



Research article

Risk perceptions of health and safety in cruising

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Abstract: Cruise holidays have become increasingly popular in the past two decades, with passenger numbers increasing every year. The global COVID-19 pandemic resulted in several cruise ships being held in quarantine or stranded at sea with mass disruption and cancelled holidays for millions of vacationers. The pandemic highlights the significance of risk perceptions as risk influences travel decision-making. Little research exists on risk perceptions in ocean cruising, or how risk potentially influences tourists' decision-making for a cruise as a holiday. Findings revealed a cruise is perceived as a safe holiday, but health risks are a significant concern. Non-cruisers perceive more risk in getting sick onboard, and cruisers develop strategies to minimize risks, and both groups acknowledge risk is inherent in travel. Findings reveal critical insight into how both cruisers and non-cruisers interpret health and safety risks in cruising, and is a significant empirical contribution to understanding risk in relation to cruising.

Keywords: cruise; risk; risk perception; health; safety

1. Introduction

The current COVID-19 crisis is just the latest of many risks the cruise industry has encountered in recent years. The cruise industry has withstood infectious outbreaks including H1N1, influenza, measles, legionnaires, and multiple outbreaks of norovirus onboard cruise ships, resulting in cancelled sailings, limited passenger services and widespread illness. This is in addition to other safety incidents including the emergency evacuation of 479 passengers on the *Viking Sky* in 2019, the sinking of the *Costa Concordia* in 2012 with 32 deaths and several fires, collisions (with other ships or piers), groundings, sinkings, severe listings, tender accidents and cruise ships breaking free of mooring lines causing injury and death. However, the global coronavirus pandemic has devastated the cruise sector

with the quarantine of several cruise ships, widespread disruption and cancellations affecting millions of cruise passengers. There has been a narrative of cruise ships as infectious “petri-dishes” [1]. While the pandemic significantly disrupted and impacted on global tourism operations, the cruise industry was particularly affected due to the enclavic environment and high infection rates among both crew and passengers [2,3].

Prior to COVID-19, the cruise industry was enjoying two decades of double-digit annual growth and was forecast to achieve a record level of 32 million passengers taking a cruise in 2020 [4]. Cruise tourism was one of the fastest growing sectors of the global tourism industry prior to the pandemic [5]. Industry figures indicate that shipyards were operating at full capacity, with construction commencing on a new cruise ship every 47 days [6]. With the COVID-19 pandemic, global cruise operations were halted for months and the future remains uncertain when the industry will return to pre-COVID-19 levels. Cruises have become increasingly popular and yet little is known about how risk is conceptualized in cruise holidays by tourists, or how risk may potentially influence tourist decision-making. There is a significant research gap in understanding how tourists perceive health or safety risks in cruising as there is little empirical or conceptual research on risk perceptions of a cruise holiday.

To address this gap, a study was conducted in the United Kingdom [UK] which explored tourists’ risk perceptions in ocean cruising. Understanding how tourists feel about risk is important because whether real or imagined, risk changes tourist decision-making [7–9]. Therefore, the aim of this paper is to provide insight into tourists’ risk perceptions for health and safety in cruise holidays.

Cruise holidays were selected to explore conceptualizations of risk because of the complex decision-making involved for many tourists [10] and the “complementarity” nature of the consumption experience [11] where the cruise ship provides all aspects of a holiday. Potential cruise tourists need to select from many cruise brands (62 were in operation in 2019), widely differing destinations and itineraries, varying cabin types and complex pricing structures. They also need to consider transportation to and from the ship, which may include international air travel, shore excursions, and a range of onboard aspects such as required attire, social expectations, dining etiquette and the giving of gratuities. Additionally, a cruise is ideal for examining tourist risk as it is characterized by an enclavic and bounded service environment, with maritime traditions that shape the holiday experience, and the unique physical risks in relation to the sea. Therefore, this paper represents an important contribution to conceptualizing risk perceptions in cruise holidays. This is significant for the cruise industry and other stakeholders to better understand how risk influences tourist decision-making, and to what extent perceived health and safety risk impact choosing a cruise for a holiday.

2. Current conceptualization of risk

2.1. Defining risk

Notably, the origins of the word *risk* refer to the potential for danger and uncertainty of merchant ships completing a journey, due to storms or unmarked rocks [12], denoting the maritime connection. Risk has been an area of research for decades across a variety of disciplines with many attempts to define, conceptualize and understand it [13]. Defining risk is problematic because definition is determined by philosophical values, the purpose of the definition and who is defining it, resulting in no universally agreed definition [14], with different disciplines using varying definitions of risk. Therefore, for the purposes of this study, risk is defined simply as the potential to lose something of

value [15] and a value may include physical health, social status, emotional well-being or financial wealth [16]. This definition allowed for a wider scope in exploring how risk in cruising might be interpreted. This study considers risk as a social construction in a particular historical and cultural context [17]. Understanding that risk is perceived differently depending on the lens being looked through is essential in order to conceptualize it, as risk emerges from the meaning ascribed to it by an individual. A positivist lens assumes risk is objective, which fundamentally contradicts risk as a social construction where risk is subjective. All risk is perceived risk, and therefore this study rejects the notion of objective risk.

2.2. *Perceived risk*

Determining whether risk is “real” or perceived is irrelevant as objective and subjective risk function in the same way for tourists [18]. Perceived risk may be defined as “a consumer’s beliefs about the potential uncertainty associated with negative outcomes in a purchase situation” [19]. It is the overall amount of uncertainty perceived about a specific purchase and is comprised of two components; uncertainty and consequences [20], where uncertainty refers to the possibility that the decision will not match the buying goal, and consequences are adverse effects related to functional, performance or psychological goals, including money and time spent to achieve the buying goals [19].

Understanding how tourists navigate risk is significant for understanding cruise decision-making, as cruisers are generally thought to be risk-averse [21]. If the level of risk tolerance is surpassed, the consumer will either abandon the purchase or take steps to manage the uncertainty. There is a higher level of risk associated with travel products due to the intangibility, high cost and complex decision-making involved [22]. As individual factors impact the formation of risk perceptions and influence travel decisions, this highlights the need to draw on a constructivist approach in exploring cruise decision-making. Individual tolerance for risk may be influenced by factors including age, gender, social status, educational level, motivation, nationality and personality traits. There has been debate about whether gender influences risk perceptions [23,24], with the research being inconclusive at this time. Other factors are biological in origin such as DNA or neural chemistry, or external, such as wider societal influences including physical and ideological contexts. Travel research has focused mainly on factors that help inform the perception of risk, which include tourist role [25], age (chronological and cognitive) [26] and travel experience [27].

Perceived risk has been recognized as a significant factor influencing destination choice and travel decision-making, including travel intentions, information search and pre-purchase behaviour [8,28,29]. Recent research reveals that individual personality affects risk appetite [30] by influencing risk perceptions and the propensity for sensation-seeking. Individuals with a higher desire for novelty and intense sensory stimulation are more willing to take risks. There is a debate within the literature as to how far risk perceptions are influenced by a decision-maker’s personal characteristics (such as attitudes and beliefs) or propensity to take risks; known as “the risk trait” [31]. However, the suggestion of a risk trait has been largely ignored in tourism. A notable exception applied Plog’s (1974) psychographics theory to attempt to explain why tourists might seek risky activities related to the level of stimulation desired [32]. The study failed to fully uncover how a tourists’ risk aversion/appetite influences decision-making, highlighting how more research is needed into understanding how risk may potentially influence tourist decision-making. Indeed, the stratification and attempts to place people in a hierarchy reflects a basic flaw: that humans are complex and constantly changing. Risk

perception is dynamic and changes in relation to new knowledge and life experience, so an individual's perception of risk is not constant. People are complex with different decision strategies and motivations that are likely to differ between holidays.

2.3. *The role of heuristics on risk perceptions*

It has been argued that, when dealing with uncertainty (risk) in decision-making, people rely on a number of heuristic principles to reduce the complex task of assessing probabilities and predicting outcomes [33]. Heuristics are quick mental short-cuts people use intuitively when making quick assessments and judgments based on previous experience and acquired information. Although there have been suggestions by researchers that tourists use heuristics in their decision-making, the application and study of heuristics in tourism decision-making has largely been ignored. Indeed, only a handful of studies have applied heuristic principles towards tourism research [34,35]. Tourists begin the decision-making process with tacit (internal) knowledge, then search for information to guide the decision, and then use heuristics to fill in the missing information [36].

The availability heuristic is the process through which individuals manage risk by recalling recent information [37]. It operates on the premise that information that is recalled more easily is more important than information less easily recalled. Thus, if a person can more easily remember an event, they are more likely to assume a higher probability for this to happen again. This heuristic has the potential for understanding risk judgements and decision-making in by demonstrating how potential tourists base their decisions on information that is more easily recalled. The availability heuristic may be of particular significance for cruise tourism. Some scholars suggest a heightened awareness among tourists after a negative cruise event [34,38]. For example, after the sinking of the *Costa Concordia* cruise ship there was an initial and immediate decrease in booking, but once the event became a more distant memory, cruise booking levels resumed [39]. Heuristics highlight the significance of emotion and affect on perceived risk and the impact on decision-making, which is examined in the following section.

2.4. *Role of emotion and affect*

Emotion and affect influence risk perceptions [40]. Emotional reaction helps assess and evaluate risk. Humans perceive and act on risk in two fundamental ways: risk as feelings (an emotional or intuitive response), and risk as analysis (a rational or logical response) [41]. Risk as feelings refers to an instinctive and intuitive reaction to danger, including emotions such as fear and anger. Risk as analysis refers to the ability to use logic and reason on risk assessment in decision-making. This is notable as risk perceptions are influenced by emotion and holidays are emotive products. Understanding emotion and affect in decision-making is of utmost importance because emotions play a significant role in tourist decision-making. The role of affect in tourism decision-making is emerging in the literature and there is little research on affect and risk perception beyond destination avoidance. Notably, negative feelings have been shown to be more influential on decision-making than positive or neutral attitudes towards a destination [42]. If feelings towards something are favourable, an individual will tend to judge the risks as low and the benefits as high. If the feelings are unfavourable the individual will tend to make the opposite judgement and judge the risk as high and the benefits low. However, affect has not been examined within cruise decision-making and this is a significant gap in

the literature. More research needs to be conducted to better understand how emotion and affect influence risk perceptions, particularly in relation to concerns for health and safety for post-COVID travel.

2.5. Current understanding of risk in cruising

Risk in cruising is generally perceived to be related to safety and physical well-being. Safety is most discussed in the literature [7,43–45], with the most common safety incidents on a cruise ship are grounding, collisions with other ships or piers, floundering (loss of power and/or steering), tender accidents, and fires; which occur six to seven times more frequently on a cruise ship than other passenger vessels [46]. Fire onboard is a serious concern, with seven major fires on large cruise ships between 2006 and 2012, although fortunately with little loss of life.

Recent examples of catastrophic events occurring are the *Crown Princess* (2006, severe listing, 298 passengers injured) and the *Viking Sky* (2019, power loss, 479 passengers evacuated by helicopter). At least three cruise ships have sunk in recent years including the *MV Explorer* (2007, no deaths), *Sea Diamond* in 2007 (2 deaths), and *Costa Concordia* (2012, 32 deaths). Fortunately, most cruise ship incidents have occurred without any loss of life, as a result of adequate emergency response procedures and mild weather. Although it has been argued that accidents involving cruise ships are rare, the consequences when incidents occur can be serious due to the large number of people onboard. Many cruise ships are increasing in size and the number of passengers they carry. In 2019, there were 24 cruise ships in operation that carry at least 4000 passengers, including three ships which can carry 6300 passengers and 2300 crew. The large number of people on these vessels highlights the potential for loss of life in the event of an accident. This is especially true for cruises to the more remote destinations such as the polar regions.

As more ships are sailing to the Arctic and Antarctica because of increased demand [47], the potential is high for a large-scale risk event. Some researchers have pointed out the dangers of polar cruising [48–50], including the increased difficulty, and at times impossibility, of conducting medical evacuations or accessing specialist treatment in an emergency situation. In polar regions, specific challenges include the lack or obsolescence of navigational charts, difficulty in performing rescue operations, the impacts of climate change such as increased sea ice and icebergs/ice hazards and aging ships sailing in areas of ice without sufficiently ice-strengthened hulls [51]. Also, some cruise ships are used beyond their service-life, which may suggest a higher potential for mechanical failure [46,47].

Indeed, some have argued that between the sinking of the *Titanic* in 1912 and recent events such as the *Costa Concordia* in 2012, little has actually changed in how cruise companies manage physical risks [52]. This is in spite of numerous advances and improvements to ship design and construction, fire resistant materials, navigation and instrumentation, and onboard safety systems including evacuation procedures and lifeboat design [45]. Some scholars suggest cruise companies and management underestimate the risk in operating large ships [52], a tendency likely to become more significant with the growth of the industry, involving more cruise ships cruising to increasingly remote ports of call.

Other safety risks affecting cruise ships include terrorism, bio-chemical attacks and political instability [53], and piracy is also a concern [44,54]. Events include the *Seabourn Spirit* (2005, fired upon by machine guns and rocket propelled grenades), *MSC Melody* (2009) and *Azamara Journey* (2012), where the ships were able to prevent attackers from gaining access by using pressure water

hoses, sonic wave devices and throwing deck furniture over the side. Crime is also discussed in the literature [55,56] and can occur both on the ship and ashore.

Health risks have been examined in the literature, exploring the frequency and severity of occurrence of outbreaks of infectious diseases such as H1N1, norovirus [57,58] and legionnaires' [59]. Cruise ships have been particularly affected by norovirus. One study found overall cruisers are not overly concerned with health risks, but those who cruise more often take more precautions to avoid getting sick [60]. Research also suggests motion sickness is a concern for some tourists [44,61].

Overall, the review of literature found there have been no formal attempts to explore tourists' perceptions of risk in cruise holidays representing a significant research gap, particularly in relation to understanding how perceived risk influences tourist decision-making. Therefore, the purpose of this study was to explore how tourists' conceptualize health and safety in relation to ocean cruises, and reveal specific insight.

3. Methods

A qualitative design was used and included both focus groups and interviews. The data was collected over two phases in the UK in 2017. Purposive sampling was selected with the participants were either cruisers (having completed at least 1 cruise) or non-cruisers (never taken an ocean cruise), and ranged from 22 to 83 years old.

The UK was selected as the research context as prior to COVID-19 it was enjoying significant growth with more cruise lines operating out of the UK than previously with demand increasing for cruise departures and visits to British ports. In 2018 there was just over 2 million passengers from the UK and Ireland and this represents 28% of passengers in Europe [62]. However, there is little research on the UK cruise market with more research needed to better understand why some prefer to cruise and others reject this type of holiday, and how risk perceptions influence decision-making.

Image elicitation was used to encourage dialogue and discussion through sharing images that evoke memories, stories and feelings [63]. This method brought to the surface subconscious feelings and thoughts about a cruise holiday through which perceptions of risk could be revealed. The images were shared during the interviews, and incorporated into the text of the transcribed interviews.

Phase one included two focus groups where the purpose was to determine aspects of risk ascribed to ocean cruising so as to better develop the design of the interview question guide. The cruisers and non-cruisers were separated within each focus group for homogeneity. Participants were asked to bring in and discuss one image that reflected how they felt about a cruise holiday. Additionally the researcher shared three images which were specifically selected to highlight different risks in cruising to encourage discussion about how risk may be interpreted.

Phase two included in-depth interviews with twenty participants who had vastly different leisure travel experiences, including some cruisers with extensive "cruising careers" (multiple cruises over a sustained period of their lives). One participant had experienced at least forty cruises. Participants were asked to share 8–10 images which reflected their thoughts or feelings about cruise holidays. Most participants said they enjoyed collecting the images. The images shared ranged from family photos, pictures taken while in port, formal evenings on the ship, and in contrast others brought in images of ships polluting the air, crowded pool decks, long lines to return to the ship and a person trapped in a box.

Interviews adapted the Zaltman metaphor elicitation technique for using images in an interview [64]. Participants were asked to firstly describe each image, discuss why that image was chosen specifically to reflect how they felt about a cruise, and to think about any images they could not find but had wanted to, and eventually to select one image that was most representative of their feelings overall about a cruise holiday. All interviews were audio-recorded and fully transcribed. Interviews were conducted until no new themes or theoretical insights emerge.

Thematic analysis was employed in both the focus groups and interviews to reveal specific themes through identifying and analyzing patterns within the data [65]. The researcher followed the rigorous process, first reading through the transcripts multiple times, determining descriptive codes, developing subthemes and then revealing specific themes.

Using these methods and situating the research in the constructivist paradigm within an interpretivist ontology offers an appropriate research strategy for understanding risk in cruise holidays. Situating with a constructivist perspectives was chosen so as to foster a pluralist and relativist interpretation of risk which allows for greater interpretation of risk perceptions.

Ethical approval was obtained from the University of Brighton Ethics Committee in April 2016, based on the University of Brighton Research Ethics Policy. All participants were provided with a detailed participation information sheet prior to participating in either the focus group session or interview, and offered opportunities to ask questions and address any concerns. The participants were advised of their ability to withdraw at any time with no negative repercussions. Prior to commencing participating, all participants were asked to read and sign a consent form. Pseudonyms were used to ensure participant anonymity and protect their identities.

4. Findings

The study revealed specific insights into how risk perceptions in cruising may be interpreted and understood by tourists. While the study revealed insight into different aspects of risk, the analysis presented here focuses on three specific findings which emerged for how physical risk is interpreted in relation to health and safety. Quotes from the interviews are used to illustrate participants' risk perceptions, and notes whether the quote came from a cruiser or non-cruiser, as this is significant at times to illustrate differences in perception.

Firstly, the data revealed physical risk was a minimal concern for most participants. Overwhelmingly a cruise was perceived as a "safe" holiday by both the cruisers and non-cruisers in this study:

I suppose you feel safe. You go to bed at night, you wake up in the morning and you're somewhere different without having to make the effort to get there. You feel quite safe on the ship. [Edith, cruiser]

I think generally you feel quite safe on the cruise ship. [Dean, cruiser]

The non-cruisers also perceived a cruise as a safe holiday. For example, one participant discussed the sinking of the *Costa Concordia* cruise ship:

What is interesting because when I was thinking about the images, one of the last images I was going to add was the image of, I can't remember the name of it now, the cruise ship that hit the rocks off Italy—I thought actually, that isn't fair to cruise ships because they have a very good safety record. I mean, I can't think of, out of the number of people that sail on the

ships, the number of accidents that actually happen. Of course, you have people falling overboard, but I think that's quite low. [Maria, non-cruiser]

Cruisers revealed almost no fear. One participant, who had been on at least 40 cruises, shared that she felt safe and “looked after” by the cruise lines, including her experience when during a cruise the ship lost power for several hours:

I've never worried about it. I know that the staff are exceptionally well trained in every area...I feel safer on the ships than the aeroplanes...They sorted it within the day but it was a weird time, but I was never worried. The crew knew what was happening and they'd taken care of it. [Joan, cruiser]

The data highlighted the role of trust in the cruise company to keep everyone safe and to be competent in case of an emergency. Indeed, every single cruiser expressed a firm belief in being safe on a cruise and that the cruise lines would look after them in case of an accident. For example:

I think the most we got was about force eight in the Bay of Biscay...That was getting a bit lively but, [laughs] but we managed and touch wood yes, we haven't had a scary experience at all, I mean certainly you hear about it, don't you? But no, no, we weren't worried. No, feel pretty safe really...The only time there has been some concern is when we've been out on the tender boat and we got to shore and later in the day, the weather suddenly got rough. I think the tenders were actually having difficulty in landing people onto the ship...but you trust them to do the right thing really...They couldn't run the tender boat so we're all stuck ashore and the lines for getting back were just huge...but they waited until it was safe to do so and...then we got back when it was safe. [Pat, cruiser]

The participants spoke about how the feeling of safety was reinforced by watching the ship's crew conduct safety exercises. Interviews reflected that cruisers trusted cruise lines and ships' officers to ensure safety. There was also evidence that officers conducting safety drills and information sessions with passengers created an enhanced feeling of trust:

They're always having drills onboard with the staff. They're always doing specific staff drills which they warn you about. They're always sounding whistles and perhaps using this, that, and the other, so yes I feel reassured that they're practicing. [Daphne, cruiser]

Meeting with the officers—there are certain ships, I think P&O are one, where they have an officers' question and answer session, and you can tell the competence and seriousness. [Joan, cruiser]

Secondly, data revealed significant health concerns about getting ill onboard a cruise. Seasickness was little mentioned by either group although a few cruiser participants related worries about being seasick before their first cruise, but these fears had been dismissed once onboard. Data gathered from the interviews revealed non-cruisers believed it was “easy” to get sick on a cruise holiday. Many non-cruisers spoke about the worry of becoming sick on a cruise due to food poisoning or other gastroenteritis related sickness. Comments highlighted the recent prominence in the media and news sources about the “common” occurrence of stomach bugs, which enhanced a feeling among non-cruisers that it would be “easy” to get sick. For example:

There's always stories about norovirus, you know, once that hits a ship everybody goes down...It's a contained environment and yeah, somebody gets sick. It's quite easy for you all to get sick. [Maria, non-cruiser]

Quite often you'll hear stories of everyone getting off a cruise really ill or people being quarantined on it for a couple of days, and it seems to happen quite a lot...I keep hearing

about outbreaks of norovirus or everyone getting diarrhoea or...bacteria in food, and...I would always be thinking about that when I was eating. [Kieran, non-cruiser]

For some of the participants, a cruise raised the possibility of becoming ill, such as through contracting food poisoning or norovirus:

I think more often than not you hear a lot of these salmonella or whatever it is, outbreaks onboard... and...You're all in bed for 10 days you limp back to port and they won't let you dock because you're all ill. [Jimmy, non-cruiser]

Norovirus outbreaks, those sickness bugs and things, it's that you're contained on a ship...If somebody gets ill, you hear in the media again, in the press, "Oh we've paid a fortune and we've come back and we're all really ill and it was awful and there was sick everywhere".

[Elena, non-cruiser]

The non-cruisers appear to perceive health risk as very high on a cruise. In contrast, interviews revealed cruisers acknowledged concerns about getting sick while on a cruise, but that worry is mediated by trust in the cruise lines to take measures to prevent passengers from becoming ill, such as enforcing hand washing and other procedures to minimize the spread of infection. The cruisers also spoke at length about the personal strategies they use to avoid getting sick such as using hand sanitizer and hand washing. One cruiser described the precautions he takes on a cruise:

We're always extremely careful about hand washing...I think as long as you're ultra-careful with hand washing and use the hand sanitizer. [Dean, cruiser]

This echoed the actions of many cruisers, as several talked about hand sanitizers and hand washing, indicating knowledge about preventing illness while travelling. Some cruisers pointed out the prevalence of health precautions onboard:

...hand sanitizer...were everywhere on the ship...all these hand sanitizers wherever you went ...They did it when you went in for dinner...They were insistent that you use it, because they didn't want you to have food poisoning. [Karen, cruiser]

Other cruisers described the need to take precautions to avoid getting sick on a cruise:

I am very careful about hygiene. Yes, we always use the sanitizers, get frustrated if we see other people going in not using them and generally very aware I think of hygiene issues. [Pat, cruiser]

A cruiser who had twice experienced her husband being medically disembarked to a hospital ashore while on a cruise, believed cruise ships have excellent medical facilities, often better than in some of the ports,

I know they've got medical facilities onboard and they can get you off if they need to, so no, it's not a concern. In fact, you're in a better place on the ship because if you got ill in a hotel somewhere you'd have nobody to give you a hand. The ship has everything at their disposal.

[Joan, cruiser]

This difference in perceptions and management of health risks between cruisers and non-cruisers is significant. While the cruisers acknowledge health risks, this group do not see this as a significant enough concern to prevent them from choosing a cruise as a holiday. Data reveals specific risk handling strategies taken by cruisers to minimize health concerns while onboard including using hand sanitizers, washing hands and following the preventative measures onboard. The cruisers also appear to place a significant amount of trust in the cruise lines to ensure their health and safety by having strict health measures and protocols in place and providing adequate medical care onboard.

Thirdly, interviews revealed the presence of fatalistic beliefs and acknowledgement that risk is inherent in all travel. The comments suggested that whatever might occur would happen regardless, and that this applied to all holidays, not just cruises. Both cruisers and non-cruisers appeared to accept inherent risk in travel as well as daily life. Explaining this fatalistic belief,

I've got this attitude that que sera sera, or whatever. I believe in fate. If your time's up, your time's up, whether it's on a boat, a train or a plane. If you're going to go, you're going to go. Otherwise you'd never do anything, would you? You wouldn't even cross the road. [Kieran, non-cruiser]

I tend not to think about things like that because what's the point anyways... there's no point worrying about it. If it's your time to go, it's your time to go. [Matthew, non-cruiser]

Several participants believed all travel involves risk:

To me, [on a cruise] there would be as much risk as flying, which is what we do to go on our holiday, or going on a ferry, or even a train, really...It can happen anywhere [Karl, non-cruiser].

I could get killed walking across the street to Tesco, that doesn't worry me at all. It never enters my head. If you did that, you wouldn't go anywhere. [Joy, non-cruiser]

Indeed, many participants of both groups pointed out the risks involved in travel, that there was nothing they could do, and that worrying did not change the outcome. Both the cruiser and non-cruisers participants in this study accepted there are risks in all forms of travel and accept the risk as a trade-off for being able to go on holiday.

5. Discussion

As established in the introduction, the purpose of this study was to explore how risk perceptions may be conceptualized and interpreted by tourists for a cruise holiday. The analysis of the findings suggest three key contributions to deepening understanding of tourists' perceptions of risks for health and safety in ocean cruising before the COVID-19 pandemic. The first is findings from this study revealed that overwhelmingly both the cruisers and non-cruisers view a cruise as a "safe" holiday and place significant trust in the cruise companies and officers to look after them. This supports previous research which found 71% of respondents felt cruising was safer than flying when compared to other forms of travel [66]. However, this study provides a much deeper exploration of risk perceptions, and notably found both cruiser and non-cruisers perceive a cruise as safe. This insight also highlights the role of heuristics in decision-making and the importance of affect. In assessing risk on a cruise, these participants point to how in a quick judgement, the feeling of being safe had a significant impact on risk perception.

Analysis revealed there was little concern about crime or terrorism, either on the ship or ashore in a destination. Previous studies have found that crime ashore is a concern and worry for cruisers [67]. However, crime was not a concern for participants in this study, even though some participants shared they had been victims of crime while on a cruise. Only one participant mentioned having concerns about fire, suggesting this was not a significant concern for the participants. For both cruisers and non-cruisers, there was an overwhelming sense that the cruise lines would only take their ships to "safe" destinations and that the potential was reduced for crime, terrorism, piracy and political instability. This is consistent with earlier research [7] which found that the confidence and trust in the cruise companies diminished the sense of worry and suggests trust and familiarity decreases perceptions of

risk. Significantly, this study provides evidence safety concerns had little influence on cruise decision-making for these participants.

Secondly, the analysis revealed both cruisers and non-cruisers are more concerned about health than safety, and this is an important contribution to the literature. This supports previous studies which found health concerns are a key factor in tourist decision-making [58,68] and illuminates the significance of infectious health outbreaks as a concern for tourists considering a cruise. This study not only provides empirical evidence of health concerns, but notably found differences between how risk is perceived between the cruise and non-cruisers participants. While both groups expressed varying degree of concern about getting sick onboard, there is a significant difference between cruisers and non-cruisers in how health risks are managed. The non-cruisers feel it is easy to become ill and do not have trust in the cruise lines to prevent them getting sick.

In significant contrast, the analysis revealed the cruisers developed specific strategies while they are onboard to minimize the risks of getting sick. Although the cruisers in this study are aware of the potential health risks, they appeared to feel confident in their own hand-washing precautions, supporting previous research noting the role of education and the communication of health risks [57], together with preventative strategies such as the use of hand sanitizer, to minimize potential for health outbreaks. Cruisers in this study appeared to feel confident that the cruise lines were taking adequate measures to control and prevent sickness onboard, and highlights the confidence and trust placed in the cruise lines. Tourists can be sensitive towards risk, whether “real” or perceived, and may avoid a destination if the risk is considered too high. This may suggest the non-cruisers perceive the health risks to be high and thus reject cruising for this and other reasons, which need to be explored with more research as this study found overall health concerns were not as influential on deciding to go on a cruise as other risks were. Health concerns did not influence the cruisers in this study for deciding whether to go on a cruise or not, as they saw the risks as manageable. While this study focused mainly on norovirus and other infectious illnesses pre-COVID-19, this insight may be used as a foundation for understanding health concerns and perceived risk for a cruise holiday.

Thirdly, this study found both cruisers and non-cruisers accept risk is inherent in travel. While this study suggests that although both groups are aware of the potential for cruise accidents and other negative events, the sense of fatalism and perceived trust seems to overcome any possible influence on perception of risk. It would appear that cruise tourists are resigned to risk in travel, including cruise holidays, and accept risk as an inherent part of travel. Findings provide evidence of a fatalism bias for some participants. Fatalism is a belief that events are perceived as the result of luck, chance, fate [69]. This study points to the role of fatalism in how participants accept risk is intrinsic to travel, and that this has not necessarily changed their travel decision-making. Indeed, risk is an unavoidable part of travel [7,24] and by extending this to a cruise context, this finding is significant for understanding risk perceptions in post-COVID-19 travel.

6. Conclusions

This study was exploratory in nature and while this adds to the evolving research on risk and tourist decision-making in cruising it also presents specific limitations. It is important to note that as risk is considered to be a social construction, the findings and analysis in this study illuminate risk perceptions specific to this group of participants, all of whom were UK residents. While useful, this is potentially limited in scope. Although the study was conducted prior to the COVID-19 pandemic, the

findings enhance knowledge in this area, and provides empirical research to serve as a foundation for future research into perceptions of health and safety risk for cruise holidays. The COVID-19 pandemic highlights the importance of risk perceptions in tourist decision-making, and therefore, this study is a significant contribution to this area. While risk perceptions of a cruise may change as a result of the coronavirus pandemic, this study serves as an important foundation from which to further examine how health and safety risks may be perceived and managed by tourists. Risk is an inherent part of travel and while most tourists accept this, research shows many people choose to cruise specifically because they feel safe and trust in the cruise line. This study found overwhelmingly that worries about physical safety did not influence their decision to cruise although health concerns were more important to non-cruisers. This reflects the significant of perceived health risks, which will be even more critical post-COVID-19. While more needs to be researched on risk perceptions in cruising, this study represents an important contribution and reflects how the perception of risk, whether real or imagined, has the power to influence travel decisions.

Conflict of interest

The author declares no conflicts of interest in this paper.

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