Making Visitors Feel Safe - Design Students’ Perspectives on Safety Concerns when Designing Future Tourism Services for North

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Abstract
The safety of services is essential part of a company's social responsibility. In the tourism industry, ensuring the safety of services is crucial, but often overlooked in the design process. Incorporating safety aspects during the initial design phase can eliminate potential safety issues and improve quality of the services. By addressing safety concerns early on, unnecessary worries related to activities and services can be resolved. This paper examines the design perspective on safety in Lapland outdoor activities. Two studies were conducted with art and design students, including an online survey to identify safety concerns in various tourist scenarios, and a focus group study on safety design. The study produced themed safety concerns on psychological, physical, social, financial, personal data, communication, and environmental safety factors. Safety design is an increasingly relevant topic in the future. When committing safety aspects in design, it can eliminate potential safety issues and improve tourists' trust between the service provider and the customer. Through safety design, it is possible to enhance the customer experience, develop social sustainability in services, and create additional value for the customer.

Keywords: guest experience; outdoor services; safety experience; service design; social sustainability; customer journey; tourism

1 Introduction
In this paper, we explore the design perspectives on safety as a part of social sustainability when conceiving services for visiting northern tourist destinations. Nature and outdoor activities form a significant part of Finland’s tourism attractions. The aim of this study is to make an initial exploration into the safety concerns related to outdoor tourism activities in Northern Finland. Finland is generally considered a safe destination, but, according to 2022 Portrait of European Travellers (MMGY, 2022), safety and language issues were among the five biggest barriers for people considering travel to Finland. Additionally, the study aims to gather insight about the significance of safety experience in services and identify the relevant safety factors for customers when designing outdoor services by utilizing service design methods. This research will focus on the following research questions: What kind of safety concerns can be identified from the customer’s viewpoint relating to outdoors services in North? Which factors would enhance safety experience in outdoor services?

We present two studies with international art and design students. The first study included identifying safety concerns in different tourist scenarios. The second study consisted of focus group discussions on safety design. The purpose of the work was to, on one hand, to focus on travelers’ safety concerns, differences, and priorities, and on the other hand, to utilize service design to gather information in focus groups using the safety journey map. Also, through focus groups, to enhance students’ design skills and knowledge of safety issues and priorities (Gray, 2016).
The research presented in this paper illustrates, how the topic of safety design and usage of modified customer journey canvas for safety can be introduced in design education. Overall, the study offers valuable insights into the safety issues that design students perceive when designing for northern tourism experiences. The results revealed several themes related to psychological, physical, social, communication and environmental safety factors that influence tourists' perceptions of safety and well-being. These findings provide useful knowledge that can be applied to enhance user experience and promote safety in outdoor activities.

2 Background

Safety is closely linked to sustainability, and they both share same pillars including environment, economy and society (Nawaz et al., 2019). More accurately, Eizenberg and Jabareen (2017) define safety as one of the key elements of social sustainability and an ontological foundation of sustainability. In tourism sector personal safety is recognised to be a major concern for tourists (Mansfield & Pizam, 2006). Safety planning for services participated in by the public is covered by mandatory regulations and represents a crucial component of service offering companies quality and competitiveness. Recent global developments have created new threats, for example, the Covid pandemic in 2020 required the rapid development of design solutions to preventing the virus from spreading (Häkkilä et al., 2021). In addition, natural phenomena related to climate change, such as floods, storms and forest fires have become more common, and influence people’s perceptions of safety. Thus, the need for safety design is of growing importance in the future.

Safety and risks can be examined from two perspectives: objective risk refers to measurable calculation of possible outcomes, whereas subjective, perceived risk is an individual, interpretation of possible outcomes (Karl & Schmude, 2017). Furthermore, subjective safety can be approached from three dimensions: physical, psychological and social (Matiza & Slabbert, 2021). The perceived safety and security of tourism destinations is based both on the individual tourist (personal traits, cultural background, socio-demographic factors) and on the destination, and how the actual risk situation is communicated or experienced (Karl & Schmude, 2017).

Prior research has noted that the subjective perception of risk has a larger effect on travel related decisions than objective risk (Karl & Schmude, 2017). It can affect, for example, the intention to travel to certain destination or avoid it, the mode and time of travel, and the activities participated in during the visit (Mansfield & Pizam, 2006; Sönmez & Graefe, 1998). However, customers' subjective safety experience, as well as how to focus on their safety concerns and priorities, has been largely overlooked when designing new services or developing the existing ones (Binkhorst & den Dekker, 2009).

Johnston & Kong (2011) define customer experience as a personal interpretation of the service process and customers' interaction and involvement with it during their journey through a series of touchpoints, and how those things make them feel. In the tourism context, Godovykh and Tasci (2020) define customer experience through four main components; affective, cognitive, sensory and conative responses, which occur in the pre-consumption, during-consumption, and post-consumption phases of experience. Additionally, they identify brand-related, consumer-related, and situational factors that impact to each of the service phases.

Previous research on safety and tourism has explored aspects related to destination safety and safety management contributing insights and recommendations for enhancing safety measures and management practices in tourism settings. Earlier research is closely tied with risk perception ie. physical, psychological, social, performance, financial and time risks, health risks, crime, natural disasters, or terrorism (Deng & Ritchie 2018, Botterill et all., 2013). Subject has been investigated as a dimension of destination image. and research has been fragmented and mainly emphasized improving safety management systems and providing guidance for destinations to offer safer environments (Botterill et al., 2013). Xie et al. (2020) have recently carried out a study focusing on tourists' perceptions of safety threats in destinations, which comprised five sub-dimensions 1) human elements 2) facilities and equipment’s 3) the natural environment 4) the social environment
5) management elements. Yen et al. (2021) employed a similar approach when developing a measurement scale to evaluate the safety climate of a destination. Their scale encompassed safety norms, safety management, activities and equipment, safety resources, infrastructure and environment, travel safety risks and tourist-resident interaction. In hotel management context Bonfanti et al. (2021) have examined the impact of Covid-19 pandemic on the intended customer experience by utilizing safe customer experience design model, that brings together physical environment, social environment, customer journey and touchpoints relating to service.

The paper of Zou and Yu (2022) highlights that safety in tourism is a subjective experience influenced by factors such as personality traits, sociodemographic background, culture, income, and risk tolerance with safety perceptions playing a crucial role in destination selection. Overall, the sense of safety in tourism is a socially constructed process, involving subjective interpretations of the external environment based on when and where the experience occurs.

3 Research Method

To address the selected topic, we collected data using two methods, an online survey and focus groups. Participants in both studies were art and design students from the University of Lapland. The students represented diverse groups in terms of age, gender, and nationality. The first study aimed to identify safety concerns in different tourist scenarios. The second study consisted of focus group discussions on safety concerns and creating improvement ideas for tourism safety in the selected scenarios. Customised customer journey tool (Figure 1.) was used as a visual representation highlighting the touchpoints and stages of customer interactions and experiences with the service. The concept of customer journey has evolved from focusing on the sequence of touchpoints with the firm to also include the customer’s emotional and the impact of situational and sociocultural factors on their experience (Pantouvakis & Gerou, 2022).

Figure 1. Modified customer journey map used in the online survey

Customer journeys as a service design method provide a means to take the customer’s viewpoint, and also offer insight into their experiences (Folstad & Kvale, 2018). Additionally, customer journey mapping is an important concept in services sustainability and helps to understand how service offerings fit with customers’ lifeworld and contribute to their overall experience. By mapping the customer journey, service providers can identify opportunities to improve the customer experience, reduce negative impacts, and enhance sustainability (Rosenbaum et al., 2016).
3.1. Online survey

The online survey focused on collecting initial data on perceptions of safety the following five tourism scenarios, arriving at the airport, participating in a snowmobile or husky safari, going northern lights spotting, independent hiking, and going to a bar in the evening. Images included in the survey aided participants to understand the context (Figure 1). Altogether 9 responses were received to the survey, 3 responders identifying as male and 6 as female.

![Figure 1. Prompt images used in the online survey](image1.png)

3.2. Focus group study

Exploratory focus group studies were conducted to gather perceptions on the safety concerns in tourism services and to ideate potential design improvements. Two focus group sessions were run, each guided by facilitators following a predetermined script that included scenarios, a safety journey canvas (i.e., a customer journey canvas highlighting safety related issues), and tasks to discuss. Both focus groups explored of two scenarios, 1) hiking experience and 2) visiting a husky farm.

The two selected scenarios were used as a prompt to simulate discussion, and to provide a context for participants to engage in discussion with other group members. The participants were encouraged to share openly their perspectives and ideas related to the presented scenario. The safety journey canvas was used to support the ideation, collecting the data from discussion and as a basis for ideating improvement ideas to address the identified safety concerns (Figure 2). The collected data was analysed by using the affinity wall method to identify common themes.

![Figure 2. The safety journey canvas used in the focus group sessions.](image2.png)
4 Results
Two studies have provided data regarding safety concerns within specific tourism scenarios. This data not only highlights existing safety issues but also provides essential design knowledge to enhance the safety experience of services that are already in the service design phase.

4.1. Survey results
In the airport arrival scenario, survey respondents highlighted concerns about the weather, language barriers, and transportation. Specifically, issues with getting from the airport to the city centre, taxi companies, lost luggage, potential delays, and weather-related problems were mentioned by participants.

The scenarios of snowmobile or husky safaris and aurora spotting tours raised similar concerns about overpaying, language barriers, falling on slippery ground and getting lost. In both cases respondents recommended wearing warm clothing and having health and life insurance. Concerning participation in snowmobile or husky safaris, respondents’ concerns focused primarily to snowmobile safaris. The potential dangers mentioned included accidents and changing weather conditions. Respondents suggested participating in daytime safaris would present fewer risks. When joining an aurora spotting tour, respondents emphasized the need for warm clothing and a lamp and wished for information on the best and most dangerous spots for aurora spotting. Survey respondents considered independent hiking in Finland’s forest areas to include risks such as getting lost, falling on slippery ground, cold weather, and wildlife. Injuries due to frostbite, insect bites and poisonous plants were specifically mentioned. The importance of having appropriate gear, including maps, compasses, and GPS devices was highlighted.

Most safety concerns noted when visiting a bar were perhaps globally relevant, including not leaving drinks unattended, violence, drug use, pickpocketing, getting too drunk and losing one’s keys. Some respondents mentioned being stalked and not knowing where to go if they became too intoxicated. Specific weather-related issues noted included slipping on icy sidewalks and the need to dress warmly in the freezing temperatures.

4.2. Focus group: Hiking experience
Participants highlighted general concerns of preparedness for the hiking situation (Figure 3). The need for practical information such as driving directions and the emergency number to use were mentioned. Also, the need for hiking specific information and tools was identified, e.g., accurate information on the difficulty level and length of the trail and having proper equipment such as clothing and footwear. Participants were concerned about the physical strain of the hike, avoiding injuries, and having health problems. Other concerns were often related to the participants’ prior experiences when hiking and included, navigation problems (particularly due to poor cellular coverage or a flat smartphone battery), the availability of accurate trail markings and the length of daylight.

Participants were also expressed concerns about their impact to nature and if their actions could somehow harm the environment. It was noted that, due to climate change, conditions in the future may differ from those in the past, requiring information to be updated.
Several improvement ideas were suggested by participants. A single source, containing all the necessary information such as emergency contacts, knowledge of Finnish legislation and nature, and trails maps and videos of how to act on trails and rest areas was considered useful. Also, a way to get assistance and ask for more information was suggested. Realistic information related to the difficulty and length of trails, the available services, and information on wildlife and insects should be easily available. Participants suggested that there could be the possibility to rent hiking equipment and special functions integrated to mobile maps to ensure an enjoyable hike. Guided group hikes and making connections between hikers and local organisations, e.g., via social media, were suggested.

4.3. Focus group: Visiting a husky farm

Figure 4 shows the thematic analysis process of the collected data from the focus group. The main safety concerns in the husky farm context related to physical comfort and the reliability and experience of the service provider. Physical discomfort and appropriate clothing were mentioned, as the activity is outdoors in a cold climate, with often severe weather conditions. When selecting a service provider, the concern was not knowing their reliability or questioning the validity of online reviews from prior visitors. Participants mentioned the behaviour and well-being of the dogs as a particular safety concern in this scenario. Not understanding guidance instructions, e.g., due to language barriers was also noted as potential cause of stress. The condition of the condition of the sledge other equipment and the availability of sufficient personnel were identified as potential points of safety risk.

Participants discussed concerns of credit card misuse and of photos of them being used in social media or in advertising, indicating the importance of keeping personal information in secure systems. Participants also expressed concerns on the impact of climate change and the future conditions and welfare of the huskies.
Several improvement ideas were proposed by participants before and after a tourism service. Prior to the service, participants suggested providing comprehensive and up-to-date information, including video examples of the visit experience, and the presence of professional staff with language skills and first-aid expertise. They also recommended using visual aids such as infographics to provide safety guidance to visitors. After the service, participants emphasized improving communication with the customer, protecting personal data, and creating a connection through a blog showcasing the daily life of dogs or keeping a diary demonstrating the proper care of dogs on the farm. These concrete ideas emphasize creating an emotional connection and providing a memorable experience beyond the tourism service itself.

5 Discussion

The aim of these two studies was to open an exploration on concerns related to outdoor tourism activities and to enhance the student participants’ design skills considering safety issues. Time-based thinking helped students to assessment safety concerns and harms at different points of timeline at safety journey map. The results revealed several themes related to psychological, physical, social, financial, personal data, communication, and environmental safety factors that influence tourists’ perceptions of safety and well-being.

Psychological load emerged as a significant safety concern, as participants reported experiencing stress and fear when learning new skills, encountering unfamiliar situations and environments. To enhance safety, service providers should prioritize providing clear guidance and concise information to address these concerns. Physical load was identified as another key safety theme, highlighting the importance of minimizing the risk of injuries and avoiding stress caused by heavy physical activity. Social factors were also considered important, with participants emphasizing the need for shared language, cultural sensitivity, and detailed guidance. The lack of information and language barriers can weaken the sense of safety, increase the risk of accidents, and lead to frustration. Service providers should ensure thorough guidance with skilled guides and transparent communication to build trust and enhance safety.

The study also identified financial safety, privacy, and security as critical safety concerns. Participants wished for reliable booking systems, secure data storage, and respect for their personal information. Service providers should provide transparent information about how data is used and ensure the security of systems to build trust with their clients.
Communication and trustworthiness emerged as essential factors that assisted participants in making informed decisions. Participants appreciated companies that engaged with them on social media and provided clear instructions, reducing anxiety and preventing conflicts. Preparedness was also found to be important, with participants emphasizing the need for real-time information and guidance on clothing and equipment for different environmental conditions. Providing information about potential risks and emergency situations can also improve preparedness and enhance overall safety.

Environmental conditions, such as short daylight hours, winter driving conditions, and local wildlife, were identified as safety concerns. Participants appreciated information on how to protect and interact with wildlife and reduce risks associated with environmental and situational factors. Sustainable behaviour was also associated with concerns about the well-being of animals and the possibility of having similar services in the future.

In conclusion, the study findings emphasize the importance of addressing tourists' safety concerns to promote safety and enhance the user experience of the outdoor activity services. Moreover, by ensuring the safety of customers will foster trust to companies and contribute to social sustainability of services. Service providers can reduce risks and enable enjoyable experiences by providing clear guidance, effective communication, and transparent information, promoting preparedness, and addressing environmental safety concerns. These efforts partly support of creating socially sustainable tourism services. We recognize that our research is limited by the sample size as well as the participant backgrounds. Despite of the limitations, we believe our studies have provided valuable insight on themes related to safety factors that influence tourists' perceptions of safety and well-being.

6 Conclusion and Future Work

In this paper, we have reported our online survey and focus group based research on tourism safety in Northern outdoors context, with design students as participants. This study provided more insights into service-related safety concerns compared to previous research. The results revealed themes related to psychological, physical, social, financial, personal data, communication and environmental factors that influence tourists' perceptions of safety and well-being. Overall, the study offers valuable insights into the safety issues that design students perceive when designing for northern tourism experiences. These findings provide useful knowledge that may be applied to enhance user experience and promote safety and overall well-being in outdoor activities. Additionally, prioritizing safety aspects contributes to the component of social sustainability of services. The study also identified areas for future research. Specifically, future studies could focus on developing safety design in services and exploring modified design tools that emphasise safety design aspects. An interesting avenue for future research is to compare the intended customer experience with the realized safety experience. Such research could provide a better understanding of the factors that contribute to the realization of a safe and enjoyable user experience in outdoor activities.

Paying attention to safety matters allows designers to concentrate on eliminating uncertainty around safety issues, enhancing trust between the service provider and the customer. Safety design is an increasingly relevant topic in the future. Through safety design, it is possible to focus on social sustainability to enhance the customer experience and to create additional value for customers.
References


MMGY (2022) 2022 Portrait of European Travellers. MMGY


