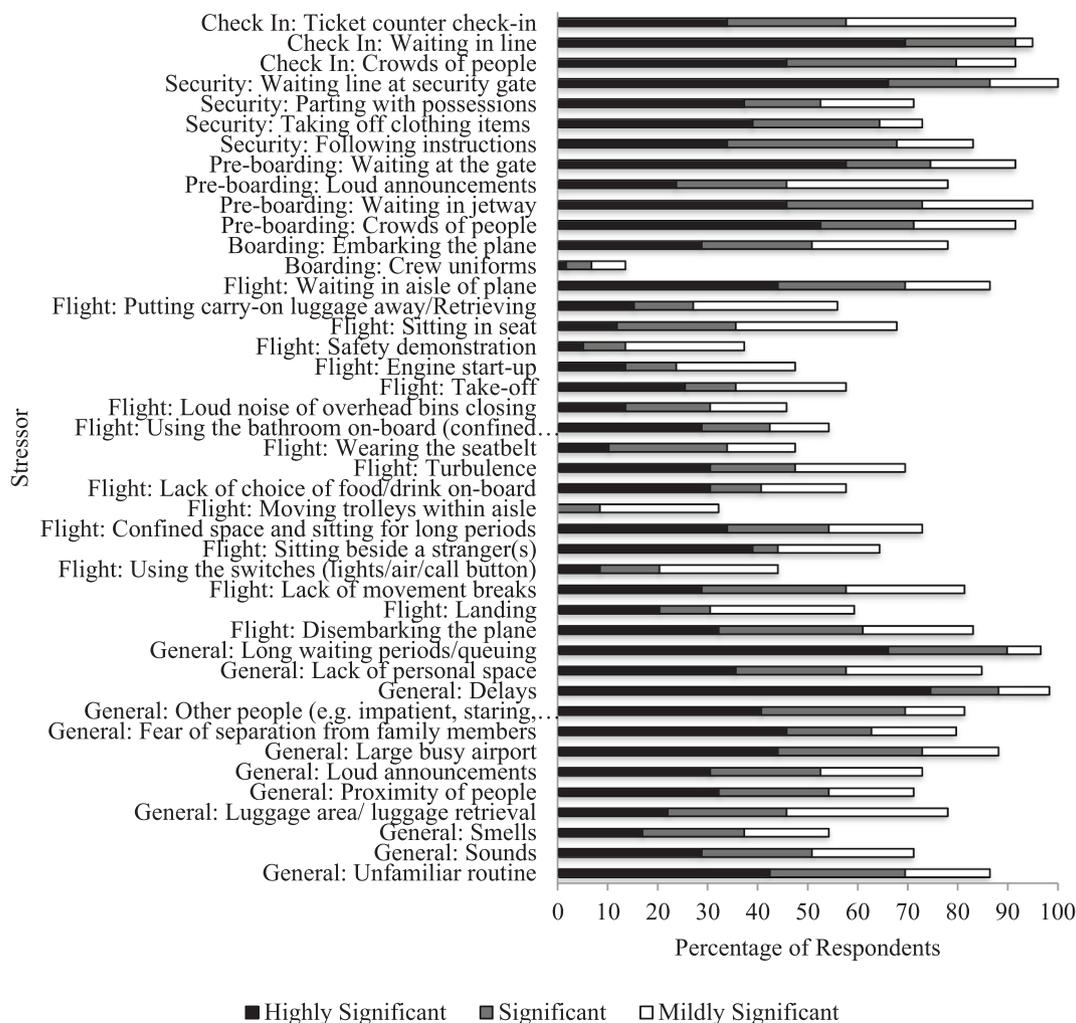


Fig. 1. Percentage of respondents who rated each of 43 potential stressors as 'highly significant', 'significant', and 'mildly significant'.

stressor as 'mildly significant', 'significant', and 'highly significant'. A majority of respondents reported 'waiting' to be stressful during check in (95%, $n = 56$), at security (100%, $n = 59$), at boarding gates (92%, $n = 54$), in the jetway (95%, $n = 56$), and in the aisle of the plane (86%, $n = 51$). Crowds of people during both check in and pre-boarding were also identified as a major stressor by 92% of respondents ($n = 54$). During security checks, following instructions, parting with possessions and removing items of clothing were identified as stressors for 84% ($n = 50$), 71% ($n = 42$), and 74% ($n = 44$) of respondents, respectively. Loud announcements during pre-boarding were a source of stress for 78% of respondents ($n = 46$) and 79% of respondents ($n = 47$) identified embarking the airplane as a stressor.

In relation to their children's in-flight experiences, a lack of movement breaks, being confined to a small space, and having to sit for long periods of time featured as stressors for 83% ($n = 49$), 74% ($n = 44$), and 69% ($n = 41$) of respondents, respectively. Wearing a seatbelt was a stressor according to 48% of respondents ($n = 28$), and 66% ($n = 37$) reported that being seated beside a stranger was a stressor. Approximately half of respondents (49%, $n = 29$) identified the noise of the airplane's engine starting up as a stressor. Having to use the airplane's bathroom and choose from a limited selection of food and drink were reported as stressors for 55% ($n = 32$) and 60% ($n = 35$) of respondents, respectively. Other potential stressors that were confirmed by respondents included using the overhead switches in the airplane (45%, $n = 27$), stowing or retrieving luggage (58%, $n = 34$), the noise of the overhead bins (47%, $n = 28$), trolleys moving in the aisle (33%, $n = 19$),

and the safety demonstration (38%, $n = 22$). Take-off and landing were rated as stressors by 58% ($n = 34$) and 60% ($n = 35$) of respondents, respectively. Turbulence was identified as a source of stress by 69% of respondents ($n = 41$) and disembarking the airplane was identified as stressful among 83% of respondents ($n = 49$).

In terms of general stressors, all but one respondent reported delays to be stressful for their autistic children (98%, $n = 58$). Both the size and busy environment of the airport and the unfamiliarity of the procedures involved in travelling by airplane were stressful for 88% of the sample ($n = 52$). Fear of separation from family members, a lack of personal space, and proximity to other people also emerged as stressors for 81% ($n = 48$), 86% ($n = 51$), and 72% ($n = 48$) of respondents, respectively. The luggage retrieval area was rated as stressful by 81% of respondents ($n = 48$).

3.3. Enablers

Potential enablers were rated by 55 respondents. Fig. 2 presents the proportion of these respondents who rated the listed enablers as 'mildly significant', 'significant', and 'highly significant'. There was universal endorsement of the following potential enablers: fast-track systems; Autism Spectrum Disorder awareness among airport staff and flight crew; recognizable passes; pre-selecting seats. All but one respondent (98%, $n = 54$) endorsed each of the following potential enablers: priority boarding; the opportunity to note additional needs when booking tickets; staff providing specific accommodations; an opportunity to

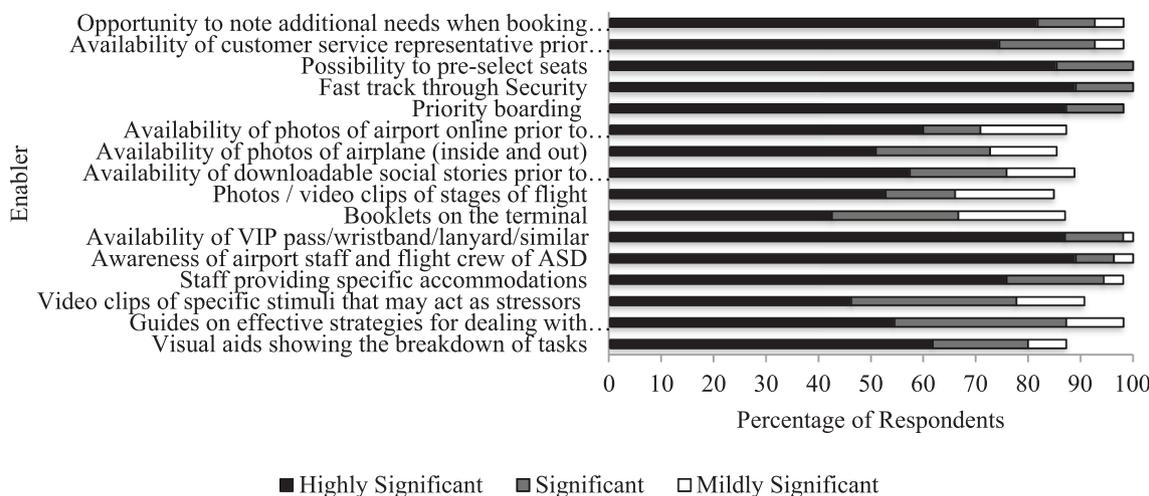


Fig. 2. Percentage of respondents who rated each of 16 potential enablers as 'highly significant', 'significant', and 'mildly significant'.

speak with a customer service representative prior to the flight. Other potential enablers that were thought to be helpful included online resources to create checklists, timetables, and schedules (87%, $n = 48$), guides on effective interventions (98%, $n = 54$), videos of the air travel process (85%, $n = 47$), and clips that would support parents to familiarize and desensitize their children to air-travel-related sensory stimuli (81%, $n = 44$).

4. Conclusions

Air travel presents an array of stressors and enablers that may have influenced participation in tourism involving air travel by families with autistic children / young people. In fact some families chose not to travel by air with their autistic family member as a result of their concerns.

Parents and guardians of autistic children and young people were surveyed about their air travel experiences in order to elucidate the stressful and protective factors that exist for their families in this context. Further exploration of these factors (stressors and enablers) is warranted in order to form a better understanding of the air travel experience for these families and to provide supports.

Although only 11 respondents in the current study reported having avoided air travel with their autistic child as a result of these concerns, this is a significant proportion of children for whom tourism involving air travel and the benefits thereof are not accessible. Additionally, most respondents with relevant air travel experience reported only taking their autistic children on short flights on an annual or less frequent basis. They often made use of available resources to prepare their children in advance. Despite this, many reported the experience to be challenging and a significant proportion of respondents indicated that they would not travel by airplane with their autistic children again in the future. These findings provide empirical support for the hypothesis that travelling by airplane is often a challenging experience for autistic people and their families (Hamed, 2013; Lerner-Baron, 2007; Skillicorn, 2013).

More specifically, periods of waiting, crowds, and sensory stimuli emerged as highly significant stressors across every stage of the air travel process. Other notable stressors included complying with instructions and procedures during security checks, having to sit in a small space while wearing a seatbelt for long periods of time during the flight, the bathroom, limited food options on the airplane, and disembarking the airplane. General stressors related to fear of separation from family members, other people's proximity and behavior, and the airport's size, busy nature, and unfamiliarity. These findings support previous speculation that core Autism Spectrum Disorder characteristics and comorbidities such as anxiety and/or sensory sensitivities would make it difficult for autistic people to tolerate the unpredictability, waiting, and

sensory stimuli that are involved in travelling by airplane (Hamed, 2013; Lerner-Baron, 2007; Skillicorn, 2013) and extend the limited research that had previously investigated air travel experiences among autistic people and their families (Faulkner & Perr, 2020; McDermott & Fox, 2020; Sedgley et al., 2017). It may be the case that interventions specifically addressing the stressors identified in the current study would be more relevant and effective than existing interventions (Miller et al., 2019; Ruddy et al., 2015), improving participation in tourism involving air travel and yielding access to new environments in which further learning and enrichment is likely (Chen & Petrick, 2013; Dolnicar et al., 2012; Uysal et al., 2016). Additionally, given that stressors such as waiting, crowds, and sensory stimuli are not exclusive to the air travel context, interventions aiming to build tolerance to these stressors along with coping mechanisms could also increase participation in other activities that could yield improved quality of life outcomes (Boyd et al., 2014; Schaaf et al., 2011).

Understanding the factors that enable autistic people and their families to access air travel is also central to the development of successful interventions. Respondents in the present study endorsed the potential benefits of enablers provided by airlines including fast-track systems, Autism Spectrum Disorder awareness among staff, priority boarding, recognizable passes, pre-selection of seats, the opportunity to note and request accommodations for additional needs when booking tickets, access to a customer service representative prior to the flight, and online resources such as checklists, timetables, schedules, and video and sound clips to facilitate desensitization to sensory stimuli. While some of these enablers reflect components of the interventions that were implemented by Miller et al. (2019) and Ruddy et al. (2015), others have yet to be systematically evaluated. It may be the case that some or all of the enablers that were identified by respondents in the present study would contribute to the success of interventions aiming to improve experiences of air travel among autistic children / young people and their families.

5. Limitations and future research

A number of limitations should be considered when evaluating the present findings. This research was conducted prior to the impact of COVID-19 on the air travel sector. It is likely therefore, that additional stressor stimuli will be present during the air travel experience as a result of the numerous changes introduced post- COVID-19 e.g., face coverings, social distancing, hand hygiene etc. The impact of such stimuli and the corresponding behavior change required of individuals will need to be examined to determine if autistic people experience further stress as a result of these safety measures. The study was likely

underpowered due to its small sample and varying response rates across items in the survey. Its demographic characteristics were also somewhat narrow as most participants were mothers of autistic sons living in Ireland. This may result in limited generalizability given that Autism Spectrum Disorder symptomology may manifest differently in males and females (Van Wijngaarden-Cremers et al., 2014) and different airports and airlines are likely to yield disparate experiences. Additionally, participants were recruited via organizations and groups for autistic people and/or their families. It could be argued that the present sample may not represent the total population of parents and guardians of autistic children because only those who were already directly engaged with these organizations and groups were aware of the study. Participants were also required to have access to the Internet in order to complete the survey. Furthermore, it may be the case that parents and guardians who elected not to take part in the study were either unwilling to discuss their air travel experiences because they were extremely challenging or disinterested in the topic because their experiences had been uneventful. This study relied on parent / guardian report of both Autism Spectrum Disorder diagnosis and children's air travel experiences. Autism Spectrum Disorder diagnosis was not verified using a standardized measure, and participants' responses represent indirect and subjective accounts of their children's air travel experiences. The severity of the core characteristics of Autism Spectrum Disorder and the potential co-occurring difficulties (e.g., anxiety, executive functioning, sensory sensitivity) were not measured in the current study. Therefore, it was not possible to delineate the differential variables that may affect individuals' experience of the air travel process across this heterogeneous neurodevelopmental disorder. Finally, no standardized measures were included to investigate stressors and enablers to air travel among this population.

Further research is needed to address these limitations and form a deeper understanding of air travel experiences among autistic people and their families. This research should recruit larger and more diverse samples to maximize generalizability and include standardized measures in addition to, or instead of, bespoke measures. Although direct observation of autistic people and their families during the air travel process would be somewhat difficult to arrange, such research would provide an objective and direct measurement of behavior in this context and allow researchers to objectively evaluate the impact of environmental stressors and protective factors. Additionally, studies evaluating the effectiveness of interventions incorporating the stressors and enablers identified above would provide more information regarding their relative importance in addition to improving air travel experiences among autistic people and their families. More specifically, interventions supporting parents and guardians to teach their children skills such as waiting for variable periods of time and tolerance of unpredictability and a range of sensory stimuli would address the most significant stressors that were identified by participants in the present study. These interventions could incorporate photos, videos, and audio clips of each step of the air travel process for parents and guardians to select depending on their child's specific and personal needs. Support from airlines in the form of fast-track systems, Autism Spectrum Disorder awareness among staff, priority boarding, recognizable passes, pre-selection of seats, the opportunity to note and request accommodations for additional needs when booking tickets, access to a customer service representative prior to the flight, and online resources such as checklists, timetables, and schedules should also be evaluated. Such research would yield a deeper understanding of air travel experiences among autistic people and their families and how these may be improved.

Future research should also consider the impact of the COVID-19 pandemic which has had far reaching and pervasive consequences for air travel. The COVID-19 pandemic lead to a devastating decline of up to 95% in passenger numbers in airports. (Štimac, Pivac, Bračić, & Drljača, 2021). The occurrence of the pandemic has implications for future airport design and planning and potential health measures that remain offer new stressor stimuli and challenges for passengers to navigate.

Some examples being the use of a thermal camera and establishment of health checkpoints (Štimac et al., 2021).

Enhancing these experiences could allow a cohort of autistic people and their families to enjoy the improved quality of life outcomes that have been reported by tourists in the general population and increase family participation more broadly. To our knowledge, the present study represents the first empirical investigation of these families' experiences of travelling by airplane. Building on these findings will allow researchers to better understand these experiences, better support families, and better address accessibility issues in tourism.

Declaration of interest

The authors report no conflict of interest.

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