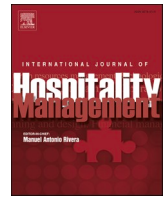




Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



The impact of the Covid-19 pandemic on customer experience design: The hotel managers' perspective

Angelo Bonfanti^{a,*}, Vania Vigolo^a, Georgia Yfantidou^b

^a Department of Business Administration, University of Verona, Via Cantarane 24, 37129, Verona, Italy

^b Department of Physical Education & Sport Science, Democritus University of Thrace, University Campus, 69100, Komotini, Greece

ARTICLE INFO

Keywords:

Covid-19
Safety
Customer experience design
Hotel managers
Luxury hotels
Customer journey

ABSTRACT

This research responds to calls for research on the devastating impact of the Covid-19 pandemic on the hospitality industry by investigating how hotel managers are designing safe customer experiences. Specifically, this study examines the measures adopted in high-end and luxury hotels and identifies the effects of such measures on the intended (or planned) experience. Based on thematic analysis of interviews with hotel managers, this study identifies seven safety measures: hygiene and protection, internal work reorganization, servicescape reorganization, investments in technology and digital innovations, customer wait time reorganization, staff training, and updated communication. These measures are expected to affect the intended experience in terms of reassurance, quickness, intimacy, and proximity, as emerged from correspondence factor analysis. Based on these results, this research proposes a model for safe customer experience design and suggests practical implications to help hotel managers formulate strategies aimed at customer experience creation under safe conditions.

1. Introduction

The global health emergency declared in January 2020 by the World Health Organization (WHO) following the spread of Covid-19 has had a significant impact on the daily lives of people and businesses (e.g., World Bank, 2020). Governments around the world have reacted by imposing partly voluntary, partly mandatory actions, such as personal hygiene and social distancing measures and quarantines, which have involved travel restrictions, border shutdowns, and temporary business closures (e.g., WHO, 2020b).

Hospitality is one of the most affected industries, suffering a global crash in demand, occupancy rates, and revenues (e.g., Rivera, 2020; Gursoy and Chi, 2020). Hospitality services, especially hotels, are operating under severe restrictions and a “new normal” needs to be defined. Hotel managers are planning how to safely run activities, and, given the continuing of the pandemic, there is uncertainty regarding how the situation may evolve.

The disruptive effects of the pandemic require hotel managers to redesign the customer experience (CX)—considered the core of the tourism and hospitality industry (Knutson et al., 2006; Kim and Ritchie, 2014). CX design has been widely examined in the hospitality management literature. Several studies highlight the importance of planning

CXs (e.g., Tussyadiah, 2014; Lu et al., 2015; Cetin and Walls, 2016; Lahouel and Montargot, 2020) as well as organizing the tangible and intangible characteristics of the service delivery system (e.g., Pullman and Gross, 2004; Hua et al., 2009) to create memorable experiences (e.g., Pencarelli et al., 2017; Sthapit, 2018; Bergs et al., 2020). Though a few studies have explored hospitality during previous disease outbreaks (e.g., Chien and Law, 2003; Kim et al., 2005; Tse et al., 2006), to the best of our knowledge, no research has addressed CX design during the Covid-19 pandemic—a pandemic that is proving unprecedented in terms of its worldwide and pervasive impact. The current priority for the hospitality industry is to create satisfying experiences for customers without compromising on safety. Therefore, (re)designing hospitality experiences during the pandemic is a crucial topic that deserves to be addressed in hospitality research (Sigala, 2020). Some industry magazines (e.g., Clark, 2020; Miranda, 2020) and hospitality websites (e.g., hoteliermagazine.com and hotelbusiness.com) propose interviews with leading hoteliers to explore how they are surviving the novel coronavirus and how hotel stays are changing. However, a categorization of the main hotel safety measures in response to the Covid-19 pandemic and an analysis of their impact on CX design has not hitherto been proposed.

This study aims, therefore, to fill this research gap by exploring how hotel managers are addressing CX design during the Covid-19 pandemic,

* Corresponding author.

E-mail addresses: angelo.bonfanti@univr.it (A. Bonfanti), vania.vigolo@univr.it (V. Vigolo), gifantid@phyed.duth.gr (G. Yfantidou).

<https://doi.org/10.1016/j.ijhm.2021.102871>

Received 1 July 2020; Received in revised form 24 December 2020; Accepted 26 January 2021

Available online 6 February 2021

0278-4319/© 2021 Elsevier Ltd. All rights reserved.

with particular regard to the intended CX—that is, the experience planned to be offered to target customers (Roth and Menor, 2003). Specifically, the objectives of this research are twofold: 1) to examine and categorize the most common safety measures currently undertaken by hotels to create satisfying and safe experiences, and 2) to identify the expected effects of these measures on the intended CX. Given the explorative nature of this study, a qualitative approach via interviews with hotel managers worldwide was adopted.

The results of this study have both theoretical and practical implications. First, the study enriches the theory of CX design by proposing a model that reflects the multifaceted current hotel environment. Second, this study suggests safety-conscious hotel measures that can help hotels to survive the impact of Covid-19 and, thus, to recover competitive advantage. These measures could also be beneficial in other health-related emergencies. In addition, the findings show how these hotel measures may affect the intended CX. This study will be beneficial to hotel managers in terms of redefining the “new normal” and successfully designing satisfying and safe CXs in hotels even after this specific emergency phase.

The paper is organized as follows. After a literature review of CX design and presentation of the study method, the main results are outlined and discussed. The paper concludes by providing implications, limitations, and directions for future research.

2. Literature review

2.1. Customer experience design in hospitality

Hospitality research draws from marketing and management studies; therefore, in the analysis of experience design, both service marketing and hospitality management literature are referenced. The experience design concept is not new (Carbone and Haeckel, 1994; Pullman and Gross, 2004). In investigating the CX design process across different sectors, Johnston and Kong (2011) found that experience design is not only beneficial to customers, but also leads to cost reductions, improved efficiency, and a better experience for staff. In the hospitality industry, CX design is considered a strategic means to obtain differentiation and long-term competitive advantage (Bergs et al., 2020).

Despite its importance, there is no consensus among scholars on the experience design concept. In a thorough analysis of the business literature aimed at defining tourist experience design, Tussyadiah (2014) identified three interpretations of design. The first interpretation is related to an aesthetic dimension able to increase the value proposition of certain products and services. The second interpretation (i.e., design thinking) emphasizes human-centered innovation, obtained by integrating consumers, designers, and managers in a collaborative environment (Tussyadiah, 2014). In this sense, design thinking helps to identify problems in service delivery and detect innovative solutions. The third interpretation considers design as a process (i.e., designing) that develops experience-centric services (Zomerijk and Voss, 2010) with the support of tangible and intangible service touchpoints (Pullman and Gross, 2004), at which service providers can connect to customers in a personal way.

Scholars have also distinguished intended (or planned) experience from realized (or actual) experience (Voss et al., 2008). Intended CX reflects the provider's perspective and includes the characteristics of the experience delivery designed and implemented by the provider (Ponsignon et al., 2017). Realized experience describes the customers' perspective, which may not be aligned with the intended CX (Heinonen et al., 2010). The organization aims to design and manage a CX that successfully reflects the intended CX. In this regard, Sundbo and Jensen (2020) explained that a holistic design concept implies both designing principles for the overall experience as well as designing how to operationalize this concept via activities. Ponsignon et al. (2017) conducted a qualitative study to explore the gap between intended and realized experience in the cultural sector, and identified four main areas that can

be managed by the service provider to design CXs: the customer journey, individual touchpoints, the physical environment, and the social environment. The customer journey can be described as the process the customer goes through, and consists of all individual encounters between the customer and the organization (Voss et al., 2008; Zomerijk and Voss, 2010). Such service encounters represent touchpoints—that is, the physical or digital points of contact where customers meet and interact with the provider. Customers perceive and evaluate their experiences at each of these touchpoints. According to Pullman and Gross (2004), experience design implies making choices about the physical structure (or physical environment) and the relational aspects (or social environment) of the service delivery system. Zomerijk and Voss (2010) argued that, from an experience design perspective, it is important to encourage connections and interactions between customers and employees as well as among customers. Thus, the human interaction factor is fundamental in the hospitality sector (Cetin and Walls, 2016), but is being severely challenged by the pandemic.

As explained by Ponsignon et al. (2017), the basic idea of CX design relies on the possibility of reducing the gap between intended CX and perceived CX by designing and managing the context in which experiences are created. In their attempt to provide a nomenclature for CX, De Keysner et al. (2020, p. 8) highlighted the importance of context, described as “the conditional state that determines the resources a person can directly and indirectly draw on at some point in time.” The Covid-19 pandemic is forcing hotels to redesign the experience customers can expect at touchpoints during their customer journey; a customer can experience a touchpoint very differently depending on the context of the interaction with the service provider. Context comprises the physical and relational elements of the experience environment, and is critical in experience design (Zomerijk and Voss, 2010). According to De Keysner et al. (2020), context consists of all situational factors; these are typically transitory in nature and can be related to individual, social, market, and environmental contexts. The Covid-19 pandemic represents a meta-environmental context pervasively affecting the individual context (e.g., by affecting customers' travel decisions as well as their approach to tourism and hospitality experiences), the social context (e.g., by transforming social contacts and interactions between customers and firms as well as between customers), the market context (remodeling competition and changing market boundaries; e.g., the effect of the lockdown and travel restrictions), and also the economic, health, public, and political contexts.

Svabo et al. (2013, pp. 321-322) argued that it is not possible to “design experiences” in the strict sense, since customers independently and subjectively interpret experiences, but it is possible to “design for experiences.” Specifically, based on service-dominant logic and value co-creation theory (Vargo and Lush, 2004, 2008, 2016, 2017), several scholars have highlighted the central role of customers in creating experiences (e.g., Pencarelli et al., 2017; Canestrino et al., 2018; Campos et al., 2018; Castellani et al., 2020). As emphasized by Zomerijk and Voss (2010), experiences cannot be fully controlled by service providers because as customers interpret a series of encounters and interactions designed by a service provider, they construct their own experience. Accordingly, organizations cannot “grant” consumer experiences, but they can design the setting in which consumers participate and contribute to the creation of an experience (Cetin and Walls, 2016).

2.2. The impact of Covid-19 pandemic on hospitality and tourism

The Covid-19 pandemic requires hotels to (re)design CX by more firmly guiding customers during the customer journey. Since the beginning of the pandemic, CX design has gained increasing importance, as a means of guaranteeing not only customers' safety, but also preventing the spread of the virus among hotel personnel, providers, and more broadly, the community. Hotel managers play a central role in CX design and, for this reason, were considered key informants for this study.

In the hospitality literature, a few studies have investigated CX design from hotel managers' perspective (e.g., Cetin and Walls, 2016; Lahouel and Montargot, 2020) but not within the context of a health emergency. Other studies have addressed the effect of past infectious disease outbreaks on the hospitality industry, but not with specific regard to CX design. For example, Chien and Law (2003) explored the impact of the Severe Acute Respiratory Syndrome (Sars) outbreak on the hotel industry in Hong Kong, focusing on crisis management and suggesting practical measures hotels could adopt to deal with the crisis. Tse et al. (2006) reviewed the typology of crisis and examined the Sars crisis response and strategies adopted by restaurants in Hong Kong. Kim et al. (2005) conducted secondary data analysis as well as in-depth interviews to investigate the effects of Sars on six Korean five-star hotel chains.

Some very recent studies have explored the effects of the Covid-19 pandemic. For example, Filimonau et al. (2020) conducted a quantitative study among senior hotel managers to investigate the impact of the Covid-19 pandemic on their organizational commitment. Jiang and Wen (2020) proposed a research agenda based on a review of the relevant literature on hotel marketing, hotel guest behavior, and hospitality service trends. Seyitoğlu and Ivanov (2020) developed a conceptual framework for service delivery system design in hospitality in the Covid-19 era, identifying three such designs (robotic, human-based, and mixed) and analyzing the advantages and disadvantages of each. Shin and Kang (2020) conducted experiments to explore the effect of expected interaction and expected cleanliness on perceived health risk and hotel booking intention, focusing on potential customers' perceptions.

Other studies focus on single countries. In this regard, Hao et al. (2020) focused on Chinese hotels and identified four post-Covid-19 strategies: multi-business and multi-channels, product design and investment preference, digital and intelligent transformation, and market reshuffle. Hu et al. (2021) adopted a qualitative approach with in-depth interviews to explore how organizations can facilitate employees' compliance with safety procedures based on the case of a small medium-sized Chinese hotel. However, to the best of our knowledge, none of these recently published studies has addressed CX design.

This study fills this research gap by specifically exploring CX design in the context of infectious disease outbreaks to provide both theoretical and practical implications for the design of a safe CX in hotels.

3. Methodology

3.1. Research design

In line with the explorative nature of this study, a qualitative research strategy was employed for primary data collection and analysis (Creswell and Creswell, 2018) to examine how hotel managers are reorganizing hotel stays to continue to create satisfying experiences following the Covid-19 pandemic outbreak. Semi-structured interviews were selected as the data collection method because provides participants with the freedom and flexibility to communicate their ideas and beliefs in their own words and use their preferred narrative structures (Creswell and Creswell, 2018). The interview protocol was designed based on the literature review on CX design. It was pretested before data collection to ensure that the meaning of the questions was clear and that their wording was unambiguous. Through this phase, the overall quality of the data collection instrument and, accordingly, the internal validity of the results were enhanced. The pretest took the form of open-ended conversations (Jafari et al., 2013) with three hotel managers – contacted through the researchers' personal networks – who were employed in three different four- and five-star hotels. The pretest results indicated that the protocol was appropriately designed to guide interviews for this qualitative study. Based on these managers' feedback, some sentences were reworded for clarity and easy comprehension. Given that these three participants suggested no major revisions, additions, or deletions during the pretest, their responses were included in the final data analysis. The interview protocol questions were as follows:

1. What are the main challenges you are facing in terms of CX design during this health emergency?
2. How are you trying to create safe CXs in this situation?
3. What key aspects are you investing in? Please share some brief examples.
4. What role does technology play in creating safe CXs in this new situation?
5. What are the effects of the measures implemented in the hotel in response to Covid-19 in terms of CX design?

3.2. Sampling and data collection procedure

This study employed a combination of purposeful and snowball sampling approaches to recruit knowledge-rich informants who could provide relevant information about experience creation during the global pandemic. Using personal networks, the researchers approached potential participants who met the three following criteria: 1) worked in high-end (four-star rating) or luxury hotel (five-star rating and above), 2) their hotel was still running or was willing to re-open shortly, and 3) added variety in terms of gender, education, managerial position, and geographic location.

These hotel managers were contacted via email to ask about their availability for an interview. The email contained a cover letter that clearly described the study's purpose and nature, explained why the respondent's opinion was being sought, and informed the respondent of his or her right to participate and withdraw at any time during the research. No financial incentives were offered for participation. Hotel managers were eventually invited to refer other hotel managers. The anonymity of the study participants was guaranteed.

Participants were interviewed via telematics because of the current situation, which makes it difficult to travel; in addition, this format respects informants' time and availability. The interviewer played a mostly strategic interpretative role and was focused on listening and avoiding potential sources of distraction. In some cases, asynchronous online interviews were conducted (Hewson and Laurent, 2008) to prioritize managers' comfort (Bowden and Galindo-Gonzalez, 2015) and to respond to their time constraints in this difficult period. This method is consistent with recent research in hospitality management (e.g., Hight et al., 2019). Interviews were conducted between May and June 2020, each lasting for approximately 40 minutes. In some cases, further clarification or additional questions were required, and respondents were approached again. Interviews were mostly undertaken in English, with a few in Italian or Greek, which were subsequently back translated into English (the research team is fluent in these languages). The translation of interview responses into English was subsequently cross-checked for meaning and consistency by other scholars fluent in both languages to ensure that it retained the subtlety and meaning of the original responses (Hogg et al., 2014).

Creswell (1998) recommended conducting 5–25 interviews to reach data saturation. Researchers should continue collecting and analyzing data until additional data start to repeat previous data and no longer provide new insights (Strauss and Corbin, 1998; Guest et al., 2006). In this study, data saturation was reached after 11 interviews; three further interviews were conducted as a confirmatory step to ensure that the findings yielded no additional information. This is in line with current hospitality research (e.g., Manoharan and Singal, 2019). Out of the 14 interviews, seven were asynchronous. Table 1 presents the personal and corporate profiles of the respondents. For confidentiality reasons, the selected hotel brands are kept anonymous.

The corporate websites of each hotel were also consulted to verify the data collected during the interviews and to add any information that the respondents had suggested collecting online for completeness. The multiple sources of evidence and informants' confirmation of data content helped ensure research validity and reliability (Yin, 2003).

Table 1
Personal and corporate profile of the respondents.

N	Gender	Managerial position in hotel	Education	Hotel type	Current state (end of June 2020)	Star rating	Location
H1	Male	General manager of restaurant	Bachelor's degree	Chain-owned	Closed	Luxury	New York
H2	Female	Learning and development manager	Bachelor's degree	Independent	In business	Four	United Kingdom
H3	Female	Consultant	Master's degree	Independent	In business	Luxury	Scotland
H4	Female	Director of operations	Master's degree	Chain-affiliated	In business	Five	Australia
H5	Male	General manager	Master's degree	Chain-owned	Closed	Five	Greece
H6	Male	Purchasing director	Master's degree	Chain-owned	Closed	Luxury	New York
H7	Male	Senior guest services manager	Master's degree	Chain-owned	In business	Luxury	Las Vegas
H8	Male	Director of business travel sales	Master's degree	Chain-affiliated	In business	Luxury	Texas
H9	Male	Assistant director of food & beverages	Master's degree	Chain-owned	In business	Luxury	Hong Kong
H10	Female	Director of entertainment and travel agency sales	Master's degree	Chain-affiliated	In business	Luxury	New York
H11	Male	Hotel manager	Master's degree	Chain-affiliated	In business	Luxury	Bangkok
H12	Male	Hotel operations manager	Master's degree	Chain-owned	In business	Five	Greece
H13	Male	Executive chef	Master's degree	Chain-affiliated	In business	Luxury	Bangkok
H14	Female	Hotel manager	Master's degree	Independent	Closed	Five	Italy

3.3. Data analysis

The synchronous interviews were audio recorded, and later transcribed and checked for accuracy. Prior to analyzing the data, respondents were asked to review the interview transcripts and confirm the accuracy of the information. The transcripts of the interviews and the text provided via email formed the final dataset. To examine the data, two different but complementary analyses were carried out: first, thematic analysis was used to examine and categorize the measures newly adopted by hotels as a response to the Covid-19 pandemic and, second, text-mining analysis was undertaken to identify the expected effects of these measures on intended CX. More specifically, through a thematic analysis, this research enabled the detection, examination, and description of themes gleaned from qualitative data (Braun and Clarke, 2006). The two researchers conducted the coding work independently to search for themes, but subsequently compared and discussed the coding results and reached a consensus on common themes. The data analysis followed a blended approach, which is theoretically driven but also allows for themes to inductively emerge from the data (Miles et al., 2014). In this regard, the themes that emerged were framed within an experience design model that includes touchpoints, customer journey, physical environment, and social environment (Ponsignon et al., 2017).

Text-mining analysis was undertaken using a correspondence factor analysis via IRaMuTeQ (Interface R for the Multidimensional Analysis of the Text and the Questionnaires), a software package that uses the functionalities provided by the R statistical software. The corpus of analysis included all the interviews carried out for this study in relation to question number five, organized into a single file and revised to remove typing and punctuation errors and to combine joint compound words by means of an underscore. This method aims to condense, classify, and structure a large amount of text data to make it more understandable (Lebart and Salem, 1994). The coding process of the interviews adopted the three following criteria: 1) inclusion of words (nouns and adjectives) subjected to lemmatization (i.e., the transformation from inflected form to the corresponding lemma); 2) elimination of empty words, such as articles, conjunctions, prepositions, and adverbs; and 3) consideration of words with a frequency greater than three for better graphic visibility. IRaMuTeQ reduced the subjectivity that often occurs during manual coding.

4. Findings

4.1. Hotel measures designed to create safe customer experiences

Based on the analysis of the interviews, it was possible to examine

and categorize seven main measures being used by hotel managers to design safe CXs: 1) hygiene and protection measures, 2) internal work reorganization, 3) servicescape reorganization, 4) investments in technology and digital innovation, 5) customer wait time reorganization, 6) staff training, and 7) updated communication. Table 2 presents the measures adopted by the hotels interviewed, showing response frequencies and the identification number of respondents for each hotel. In support of these research findings, some exemplary quotations are provided as empirical evidence.

4.1.1. Hygiene and protection measures

All the managers of the hotels investigated communicated that new protocols are being introduced to limit the risk of Covid-19 transmission. In general, these protocols include new cleaning and sanitation procedures, increased attention to safety in communal spaces, and protective equipment. More specifically, the hotel managers described that all surfaces as well as high-touch areas are frequently sanitized, including with the support of new technologies; for example: "We are evaluating new technologies such as electrostatic sprays with nebulization of a disinfectant and ultraviolet lights for the sanitization of objects and surfaces." (H6)

Besides installing alcohol-based hand sanitizer and gloves near the front entrance and public areas, hotels are providing customers with disinfecting wipes as amenities and disinfected key cards. Air filters are also being cleaned more frequently.

With reference to protection measures, hotel managers have planned protocols that involve both personnel and guests. For example, personal protective equipment such as masks and visors are provided to team

Table 2
Measures to design safe customer experiences.

Hotel measures	Frequencies	Identification number of hotels
• hygiene and protection measures	14	H1, H2, H3, H4, H5, H6, H7, H8, H9, H10; H11, H12, H13, H14
• internal work reorganization	12	H1, H2, H3, H4, H6, H7, H8, H9, H10; H11, H12, H13
• servicescape reorganization	12	H2, H3, H4, H5, H6, H7, H8, H9, H10; H11, H12, H13
• investments in technology and digital innovations	10	H2, H3, H4, H7, H8, H9, H10; H11, H12, H13
• customer wait time reorganization	9	H2, H4, H7, H8, H9, H10; H11, H12, H13
• staff training	9	H2, H3, H4, H7, H9, H10; H11, H12, H13
• updated communication	9	H3, H4, H7, H8, H9, H10; H11, H12, H13

members. Masks are also offered to guests when they are missing. Hotel guests are also invited to respect respiratory hygiene measures, such as covering their mouth and nose with their elbow or with a folded handkerchief when they cough or sneeze. Physical distancing measures have also been implemented, such as requesting a minimum distance between guests in queues or reducing elevator capacity. Some hotels have introduced other measures, such as locking or removing minibars. In addition, all hotels have introduced temperature checks of team members, suppliers, and guests, as well as specific procedures in case there is a suspected or confirmed case of transmission of the virus among guests or colleagues.

4.1.2. Internal work reorganization

Most of the hotel managers interviewed have designed a protocol that introduces new standards of hotel cleaning and disinfecting to ensure guests have an even cleaner and safer stay, employing specific and qualified teams of (health) experts to design these measures. For example, a hotel chain has established a group of in-house and external experts in food safety, hygiene and infection prevention, and hotel operations with the aim of developing new cleanliness standards and behaviors. The implementation of the designed hygiene and protection measures required the hotel managers to internally reorganize both employees' work and their work spaces. In this regard, some hotels are reorganizing operational practices for in-room dining and designing new approaches to buffets.

4.1.3. Servicescape reorganization

Each hotel is trying to find their own solutions to continue guaranteeing their services to guests to allow the implementation of planned hygiene and protection measures. For this, they are remodeling their spaces, considering protection, and, where possible, preferring outdoor spaces. When necessary, the elements of the servicescape have been retrofitted, removed, or re-arranged to implement hygiene and protection measures and to allow for physical distancing. Some hotels have also introduced (or are planning to introduce) partitions at the front desks to provide an extra level of precaution for hotel staff and guests. Managers highlighted the importance of having spacious and diversified common areas, where customers can find a variety of 24/7 services that they can access independently and safely. In dining areas, tables and bar stools have been placed 6 feet apart to increase safety. However, not all the investigated hotels are large. Alternative solutions can also be found in smaller hotels, as apparent in this example regarding the distribution of meals: *"Our hotel has small spaces for breakfast. Therefore, we decided to offer breakfast in the room or in convenient takeaway baskets, which can be consumed by travelers wherever they prefer."* (H14)

4.1.4. Investments in technology and digital innovations

An important change following the implementation of anti-Covid-19 measures is the way guests are welcomed. Many hotel managers are organizing for this to occur without human contact; for example, via an electronic device that allows do-it-yourself check-in and check-out. As explained by one hotel manager:

"Through intuitive apps, already available in the online booking phase, it is possible to carry out the operations of automatic sending of identity documents, the collection of the tourist tax, the signing of contracts ... and the collection of extra services." (H9)

In addition to the traditional hotel desk, different technological solutions have been adopted, such as automatic check-in totems that enable customers to access various services, such as printing room keys. Most hotels have introduced digital menus in their restaurants with the support of QR codes, via which guests can view menus on their personal mobile devices. Another example is as follows: *"In our restaurant, waiting for a table is managed through a virtual queue: guests will receive a text*

message when their table is ready." (H7)

Only some of these technological innovations were adopted within some hotels before the pandemic spread, such as online check-in (12 of 14 hotels interviewed) and use of a QR code for menus on a personal mobile device (nine of 14 hotels interviewed). In contrast, other innovations such as check-in via a mobile app (contactless option) and printing their own keys with a self-service key totem have been introduced in some hotels as a response to the pandemic. This aspect highlights how hotels have introduced innovations to respond to Covid-19 by strengthening technologies already in use. To preserve social distancing, hotels are redesigning customer waiting time to reduce or eliminate waiting times and queues, as illustrated in the following example:

"Our guests can choose to use their smartphones to check-in, access their rooms, make special requests, and order room service, which will be specially packaged and delivered right to the door without contact. These 'touchless' services can all be done quickly via a specific mobile app." (H10)

4.1.5. Customer wait time reorganization

To preserve social distancing, hotels are redesigning customer wait time to reduce or eliminate waiting lines. For example, some hotels have explained that customers can use their smartphones to check-in, directly access their rooms and order room service. In addition, some hotels are using a "virtual queue system" in their restaurants to manage wait time; guests receive a text message when their table is available.

4.1.6. Staff training

Staff training was of fundamental importance to all the managers interviewed as it provided learning, for example with the support of videos, regarding how to enforce the hygiene and protection measures mentioned above, recognize any suspicious symptoms, and on other internal procedures against Covid-19. In particular, staff are receiving training on how to implement the directives on the cleaning of common areas and of the most frequently touched objects such as handles, elevator buttons, handrails, and switches.

4.1.7. Updated communication

The WHO (2020a, p. 2) has specifically advised the accommodation sector on the importance of "informing guests who inquire about the establishment's policy in terms of the preventive measures established or other services that guests may require." Accordingly, keeping communication up to date is a priority. More precisely, the hotel chain managers surveyed said that the various locations are being briefed on hygiene and protection protocols and strongly encouraged to implement them. Within the hotels, documents, posters, and monitors with videos in different languages are used as a major communication tool to inform customers about recommended practices for hand washing, respiratory hygiene, and other behaviors, both within the hotel and in other various environments. In this health emergency period, it is important to stay close to guests by maintaining continuous and positive relationships, especially online. The analysis conducted for this study reveals that many hotels, but not all, have prepared institutional webpages with specific reference to the hotel's policies regarding Covid-19. Some hotels have created written and visual information and, in some cases, even videos with more detail. These pieces of information are also posted on the hotel's social media profile. For example, a hotel manager said that:

"We have updated the website by publishing the hygiene and protection measures that we are implementing in order to reassure guests about the safety delivered to them by hotel employees." (H12)

Some managers also reported that in the customer satisfaction survey sent to customers after their stay, there were questions aiming to specifically assess customers' perceptions of the hygiene and safety measures adopted by the hotel.

4.2. Expected effects of safety measures on intended experience

The second objective of this study was to understand the effects of hotels' safety measures on the intended CX. Based on correspondence factor analysis of the responses to the fifth question of the interview protocol (i.e. "What are the effects of the measures implemented in the hotel in response to Covid-19 in terms of CX design?"), it was possible to identify the four following factors that represent the main expected effects of the newly designed safety measures on the intended CX: 1) reassurance, 2) quickness, 3) intimacy, and 4) proximity. Table 3 presents the response frequencies and the identification number of the respondents for each expected effect.

The four expected effects are graphically represented in Fig. 1 on the two main factorial axes of a Cartesian plane: the horizontal axis (46.6% of the total variance) can be interpreted as the skill of hotel managers/employees in providing experiences that inspire trust and confidence (left side of the axis) or offer an efficient service (right side of the axis). The vertical axis (27.83% of the total variance) can be viewed as the experiential dimension of the human interaction, which is generated among travel companions (upper side of the axis) or between the hotel staff/technology and the guest (lower side of the axis). The four factors of expected effects occupy a well-defined location in this coordinate space. Specifically, reassurance is located in the middle-left area of Fig. 1, while quickness is located in the right area of the coordinate space. Proximity is almost completely located in the bottom-right area, while intimacy is positioned in the upper-central area. Each expected effect of the safety measures on the intended CX is presented hereafter according to their relevance in terms of frequencies, as identified from the interviews.

4.2.1. Reassurance

Reassurance can be considered the result of the safety measures designed by hotel managers so that their customers feel confident and safe during the hotel experience. For example, the use of self-check-in systems and physical distancing at restaurant tables allow customers to feel reassured in terms of safety. Reassurance is obtained by staff continuing to guarantee immediate customer responses, either in person or through technological solutions such as apps, instant messaging, and video calls.

In addition, trained staff not only know how to behave but are also able to give immediate instructions to guests, as well as inform the relevant authorities. In this way, hotel staff demonstrate their competency and generate information and reassurance. Regardless of the tool, communicating the safety measures and sanitation protocols adopted by the hotel is essential to transfer the appropriate information to customers and to make their stay safe.

4.2.2. Quickness

Hotel managers revealed that various technological elements are playing a key role in eliminating queues by positively influencing the intended CX in terms of quickness. In particular, contactless check-in and check-out is easy and convenient, given that guests can confirm their arrival time, add payments, and verify their ID via mobile check-in, before even setting foot in the hotel lobby. In addition to technology,

Table 3
Expected effects of hotels' safety measures on intended experience.

Expected effects of safety measures	Frequencies	Identification number of hotels
• reassurance	14	H1, H2, H3, H4, H5, H6, H7, H8, H9, H10, H11, H12, H13, H14
• quickness	10	H2, H3, H4, H7, H8, H9, H10, H11, H12, H13
• intimacy	9	H3, H4, H7, H8, H9, H10, H11, H12, H13
• proximity	9	H1, H2, H3, H4, H7, H8, H9, H12, H13

other organizational solutions can imply faster service delivery processes by meeting customers' need for speed, as this example outlines: "We provide our guests with meals via delivery directly to the room according to their needs and at their preferred time." (H3)

In fact, such internal reorganization requires different work times and shifts, as well as an acceleration of changes such as the enhancement of the telematics infrastructure that enables employees to work more efficiently, as argued by this respondent: "Although these activities are not visible to customers, they affect their experience in the hotel in terms of quickness." (H11)

4.2.3. Intimacy

Although physical and social distancing forces managers to limit the use of space in hotels, customers can enjoy greater intimacy with their travel companions. Rather than being purposely designed, this effect is a consequence of the implementation of hygiene and protection measures. Customers can enjoy a quieter and more reserved experience in hotel areas with their travel companions, as this interviewee pointed out:

"We have large spaces with diversified furnishings. We have created 'private' corners that allow social distancing to be carried out safely, without having to distort the existing space. These choices enable customers to continue to find a comfortable space in the lobby where they can relax." (H8)

4.2.4. Proximity

Some solutions limit, if not eliminate, interpersonal contact with the front desk in physical and relational terms. Staff-customer interactions may become difficult in some situations; for example, physical barriers may mute the speaker's voice, making conversation difficult. This becomes particularly critical in the presence of hearing impaired or deaf guests, for whom lip reading may be crucial to understand a conversation. Besides practical difficulties in communication, masks could have negative effects from a relational point of view, as can be seen in the following examples: "We provide masks for our front desk staff as mandatory, but we are aware that this protection measure negatively affects the customer experience in relational terms." (H13); "Even a friendly smile accompanied by a warm greeting when the client walks into the hotel cannot be visible." (H1)

This reduction or lack of physical proximity can be recovered through technological solutions, such as a microphone at the desk for staff and customers, or staff training to ensure speech is clear and slow, or video calls. The safety measures adopted as a consequence of the pandemic are resulting in a new type of proximity, defined by emotional and social closeness rather than by physical closeness.

4.3. Towards a safe customer experience design model

The seven hotel safety measures and the four expected effects explored above can be framed within the experience design model, which includes customer journey, touchpoints, physical environment, and social environment as the four main areas that can be managed by the hotel managers to design the CX. Precisely, Fig. 2 (left side) presents a safe CX design model, in which each measure is designed to influence the way in which experiences are lived at each of the service encounters implemented, from guest welcoming to self-check-out systems (i.e. touchpoints). In addition, each customer interaction with tangible elements (i.e., physical environment) such as signals indicating sanitization protocols or any technological or organizational measure, as well as staff-customer interactions and those among customers (i.e., social environment) are designed to create safe CXs. Therefore, each service encounter is an important touchpoint that contributes to creating a perception of customer health and safety during the hotel stay and, thus, positively affects the customer journey as a whole. In addition, the same Fig. 2 (right side) shows the expected effects of hotel customer safety

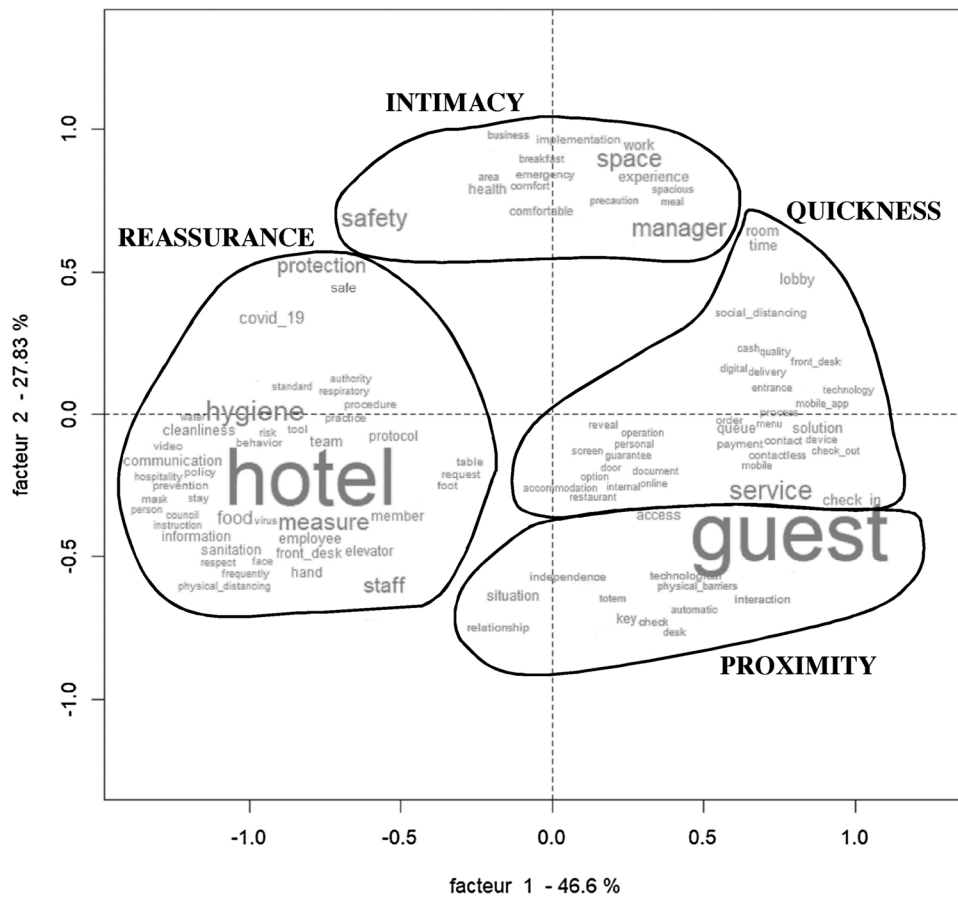


Fig. 1. Expected effects of hotels' safety measures on intended customer experience.

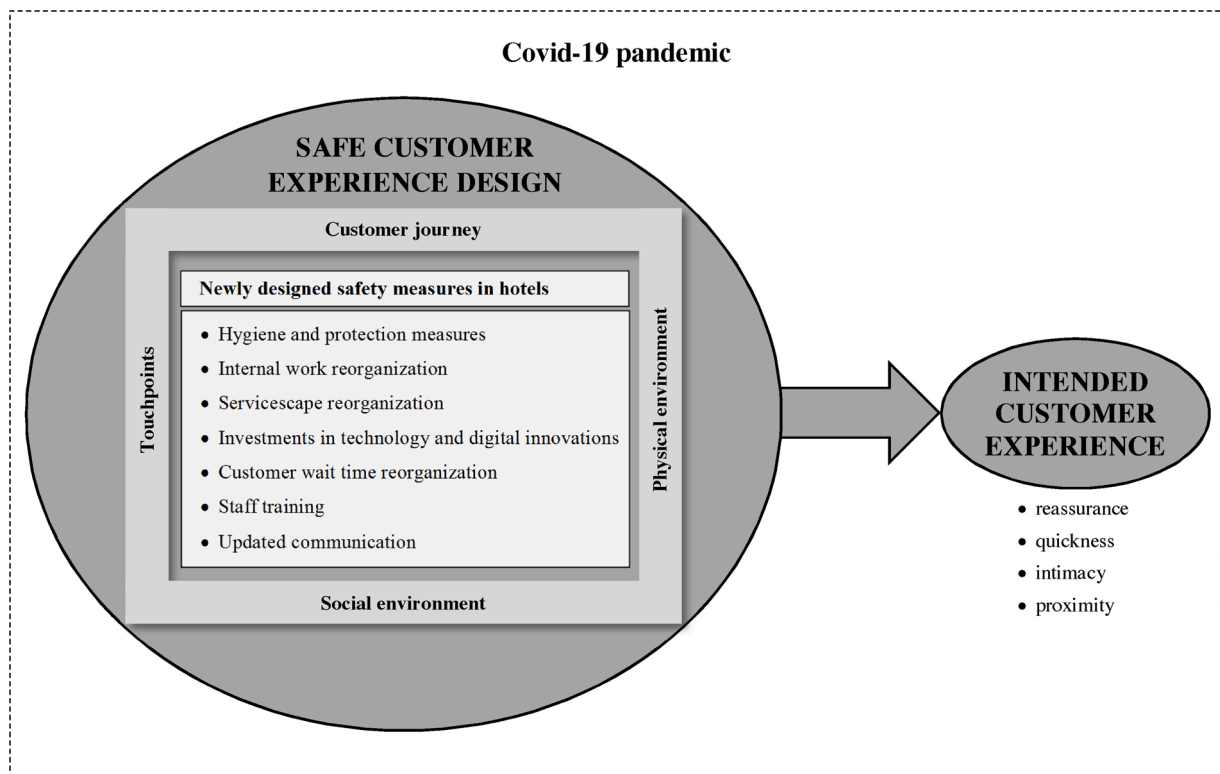


Fig. 2. Model of the impact of the Covid-19 pandemic on the intended customer experience from hotel managers' perspective.

measures on intended CX that can happen in terms of reassurance, quickness, intimacy, and proximity.

5. Discussion

This study explored safe CX design in the hotel context by pursuing the following two objectives: 1) to examine and categorize the most common measures currently undertaken by hotels to create satisfying and safe experiences, and 2) to identify the expected effects of these measures on the intended CX. With reference to the first objective, the analysis reveals that the hotel managers interviewed are giving highest priority to the safety and health of their guests – as well as team members and business partners – in response to the spread of the Covid-19 pandemic. As emphasized by [Tasci and Pizam \(2020\)](#), safety is a complex concept that includes both a cognitive and affective response to the servicescape. Hotels, often along with a team of (medical) experts, are redesigning their existing health and safety processes to fit the “new normal.” Thus, hotel managers are adopting a proactive strategic attitude, and designing safe CXs is their top priority. Even managers in still-closed hotels are planning how to realize satisfying experiences in view of the business re-opening. More precisely, this research highlights that hygiene and protection measures, internal work reorganization, servicescape reorganization, investments in technology and digital innovations, customer wait time reorganization, staff training, and updated communication are the seven main measures that have been adopted. This confirms that managers are fundamentally investing in all tangible and intangible elements of the physical and social environment with which customers come in contact during their stay in the hotel ([Pullman and Gross, 2004](#)) and, more precisely, in firm-controlled touchpoints ([Becker and Jaakkola, 2020](#)) connected to various hotel areas such as the lobby, in-room and common spaces, dining outlets, gaming rooms/casino, meeting and event spaces, and pleasure spaces. From a customer journey perspective (e.g., [Voss et al., 2008](#)), some hotel managers are focusing not only on the arrival and stay, but also on pre- and post-arrival phases, especially regarding communication on the website or social media, so that customers are informed and reassured about the introduced changes.

With regard to the second research objective, this study investigated the main expected effects of hotel measures on the intended CX. All respondents revealed that they are employing – or are planning to on re-opening – many hygiene and protection measures. Their implementation requires redesigning hotel organization, management, and communication activities. Given that each change affects the CX, such new safety measures are expected to influence the intended CX in terms of reassurance, quickness, proximity, and intimacy. In particular, all these changes could negatively affect the intended CX in emotional terms (e.g., [Kim et al., 2012](#)), given that changes are not usually welcomed, especially by loyal customers. However, given that customers need to feel safe in this health emergency period, the hotel managers' choices are focused on creating reassurance, delivering the promised service, and taking all necessary measures to increase customers' confidence ([Rivera, 2020](#)). This enables them to retain control of the situation, limit the risk of virus transmission, and, consequently, discourage cancellations and generate new reservations, convincing hesitant travelers not to change their plans and encouraging new ones to book a stay.

Other important effects on CX are quickness and proximity. In this regard, all hotels are investing in technology and digital innovations that provide customers with faster and easier service delivery. Online reservations, digital check-in and check-out, communication with staff via chat or mobile smartphone in some hotels, and the release of disposable electronic keys instead of traditional ones are just some of the technological solutions adopted by the hotels interviewed. They highlight how it is possible to not only avoid gatherings but also to provide a faster service to the customer, who can thus enjoy an improved experience without waiting in a queue. For example, the contactless option has been

widely implemented across the hotels investigated by using a check-in via a mobile app. Although this and other technological innovations had already been adopted in recent years within some hotels, the pandemic has boosted technology developing further and becoming key to a new way of hosting. The introduction of technological support helps practitioners speed up and simplify entry and exit practices, evoking positive emotions such as guest relaxation (e.g., [Kim and Ritchie, 2014](#)). However, limited human contact, made necessary by distancing, is a serious loss in terms of CX. This may not have a negative impact on some types of guests. For example, business travelers prefer speed and ease of service over staff chatter ([Lu et al., 2015](#)). In contrast, pleasure travelers tend to appreciate human contact with hotel and restaurant staff. Accordingly, hotels are redesigning direct contact with their guests by transferring this from the offline to the online/digital. A similar distinction has been drawn between Western travelers in comparison to Asian counterparts, who have been found to prefer speed of service ([Hua et al., 2009](#)).

Last but not least, the safety measures designed by hotel managers affect the CX in terms of intimacy with reference to interpersonal relationships ([Beetles and Harris, 2010](#)). While distancing limits the services offered by hotels, the implementation of safety measures may enable customers to enjoy a more intimate and reserved atmosphere, such as having a more discreet and tranquil dinner with a partner or family members ([Kim and Ritchie, 2014](#)). Essentially, sociability is not eliminated, but designed and, consequently, experienced in a different way.

The newly designed measures may thus have positive effects on the intended CX and most could even possibly be retained after the pandemic. In particular, hotel managers should further design (and implement) measures to improve reassurance, quickness, proximity, and intimacy to positively affect the intended CX. As with each crisis, experiencing the disruptive effects of a pandemic favors organizational learning development (e.g., [Ghaderi et al., 2014](#)). While this research is thus particularly timely, looking beyond the current situation, it aims to provide principles and measures that can be used as a source of competitive advantage and a reference guide for hotels in similar future situations. [Fig. 2](#) shows a model of the impact of the pandemic on safe CX design, including the measures planned by managers in their hotels and expected effects on intended CX.

6. Implications

6.1. Theoretical implications

This study provides new knowledge in the field of hospitality research, service design, and the customer journey. More precisely, it extends previous hospitality research into the effects of the Covid-19 pandemic on this industry ([Filimonau et al., 2020](#); [Jiang and Wen, 2020](#); [Seyitoğlu and Ivanov, 2020](#); [Shin and Kang, 2020](#)), by examining and categorizing the most common hotel measures adopted in response to the spread of the virus and analyzing the impact of these measures on intended CX. This study therefore responds to the urgent need for further research ([Rivera, 2020](#); [Gursoy and Chi, 2020](#)) into the operational strategies necessary to rebuild consumer confidence in staying at hotels.

In terms of service design, this study investigates the ways hotel managers create safe experiences. Recently published studies address the effects of the Covid-19 pandemic on the hospitality industry, but do not focus on CX design. For instance, [Hao et al. \(2020\)](#) highlight the importance of product design as a strategy for the post Covid-19 era, but do not offer guidance on how hotel managers should design safe CXs. In line with previous studies (e.g., [Ponsignon et al., 2017](#); [Zomerdijsk and Voss, 2010](#)), this research provides practical evidence that CX design can be modeled via a framework that includes touchpoints, the customer journey, and the physical and social environment. To this past research, it adds an analysis of the expected effects of safety measures on intended CX by showing how reassurance, quickness, intimacy, and proximity

together contribute to the intended CX creation. In this sense, the findings of this study provide an original theoretical contribution that enriches the literature on CX design and its possible effects on the intended CX. The relevance of this study reaches beyond the contingent situation, since it proposes a model that can be broadly used to enhance safety in CX design in hotels while controlling for the effects on the intended CX.

In terms of customer journey research, this study reinforces the importance of examining physical and digital touchpoint interactions from the customer's perspective (De Keyser et al., 2020; Lahouel and Montargot, 2020; Rosenbaum et al., 2017). The customer journey needs to be redesigned to meet the new safety standards required by the pandemic and to reassure customers before, during and after their stay at the hotel (Rivera, 2020). Specifically, firm-controlled touchpoints play a crucial role in designing safe CXs, and technology provides a key support to the introduction of new touchpoints. The findings also reveal that the context in which touchpoints are embedded (De Keyser et al., 2020) has changed and that, as a result, the interactions between customers, service providers and servicescape have changed. In addition, this study highlights an increasing level of behavioral participation required of customers, for example during self-check-in procedures or when ordering food at a restaurant. The new customer journey needs to be mapped effectively and analyzed to identify possible points of friction in the CX and therefore improve CX design.

Since most of the available research on the CX has focused on the customer perspective and, to the best of our knowledge, no studies have addressed CX design with specific reference to the ongoing pandemic situation, this research deepens existing theory.

6.2. Practical implications

The results of this study offer real examples and instructions to help managers recover from the negative effects of this pandemic. With reference to the safe CX design model proposed in this study, several recommendations are provided for hotel managers. First, in terms of touchpoints, this study suggests that hotel managers focus on physical firm-controlled touchpoints to increase safety. Similarly important are digital touchpoints, such as website and social media, to inform and reassure guests about the safety measures delivered by hotels. This study also recommends investing in technological innovations such as check-in via tablet or smartphone. Ultimately, it may be necessary to introduce new (digital) touchpoints to increase CX safety by reducing physical interactions between customers and hotel staff.

Second, in terms of the physical environment, this study suggests designing and implementing general rules to ensure appropriate hygiene measures, procedures, and instructions for the prevention of inflow or spread of Covid-19 are followed. All possible contact points should be cleaned and disinfected, from elevator buttons to doorknobs, and from coffee makers to other small appliances and utensils with which the customer comes into contact. This strategy should also apply to dishwashing and disposable materials (e.g., tablecloths and napkins). For example, at reception, it would be useful to mark the floor clearly to indicate where customers should stand when waiting, and all necessary hygiene materials (e.g., disinfectant gel) should be made available at entrances to hotel facilities. In addition, hotel managers should follow special rules for cleaning and disinfecting all areas of a room where a case of the virus has been observed. In fact, following government restrictions, every tourist accommodation business should draw up a protocol to guarantee guests' and associates' health and safety. This protocol must include the development of an action plan for the management of a suspicious case by the hotel to limit the spread of the virus to staff and other customers.

Third, in terms of the social environment, this study highlights the importance of defining customer-personnel and customer-customer social distancing, without neglecting these relationships. To that end, a "health ambassador" for customer contact could be created to answer

enquiries about health and safety processes or requests for medical assistance. Supplying customers with the necessary materials and information leaflets, including guidance for those who have respiratory system symptoms until medical attention arrives and procedures for the availability of antiseptics and personal protective equipment, could be implemented. To move in this direction, periodic briefings between staff and management regarding all protective measures should be organized to help staff recognize suspicious symptoms and enact other internal procedures against Covid-19. Among other suggestions connected to stays, special attention will be required for children, who might have more difficulty respecting social distancing measures. For example, hotels could offer outdoor activities for small groups of children and individual sports or sports for families.

Fourth, in terms of the customer journey, the seven measures proposed in this research should not be implemented separately or exclusively. Hotel managers must combine them to form an action plan taking into account the guidelines of all global, intermediate, and local government organizations to be effective. To this end, the practical implications described above may be placed on a customer journey map to design satisfying and safe CXs. To construct a useful map, managers need to identify both critical and less important touchpoints for different customer segments. For example, managers need to find effective ways to overcome possible barriers to the introduction of new digital touchpoints among senior customers (Vigolo, 2017). This approach may be demanding in terms of time and resources at the beginning of the process, but the extra effort will be outweighed by the benefits of improved map simplicity and usability. The customer journey map should illustrate how customers really spend their time, instead of how managers imagine they spend their time. In this way, hotel managers can fully employ the map for service and improvement as a strategic innovation tool (Rosenbaum et al., 2017). In addition, hotel managers, through reorganization of services and strict implementation of the seven measures identified, can understand what customers expect and desire, thereby increasing reassurance, quickness, intimacy, and proximity.

Finally, communication activities play a fundamental role in supporting the previously discussed areas of the CX design. Effective communication will result in customers who better understand and respect rules, as well as behave as requested. Communication activities are also important to reassure (potential) customers. Recent communication activities in the hospitality industry have relied on storytelling through emotion (Ryu et al., 2018), and during the lockdown, businesses have relied on emotional messages to engage their customers; however, for full business recovery, cognitive engagement is also required. Marketing research can support the hospitality industry to understand customers' needs, and technology can help hotel managers redesign the CX. Various studies have shown that real value does not exist within the product or service; rather, it exists in real and potential customers' minds. The need to influence customers' minds is also evident in the hotel industry (Nobar and Rostamzadeh, 2018). Adhikari and Bhattacharya's (2016) framework suggests that CX is a combination of cognitive and affective components, the positive representation of which has a positive impact on customers' future experiences. The authors relate three main aspects of CX: antecedents, creation and consumption of experience, and effect of CX. However, it is crucial that hotel managers invest in further communication activities, especially in terms of content, by producing texts and videos designed to reassure hesitant travelers. For example, to be ready to answer all questions, it would be judicious to prepare text or FAQs to include on the website and publish on social networks in relation to the attention paid to customers' health and the consequent high standards of hygiene and cleanliness now offered, or to communicate that hotel staff operate in full awareness of the health situation. Further reassurance may arise from offering customers the possibility of cancelling a reservation in the future to encourage them to book now. Current penalties for travelers who want to cancel require consideration—if people understand they can cancel a booking without losing their money, they will be considerably more

inclined to book and experience a hotel stay. This suggestion is in line with recent preliminary studies on customer sentiment analysis (Gursoy et al., 2020) that highlighted how, in the next few months, only around one-third of customers will be willing to travel and stay at a hotel. Investing in communication activities is, accordingly, fundamental to reassuring customers so that they can return to live experiences in hotels.

7. Conclusions, limitations, and further lines of research

In times of crisis, businesses are called on to change course and adapt to new conditions. The Covid-19 pandemic represents an unprecedented crisis that will most certainly lead to a new normal in the hospitality industry. Businesses are trying to “predict” developments in their industries, but long-term forecasts are not possible, since everything may be overturned in the months to come. While many pre-planned changes have accelerated since February 2020, the global economic recession, with all its consequences, adds to health and economic insecurity. People are prioritizing their needs differently. The basic physiological and safety needs of Maslow's pyramid (1954), previously taken for granted in many parts of the world and often overshadowed by social and self-realization needs, have now become a top priority for both customers and firms, hospitality businesses included. The CX can no longer be determined by the factors that scholars and managers have invested in, in both theoretical and practical terms, to date; further research is, therefore, desirable.

This study highlights how hotel managers are investing in both physical and digital firm-controlled touchpoints to create safe CXs. More precisely, the hotel measures designed in response to the Covid-19 pandemic comprise hygiene and protection measures, internal work reorganization, servicescape reorganization, investments in technology and digital innovations, customer wait time reorganization, staff training, and updated communication. The main expected effects of the Covid-19 safety-conscious hotel measures on the intended CX comprise reassurance, quickness, proximity, and intimacy. Technology and digital innovations improve the overall hotel experience by enabling customers to enjoy fast and efficient service delivery. The restrictions and reorganizations deriving from hotels' response to the pandemic can help hotels to redefine a new normal, with positive effects on the intended CX over time. The lessons learned from dealing with this unprecedented crisis will serve as a reference for hotels in case of future outbreaks.

This study has some limitations that may encourage further research. First, this study followed a qualitative approach, and hence, the results of the interviews do not have statistical significance and cannot be generalized. Therefore, quantitative research is needed to test the effect of the measures on the intended CX according to managers' perspective. In addition, only one person was interviewed from each hotel, thus providing a subjective perspective on CX design. Future research could overcome this limitation by interviewing more managers from each hotel. Second, this study focused on the intended CX: an interesting research area would be to extend the analysis across hotel guests in such a way that the designed experience, that is the intended CX, could be compared with the actual (realized) CX to provide novel empirical insights into the experience design areas of touchpoints, journey, and physical and social elements (Ponsignon et al., 2017) in hospitality management. Future studies could compare perceptions of hotel guests of different cultural backgrounds and those traveling for pleasure rather than business. Further research could also examine how restaurant and bar managers have designed CX during and after Covid-19 to suggest possible other solutions for hotels (and vice versa). In addition, given that some researchers (Chen and Chen, 2010; Klaus and Maklan, 2013; Tapar et al., 2017) have argued that CX has a positive impact on customer satisfaction – a business philosophy concerning the responsibility and ability to meet customers' needs, and manage and forecast their expectations – upcoming studies could investigate how the safety measures identified by hotels influence customer satisfaction.

Referring to Schmitt's (1999) studies about five strategic experience modules – sense, feel, think, act, and relate – it would be interesting to examine how these can be used to create a safe CX design.

Declaration of Competing Interest

The authors report no declarations of interest.

References

- Adhikari, A., Bhattacharya, S., 2016. Appraisal of literature on customer experience in tourism sector: review and framework. *Curr. Issues Tour.* 19 (4), 296–321.
- Becker, L., Jaakkola, E., 2020. Customer experience: fundamental premises and implications for research. *J. Acad. Mark. Sci.* 48, 630–648.
- Beetles, A.C., Harris, L.C., 2010. The role of intimacy in service relationships: an exploration. *J. Serv. Mark.* 24 (5), 347–358.
- Bergs, Y., Mitas, O., Smit, B., Nawijn, J., 2020. Anticipatory nostalgia in experience design. *Curr. Issues Tour.* 23 (22), 2798–2810.
- Bowden, C., Galindo-Gonzalez, S., 2015. Interviewing when you're not face-to-face: the use of email interviews in a phenomenological study. *Int. J. Dr. Stud.* 10 (12), 79–92.
- Braun, V., Clarke, V., 2006. Using thematic analysis in psychology. *Qual. Res. Psychol.* 3 (2), 77–101.
- Campos, A.C., Mendes, J., Valle, P.O.D., Scott, N., 2018. Co-creation of tourist experiences: a literature review. *Curr. Issues Tour.* 21 (4), 369–400.
- Canestrino, R., Bonfanti, A., Magliocca, P., 2018. Value co-creation in the hospitality industry: learning from the Vascitour experience. *Sinergie Ital. J. Manag.* 36 (107), 23–47.
- Carbone, L.P., Haecckel, S.H., 1994. Engineering customer experiences. *Mark. Manag.* 3 (3), 8–19.
- Castellani, P., Bonfanti, A., Canestrino, R., Magliocca, P., 2020. Dimensions and triggers of memorable tourism experiences: evidence from Italian social enterprises. *TQM J.* 32 (6), 1115–1138.
- Cetin, G., Walls, A., 2016. Understanding the customer experiences from the perspective of guests and hotel managers: empirical findings from luxury hotels in Istanbul, Turkey. *J. Hosp. Mark. Manag.* 25 (4), 395–424.
- Chen, C.F., Chen, F.S., 2010. Experience quality, perceived value, satisfaction and behavioral intentions for heritage tourists. *Tour. Manag.* 31 (1), 29–35.
- Chien, G.C.L., Law, R., 2003. The impact of the severe acute respiratory syndrome on hotels: a case study of Hong Kong. *Hosp. Manag.* 22 (3), 327–332.
- Clark, P., 2020. Marriott CEO Says Coronavirus Pandemic Will Change Hotel Stays. *Bloomberg.com*, 4/20/2020. Retrieved September 10, 2020 from <https://www.bloomberg.com/news/articles/2020-04-20/marriott-ceo-says-coronavirus-pandemic-will-change-hotel-stays>.
- Creswell, J.W., 1998. *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*. Sage, Thousand Oaks, CA.
- Creswell, J.W., Creswell, J.D., 2018. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Sage, USA.
- De Keyser, A., Verleye, K., Lemon, K.N., Keiningham, T.L., Klaus, P., 2020. Moving the customer experience field forward: introducing the touchpoints, context, qualities (TCQ) nomenclature. *J. Serv. Res.* 23 (4), 433–455.
- Filimonau, V., Derqui, B., Matute, J., 2020. The Covid-19 pandemic and organisational commitment of senior hotel managers. *Int. J. Hosp. Manag.* 91, 102659.
- Ghaderi, Z., Som, A.P.M., Wang, J., 2014. Organizational learning in tourism crisis management: an experience from Malaysia. *J. Travel Tour. Mark.* 31 (5), 627–648.
- Guest, G., Bunce, A., Johnson, L., 2006. How many interviews are enough? An experiment with data saturation and variability. *Field methods* 18 (1), 59–82.
- Gursoy, D., Chi, C.G., 2020. Effects of Covid-19 pandemic on hospitality industry: review of the current situations and a research agenda. *J. Hosp. Mark. Manag.* 29 (5), 527–529.
- Gursoy, D., Chi, C.G., Chi, O.H., 2020. Covid-19 Study 2 Report: Restaurant and Hotel Industry: Restaurant and Hotel Customers' Sentiment Analysis. Would They Come Back? If They Would, WHEN? (Report No. 2). Carson College of Business, Washington State University.
- Hao, F., Xiao, Q., Chon, K., 2020. Covid-19 and China's hotel industry: impacts, a disaster management framework, and post-pandemic agenda. *Int. J. Hosp. Manag.* 90, 1–11, 1026362.
- Heinonen, K., Strandvik, T., Mickelsson, K.J., Edvardsson, B., Sundström, E., Andersson, P., 2010. A customer-dominant logic of service. *J. Serv. Manag.* 21 (4), 531–548.
- Hewson, C., Laurent, D., 2008. Research design and tools for internet research. In: Fielding, N., Lee, R., Blank, G. (Eds.), *The Sage Handbook of Online Research Methods*. Sage, London.
- Hight, S.K., Gajjar, T., Okumus, F., 2019. Managers from “hell” in the hospitality industry: how do hospitality employees profile bad managers? *Int. J. Hosp. Manag.* 77, 97–107.
- Hogg, G., Liao, M.-H., O'Gorman, K., 2014. Reading between the lines: multidimensional translation in tourism consumption. *Tour. Manag.* 42, 157–164.
- Hu, X., Yan, H., Casey, T., Wu, C.-H., 2021. Creating a safe haven during the crisis: how organizations can achieve deep compliance with Covid-19 safety measures in the hospitality industry. *Int. J. Hosp. Manag.* 92, 1–11, 102662.
- Hua, W., Chan, A., Mao, Z., 2009. Critical success factors and customer expectation in budget hotel segment—a case study of China. *J. Qual. Assur. Hosp. Tour.* 10 (1), 59–74.

- Jafari, A., Taheri, B., vom Lehn, D., 2013. Cultural consumption, interactive sociality, and the museum. *J. Mark. Manag.* 29 (15–16), 1729–1752.
- Jiang, Y., Wen, J., 2020. Effects of COVID-19 on hotel marketing and management: a perspective article. *Int. J. Contemp. Hosp. Manage.* 32 (8), 2563–2573.
- Johnston, R., Kong, X., 2011. The customer experience: a road-map for improvement. *Manag. Serv. Qual.: An Int. J.* 21 (1), 5–24.
- Kim, J.-H., Ritchie, B.J.R., 2014. Cross-cultural validation of a memorable tourism experience scale (MTEs). *J. Travel. Res.* 53 (3), 323–335.
- Kim, S.S., Chun, H., Lee, H., 2005. The effects of Sars on the Korean hotel industry and measures to overcome the crisis: a case study of six Korean five-star hotels. *Asia Pac. J. Tour. Res.* 10 (4), 369–377.
- Kim, J.-H., Ritchie, B.J.R., McCormick, B., 2012. Development of a scale to measure memorable tourism experiences. *J. Travel. Res.* 51 (1), 12–25.
- Klaus, P.P., Maklan, S., 2013. Towards a better measure of customer experience. *Int. J. Mark. Res.* 55 (2), 227–247.
- Knutson, B., Beck, J., Him, S., Cha, J., 2006. Identifying the dimensions of the experience construct. *J. Hosp. Leis. Mark.* 15 (3), 31–47.
- Lahouel, B.B., Montargot, N., 2020. Children as customers in luxury hotels: what are Parisian hotel managers doing to create a memorable experience for children? *Int. J. Contemp. Hosp. Manage.* 32 (5), 1813–1835.
- Lebart, L., Salem, S., 1994. *Statistique Textuelle*. Dunod, Paris.
- Lu, C., Berchoux, C., Marek, M.W., Chen, B., 2015. Service quality and customer satisfaction: qualitative research implications for luxury hotels. *Int. J. Cult. Tour. Hosp. Res.* 9 (2), 168–182.
- Manoharan, A., Singal, M., 2019. Organizational effectiveness in hospitality: managers perspectives. *Int. J. Hosp. Manag.* 80, 123–125.
- Maslow, A., 1954. The instinctoid nature of basic needs. *J. Pers.* 22 (3), 326–347.
- Miles, M.B., Huberman, A.M., Saldana, J., 2014. *Qualitative Data Analysis: A Methods Sourcebook*. Sage, AZ.
- Miranda, M., 2020. Latest covid-related mandate inspires hope for tourism sector: executive order lifts restrictions for hotels, casinos. *Caribb. Bus.* 6 (36), 17.
- Nobar, H.B.K., Rostamzadeh, R., 2018. The impact of customer satisfaction, customer experience and customer loyalty on brand power: empirical evidence from hotel industry. *J. Bus. Econ. Manag.* 19 (2), 417–430.
- Pencarelli, T., Conti, E., Splendiani, S., 2017. The experiential offering system of museums: evidence from Italy. *J. Cult. Herit. Manag. Sustain. Dev.* 7 (4), 430–448.
- Ponsignon, F., Durrieu, F., Bouzdine-Chameeva, T., 2017. Customer experience design: a case study in the cultural sector. *J. Serv. Manag.* 28 (4), 763–787.
- Pullman, M.E., Gross, M.A., 2004. Ability of experience design elements to elicit emotions and loyalty behaviors. *Decis. Sci.* 35 (3), 551–578.
- Rivera, M.A., 2020. Hitting the reset button for hospitality research in times of crisis: covid19 and beyond. *Int. J. Hosp. Manag.* 87, 1–2, 1025282.
- Rosenbaum, M.S., Otalora, M.L., Ramirez, G.C., 2017. How to create a realistic customer journey map. *Bus. Horiz.* 60 (1), 143–150.
- Roth, A.V., Menor, L.J., 2003. Insights into service operations management: a research agenda. *Prod. Oper. Manag.* 12 (2), 145–164.
- Ryu, K., Lehto, X.Y., Gordon, S.E., Fu, X., 2018. Compelling brand storytelling for luxury hotels. *Int. J. Hosp. Manag.* 74, 22–29.
- Schmitt, B.H., 1999. *Experiential Marketing*. The Free Press, NY.
- Seyitoğlu, F., Ivanov, S., 2020. A conceptual framework of the service delivery system design for hospitality firms in the (post-)viral world: the role of service robots. *Int. J. Hosp. Manag.* 91, 1–10, 102661.
- Shin, H., Kang, J., 2020. Reducing perceived health risk to attract hotel customers in the Covid-19 pandemic era: focused on technology innovation for social distancing and cleanliness. *Int. J. Hosp. Manag.* 91, 1–9, 102664.
- Sigala, M., 2020. Tourism and Covid-19: impacts and implications for advancing and resetting industry and research. *J. Bus. Res.* 117, 312–321.
- Sthapit, E., 2018. Antecedents of a memorable hotel experience: Finnish hotels perspective. *Curr. Issues Tour.* 22 (20), 2458–2461.
- Strauss, A.L., Corbin, J.M., 1998. *Basics of Qualitative Research: Procedures and Techniques for Developing Grounded Theory*. Sage, Thousand Oaks, CA.
- Sundbo, J., Jensen, J.F., 2020. *Experiential choice in tourism*. In: Dixit, S.K. (Ed.), *The Routledge Handbook of Tourism Experience Management and Marketing*. Routledge, London.
- Svabo, C., Larsen, J., Haldrup, M., Børenholdt, J.O., 2013. *Experiencing spatial design*. In: Sundbo, J., Sørensen, F. (Eds.), *Handbook on the Experience Economy*. Edward Elgar Publishing. http://www.e-elgar.co.uk/bookentry_main.lasso?id=14875.
- Tapar, A.V., Dhaigude, A.S., Jawed, M.S., 2017. Customer experience-based satisfaction and behavioural intention in adventure tourism: exploring the mediating role of commitment. *Tour. Recreat. Res.* 42 (3), 344–355.
- Tasci, A.D., Pizam, A., 2020. An expanded nomological network of experiencescape. *Int. J. Contemp. Hosp. Manage.* 32 (3), 999–1040.
- Tse, A.C.B., So, S., Sin, L., 2006. Crisis management and recovery: how restaurants in Hong Kong responded to SARS. *Int. J. Hosp. Manag.* 25 (1), 3–11.
- Tussyadiah, I.P., 2014. Toward a theoretical foundation for experience design in tourism. *J. Travel. Res.* 53 (5), 543–564.
- Vargo, S.L., Lusch, R.F., 2004. Evolving to a new dominant logic for marketing. *J. Mark.* 68 (1), 1–17.
- Vargo, S.L., Lusch, R.F., 2008. Service-dominant logic: continuing the evolution. *J. Acad. Mark. Sci.* 36 (1), 1–10.
- Vargo, S.L., Lusch, R.F., 2016. Institutions and axioms: an extension and update of service-dominant logic. *J. Acad. Mark. Sci.* 44 (1), 5–23.
- Vargo, S.L., Lusch, R.F., 2017. Service-dominant logic 2025. *Int. J. Res. Mark.* 34 (1), 46–67.
- Vigolo, V., 2017. *Older Tourist Behavior and Marketing Tools*. Springer, Cham, Switzerland.
- Voss, C., Roth, A.V., Chase, R.B., 2008. Experience, service operations strategy, and services as destinations: foundations and exploratory investigation. *Prod. Oper. Manag.* 17 (3), 247–266.
- WHO, 2020a. *Operational Considerations for Covid-19 Management in the Accommodation Sector*, 31 March. Retrieved September 10, 2020 from. <https://apps.who.int/iris/bitstream/handle/10665/331638/WHO-2019-nCoV-Hotels-2020.1-eng.pdf>.
- WHO, 2020b. *Strategic Preparedness and Response Plan*, 4 February. Retrieved September 10, 2020 from. <https://www.who.int/publications/i/item/strategic-preparedness-and-response-plan-for-the-new-coronavirus>.
- World Bank, 2020. *Global Economic Prospects*. June. Washington, DC. Retrieved September 10, 2020 from. <https://openknowledge.worldbank.org/handle/10986/33748>.
- Yin, R.K., 2003. *Case Study Research: Design and Methods*. Sage, London.
- Zomerijk, L.G., Voss, C.A., 2010. Service design for experience-centric services. *J. Serv. Res.* 13 (1), 67–82.