

Cruise ship dining experiencescape: The perspective of female cruise travelers in the midst of the COVID-19 pandemic

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ABSTRACT

The cruise dining experience is one of the core elements of the overall cruise travel experience as guests fulfill their cognitive and affective needs in this pleasant environment. Nonetheless, the cruise dining experience has been sparsely researched. There is also no holistic model conceptualizing the cruise ship dining experiencescape. This study explores how under the influence of the COVID-19 pandemic, cruise ship dining environment stimuli dimensions are evaluated by female cruise travelers. Female travelers are the major spenders and travel decision-makers. They are also the dominant customer group in the cruise sector. Their perception of cruise ship dining environment is leading to their positive emotional responses and approach behavior. More precisely, this study demonstrates the potency of the moderating role of a perceived health risk from COVID-19, which strengthens female travelers' perceptions of the dining atmosphere and interaction with other guests by evoking positive emotions and influencing their approach behavior.

1. Introduction

The COVID-19 pandemic led to a serious crisis in medical, financial and psychological aspects (Chua et al., 2020; Žižek, 2020). As a result, the world economy is on its knees (Rai, 2020), exposing what Noam Chomsky describes as “another colossal failure of the neoliberal version of capitalism” (Magdaleno, 2020). The cruise industry was not spared from the pandemic and as Radic et al. (2020) argue that the current COVID-19 cruise tourism crisis has grown to unparalleled proportions placing the major cruise lines on the brink of insolvency. On March 14, 2020 the U.S. Centers for Disease Control and Prevention (CDC) issued a

No Sail Order that was extended on September 30, 2020 until at least October 31, 2020 (Centers for Disease Control and Prevention, 2020a). As new COVID-19 cases surged across the USA, CDC initially recommended an extension of the No Sail Order up until February 2021, however, due to strong lobbying from major cruise lines, U.S. Vice President Mike Pence overruled the director of the CDC forcing him to extend the ban only until October 31, 2020 (Feuer, 2020). Under the strong pressure on the White House from 61 lobbyists paid by the cruise industry (Smith, 2020) on October 30, 2020 the CDC issued the Framework for Conditional Sailing Order for a phased-in approach and return to service for the cruise industry in the United States (Centers for

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Disease Control and Prevention, 2020b). Among many other things, the Framework requires cruise line companies to modify dining services to maintain physical distancing.

The CDC's Framework for Conditional Sailing Order provides a lifeline for a hemorrhaging cruise industry. However, Sharma and Nicolau (2020) have expressed serious concerns about the effect of the COVID-19 pandemic on the cruise industry, due to its hedonic nature and the fact that the business-leisure traveler ratio is lowest in the cruise industry compared to the hotel, airline and car rental sectors (Sharma and Nicolau, 2020). Erdmann (2020) suggests that cruise lines most likely will not be profitable until 2022, and it will take at least 10 years for the industry to recover to the levels prior to the pandemic. Nevertheless, as man cannot be defeated (Hemingway, 1952) "and death shall have no dominion" (Thomas, 1933/2003, p.73), the COVID-19 cruise tourism crisis represents a crucial test for cruise industry leaders.

Prior to the COVID-19 pandemic, self-service buffets on board cruise ships resembled a culinary cabaret, where food was displayed in theatrical fashion while the buffet ambience, food quality, and quality of service satisfied the hedonic needs of even the most critical of gourmets. However, the pandemic changed this as cruise ship self-service buffets provide a favorable environment for spreading COVID-19 (NHK, 2020). Hence, the CDC expressed great concerns relating to self-service buffets and physical distancing on cruise ships (Centers for Disease Control and Prevention, 2020c). As a response to the CDC's concerns, the Cruise Lines International Association (Cruise Lines International Association, 2020) introduced a mandatory set of health protocols as a part of a phased-in, highly controlled resumption of operations, including discontinuing self-service buffets and reducing the occupancy rates as a way to facilitate physical distancing on board cruise ship facilities.

The dining experience on a cruise ship is one of the core elements of the overall cruise experience, as guests fulfill their utilitarian and hedonic needs in this pleasant environment. Lyu, Hu, Hung and Mao (2017) in their study on perceptions of Chinese tourists regarding the cruise tourism servicescape, found that atmospherics, social interactions and dining services were three out of six cruise tourism servicescape constructs. Bennett (2016) illustrates the cruise ship dining experience as a borderless multisensory environment where diners are simultaneously everywhere and nowhere. Lallani (2019; 2017) argues that dining on board cruise ships provides guests with possibilities for "metaphorical travel" through ethnic and themed restaurants, where guests transcend themselves to other cultural identities through food consumption. The effect of tipping policies on the customer dining satisfaction was also explored by Lynn and Kwortnik (2015) who concluded that guests rated their cruise more positively when they sailed under a voluntary-tipping policy. However, the dining experience on cruise ships itself has never been empirically tested and to this date a holistic model for cruise ship dining experiencescape, does not exist.

Gender is considered to be a salient factor that molds consumers' behavior (Brown and Osman, 2017). Thus, robust evidence demonstrates significant differences between men and women regarding the consumption of tourism products and services (Figueroa-Domecq et al., 2015). In contemporary societies women are relaying their free spirit into every pore of their life including travel and dining (Liu and Li, 2020). Females enjoy traveling as it provides them with an escape from daily routines, social bonding and pleasure (Durko and Stone, 2020). Furthermore, with an increased number of female cruise travelers, there is a growing demand for female-centered itineraries based on interests and connecting women with other women (Cruise Lines International Association, 2018). According to Chrusciel (2018) female bachelor travelers tend to be attracted to cruises because these are notoriously romantic, featuring candlelit dinners and colorful sunsets. A further study by Karl et al. (2020), conducted in the midst of the COVID-19 pandemic showed that middle aged female travelers are willing to consider traveling to destinations affected by health risks. Buckley et al. (2016) outline how leisure plays an important role in recovering mental health in women. More precisely, following the deterioration of

women's mental health during COVID-19 pandemic lockdowns, it is of paramount importance to acknowledge that psychological wellbeing of women may depend heavily on commercial tourism businesses (Buckley and Westway, 2020) including cruise line companies. Finally, as female oriented research articles attract less citations (Figueroa-Domecq et al., 2015), scholars should not be discouraged to pursue female oriented topics, as such papers are the cornerstone in creating gender equality in tourism knowledge (Chambers et al., 2017). In pursuit of gender equality, it is important to acknowledge that female oriented studies have improved academic knowledge as they have opened new avenues of thinking and knowing (Pritchard, 2018).

The pioneering study described here sets out to investigate the cruise ship dining experiencescape under the impact of the COVID-19 pandemic. In particular, this research explores a cruise ship dining experiencescape based on Mehrabian and Russell (1974) stimulus-organism-response (S-O-R) paradigm with respect to the relationships between perceived crowdedness, dining atmosphere and interaction with other guests, emotions and approach behavior, under the moderation of perceived health risks from COVID-19. The significance of moderators relates to their capacity to enhance comprehension of the relatedness that exists between independent and dependent variables (Khan et al., 2020). To accomplish this task, the following research question is addressed: How is the COVID-19 pandemic changing the cruise ship dining experiencescape among female cruise travelers?

With the aim of enhancing academic literature on the topic of the dining experience and the COVID-19 pandemic effects on the dining experiencescape, coupled with strategic recommendations for improving guests' dining experiencescape, the authors propose four main research objectives. In particular, the present research aimed 1) to develop a dining experiencescape model based on Mehrabian and Russell (1974) S-O-R paradigm, 2) to empirically test the impact of the COVID-19 pandemic on cruise ship dining experiencescape among female cruise travelers, 3) to unearth the moderating role of the perceived health risk from COVID-19, and 4) to uncover the mediating role of emotional responses in the cruise context.

The theoretical value and originality of the present research it is evidenced by the uncovering of particular relationships within dining experiencescape under the influence of COVID-19 pandemic with reference to female travelers. Practically, this study can assist the struggling cruise industry by offering a dining experiencescape model grounded in empirical research that can guide cruise line companies on how to elicit guests' positive emotions and approach behavior.

2. Literature review

2.1. Cruise ship dining experiencescape and proposed research framework

Experiencescape is a relatively new concept based on a multidisciplinary approach with a special emphasis on the culture of hospitality where "sensory, functional, social, natural and cultural stimuli in a product or service environment, (...) result in positive or negative cognitive, affective, and behavioral reactions toward products, services, brands, and firms." (Pizam and Tasci, 2019, p. 26). In this study, a cruise ship dining experiencescape is established based on Mehrabian and Russell (1974) S-O-R paradigm. The authors propose that an environment poses a particular feature that can induce stimuli (S) which have influence on organisms (e.g. guests; O) that fundamentally shape guests' approach or avoidance response (R) behaviors toward the environment. By extension, a favorable cruise ship dining experiencescape can lead to behavior outcomes such as: booking a seat at a cruise ship dining room and/or themed restaurant, the intention to recommend the cruise ship dining rooms and/or themed restaurants, and a repurchase intention towards another cruise. Essentially, Mehrabian and Russell (1974) S-O-R paradigm can be used to uncover the nature of cruise ship dining environment prompts (e.g., human density, spatial crowdedness, music,

ambient temperature, color, lighting, socialization among guests) and their analogous prevalence on guests' emotional responses. These emotional responses can lead to approach or avoidance responses to the cruise ship dining environments. According to the S–O–R, we argue that guests experience an inner metamorphosis through positive or negative affective responses, which create the conditions of behavioral responses. Thus, if guests are exposed to cruise ship environment stimuli, their behavioral responses might change and eventually transformation occurs.

The cruise ship dining experiencescape is a context specific holistic concept that echoes the Pizam and Tasci (2019) experiencescape and Tasci and Pizam (2019) expanded nomological network of experiencescape. The validity of the notion of the dining experiencescape is supported by recent empirical studies in cruise experience (Calza et al., 2020; Radic, 2018; Radić and Popesku, 2018), dining experience (Taylor et al., 2018; Hanks and Line, 2018) cuisine creativity (Leong et al., 2020) theme park experience (Torres et al., 2019), hot spring resorts experience (Chang, 2016) lodging industry (Lee, 2019), tourism event experience (Le et al., 2020), substantive and communicative servicescape (Park et al., 2019), upscale hotel experience (Choi and Kandampully, 2019) and hotel lobby design (Nanu et al., 2020).

Table 1 demonstrates the effect of the physical and social environments on emotional responses and behavioral intentions. However, none of those studies have investigated the positive effect of the physical and social environments on the emotional response: a) under the moderating influence of perceived health risks, b) in the context of cruise ship dining, c) during a global health crisis, d) from the perspective of female travelers, and e) using Tasci and Pizam (2019) expanded nomological

network of experiencescape. Thus, our study possesses originality as it offers important theoretical contributions.

Drawing on Mehrabian and Russell (1974) S–O–R paradigm and Tasci and Pizam (2019) conceptualization of expanded nomological network of experiencescape, we developed a conceptual framework of the cruise ship dining experiencescape (Fig. 1) that explains how under the influence of the COVID-19 pandemic, cruise ship dining environment stimuli dimensions (perceived crowdedness, dining atmosphere and interaction with other guests) are individually evaluated by the guests, leading to their emotional responses and behavioral intentions. In the aforementioned conceptual framework, these three independent stimuli dimensions are moderated by one independent factor, i.e. perceived health risks from COVID-19.

Thus, based on the conceptual framework of this study (Fig. 1) and Pizam and Tasci (2019) definition of experiencescape, we argue how the cruise ship dining experiencescape is a manmade environment staged for theatrical interplay between the guests and between the service employees and the guests themselves, with the sole purpose of inducing multisensory and social stimuli, that provokes the positive or negative affective and cognitive responses, which ultimately lead to guests approach or avoidance behavior.

2.2. Hypothesis development

2.2.1. Perceived crowdedness

The notion of perceived crowdedness is based on the density of humans in a specifically arranged environment. Perceived crowdedness is an important part of social servicescape that encompasses social

Table 1
Review summary of relevant studies.

Authors	Focus	Underlying Theory/Model/ Concepts	Important finding/ Issue addressed
Calza et al. (2020)	The relationships between the onboard environment, overall satisfaction, perceived value and behavioral intentions with the moderating effects of gender, employment status, group composition and the propensity to stay on board.	Shipshape, perceived value, consumer satisfaction and behavioral intentions.	Onboard environment is a good predictor of behavioral intentions, however, aforementioned relationship is strongly mediated by satisfaction and perceived value.
Radic (2018)	Exploration of the building components of onboard cruise experience.	Service theater, experience economy domains, service quality, experienced emotions.	The building components of the onboard cruise experience are service quality, experienced emotions and four realms of experience economy.
Radić and Popesku (2018)	The quality of cruise experience.	Service theater, experience economy domains, service quality, experienced emotions (PAD).	Experienced emotions positively influence satisfaction and future behavior.
Taylor Jr. et al. (2018)	Assessing the relationships between experiential value-relationship quality, and relationship quality-behavioral intentions within the context of the pop-up restaurant industry.	Unspecified.	Experiential value of pop-up restaurants is leading to increased levels of relationship quality, while relationship quality is leading to an increase in behavioral intentions.
Hanks and Line (2018)	Understanding the effects of the service environment on consumption behavior.	Unspecified.	The social servicescape is a robust predictor of attitude, satisfaction, and post-consumption behavioral intentions.
Leong et al. (2020)	The effect of food as stimuli on customer emotions in a restaurant setting.	The Stimulus-Organism.	The effect aesthetic aspect of food is the most influential factor on customer emotions.
Torres et al. (2019)	The emotions generated by service encounter within the theme park setting.	The Positive and Negative Affect Schedule (PANAS).	The positive emotions are linked to rides, dining, and interacting with others, while negative emotions are linked to buying tickets.
Chang (2016)	Service climate and employee engagement as firm-level moderators of the individual-level stimulus(servicescape)–organism (customer emotions)–response (behavioral intentions) relationship.	The Stimulus-Organism-Response.	The study extends the S–O–R by demonstrating outcome variables are not limited to individual-level effects as environmental characteristics are of major considerations.
Lee (2019)	The effect of biophilic design in the lodging industry.	The scenario-based experiment.	Biophilic designs elicited stronger positive emotional and behavioral responses than the standard design.
Le et al. (2020)	Affect-driven behavior.	Cognitive appraisal theory.	The elicitation of positive emotions guides consumer behavior in goal striving and novelty seeking.
Park et al. (2019)	The relationships between substantive and communicative servicescape, positive affect, satisfaction, and behavioral intentions	Unspecified.	Substantive and communicative servicescape positively influence positive affect, under the moderating impact of brand familiarity.
Choi and Kandampully (2019)	Identification of the atmosphere elements that are enabling customers to engage with the hotel.	The Stimulus-Organism-Response.	Social and room design are significant antecedents to customer satisfaction.
Nanu et al. (2020)	Elements of the hotel lobby design that influence guest booking intentions.	The Stimulus-Organism-Response.	The lobby interior design style has a significant impact on booking intention across different generations.

interactions between the guests, consequently the perception of human and spatial crowdedness acts as stimulus for customers' emotional response (Hanks and Line, 2018). Human crowdedness on cruise ship dining rooms is a common occurrence (Centers for Disease Control and Prevention, 2020a). Accordingly, Hanks et al. (2017) argue that guests experience positive emotions during fine dining with high spatial crowdedness due to a heuristic processing of dining atmospherics and the interaction with other guests. Spatial crowdedness in cruise ship dining rooms is associated with excessive pressure on dining rooms' seating capacity induced by cruise lines' marketing activities. Hence, the perception of a cruise ship dining room leaves the impression of an attractive, nonetheless, noisy and densely built environment (Ward, 2019). The level of human density in a particular environment is a robust stimulus that evokes both, positive and negative emotional responses based on guests' expectations for a particular venue (Hanks, Line and Kim, 2017). Furthermore, in Tasci and Pizam (2019) expanded nomological network of experiencescape, these authors argue that human crowdedness can have a positive effect on consumers' emotional responses. In a recent study on motivation and satisfaction of U.S. tourists in restaurants, Jia (2020) has concluded that U.S. tourists are fun-seeking individuals who are comfortable with high human density in restaurants. Customers' intention to choose dining with high spatial and human crowdedness can be understood through the concept of herd behavior where the effects of servicescape and social servicescape lead to positive emotional responses and approach behavior (Ha et al., 2016). This type of behavior was also noticed during the COVID-19 pandemic when Lee and You (2020) demonstrated how physical distancing and avoidance of spatial crowdedness in places such as restaurants was lowest among the precautionary behaviors. It is the human need for socializing that drives most people to choose crowded restaurants despite the COVID-19 pandemic (Renner, 2020). Consequently, we put forward following hypothesis:

Hypothesis 1. Perceived crowdedness of cruise ship dining rooms has a positive impact on female guests' emotional responses.

2.2.2. Dining atmosphere

The cruise ship dining environment (e.g. color, background music, lighting, furniture, air quality and ambient temperature, cleanliness of dining room and seating arrangements) as a core aspect of food service, represents a principal component in framing the cruise ship dining experiencescape. The functional components of the service environment have a tremendous impact as they arouse consumers' sensory reactions, hence influencing customer's cognitive and emotional responses (Tasci and Pizam, 2019). Dining atmospherics have a strong, robust influence on solo dining in Chinese restaurants where physical settings such as communal tables and solo tables evoke positive emotions such as relaxation and enjoyment (Choi et al., 2019). Chang (2016) argues that consistent and carefully designed environment color, background music, and decoration could be stimuli that incite customer perception of the uniqueness of the ambience which is an important starting point for creating guests' positive emotions. Tangible and aesthetic elements of environment that enhance consumers' hedonic consumption are strong stimuli that can lead to consequences in the form of positive emotions such as pleasure, and an overall favorable memorable experience (Torres et al., 2019). Thus, based on the academic literature and empirical studies, we propose the following hypothesis:

Hypothesis 2. The cruise ship dining atmosphere has a positive impact on female guests' emotional responses.

2.2.3. Interaction with other guests

Cruise ship dining rooms, ethnic restaurants and themed restaurants are places where guests, motivated by empathy, and the basic human drive to share resources and experiences, socialize with each other while they indulge themselves in hedonic consumption. Hedonic consumption always carries certain emotions attached to it, because endorphins

correlated with positive emotions such as pleasure are stimulated by guests socializing (Renner, 2020). Moreover, positive emotions such as pleasure are correlated with endorphins due to increased dopamine production. Thus, guests on cruise ships enjoy socializing in dining rooms because such behavior activates reward pathways in their brains. Torres et al. (2019) found that guests have a profound effect over each other's emotional and cognitive responses. In the context of cruise ship dining experiencescape this is most likely intensified by the nature of the cruise experience where guests who are essentially strangers to each other, spend prolonged, close contact, repeatedly sharing dining facilities. Dynamic consumer interaction as a part of hospitality industry experiential innovativeness can lead to favorable outcomes such as positive emotional responses and long-term relationship (Kim et al., 2018). Her and Seo, (2018) in their study on solo dining intentions with respect to other consumers in a restaurant, found how other consumers take a part in the explanatory contribution that influences the emotional response from solo diners. Interaction between the guests through socialization in the form of food consumption, chatter and observation of others has a significant impact on individual emotional response and overall dining (Cao et al., 2019). Hence, the aforementioned justification led to the following hypothesis:

Hypothesis 3. Interaction with other guests while dining on a cruise ship has a positive impact on female guests' emotional responses.

2.2.4. The moderating role of perceived health risk from COVID-19

Risk is deep-rooted in our daily lives (Ritchie and Jiang, 2019) and it is even more influential during the COVID-19 pandemic as people are considering booking a cruise as their preferable choice of leisure (Radic et al., 2020). Perceived health risk is the manifestation of the imminent reaction of tourists' or hospitality customers' when they feel that their physical health is threatened by the uncontrolled event such as a pandemic (Shin and Kang, 2020). In a recent survey conducted by the CDC, the general public opinion related to the resuming of cruises in the U.S. was quite favorable (Centers for Disease Control and Prevention, 2020d), despite the surge of new positive cases of COVID-19 across the U.S. Almost the entirety of 1616 participants indicated that improved public health safety protocols (e.g. medical screening prior to boarding, improved air ventilation and enhanced cleaning and sanitation frequencies) would significantly boost their confidence and positive perception related to high human and spatial density, dining atmosphere and interaction with other guests while being on cruise ships. Subsequently, on November 15, 2020 more than 100,000 people have applied for cruise trials (Cruise Industry News, 2020a) despite CDC's (Centers for Disease Control and Prevention, 2020e) plea to stay at home and avoid crowded spaces considering the prevalence of COVID-19 health risk. Therefore, we propose the following hypothesis:

Hypothesis 5a. Perceived health risks from COVID-19 have a significantly positive moderating influence in the relationship between the perceived crowdedness of the cruise ship dining rooms and female guests' emotional responses.

Major cruise line companies claim that booking trends have clearly demonstrated how cruisers are interested in sailing and dining on cruise ship despite the COVID-19 pandemic (Hines, 2020). These results are supported by the recent record in daily bookings by Regent Seven Seas Cruises (Cruise Industry News, 2020b) and consumers' willingness in the midst of the COVID-19 pandemic to pay US\$496 to dine in a crowded parked airplane (BBC News, 2020). Nevertheless, perceived health risk does affect consumers' confidence under the impact of the COVID-19 pandemic as only 22% of Americans are very confident to dine in crowded indoor restaurants and 23% are very confident to book a hotel or similar accommodation in next 30 days (Crabtree and Berg, 2020). If cruise line companies can provide empirical evidence that the enhanced public health safety protocols are providing a safe dining environment, consumers' confidence may be boosted in a way that they reengage with

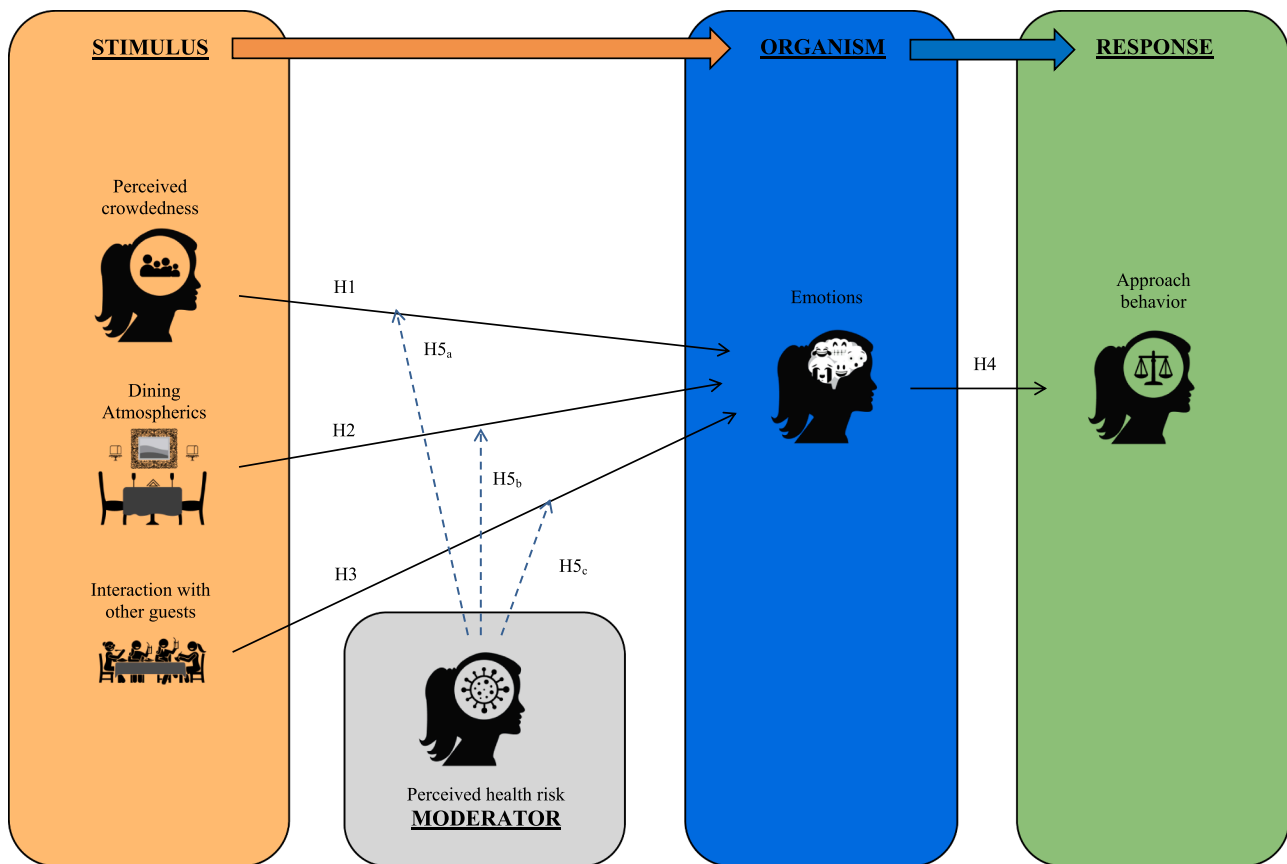


Fig. 1. Proposed conceptual model.

the cruise ship dining services. Hence, the following hypothesis is proposed:

Hypothesis 5b. . Perceived health risks from COVID-19 have a significantly positive moderating influence in the relationship between cruise ship dining atmosphere and female guests' emotional responses.

Cruise travel has been perceived as a safe holiday from a public health perspective (Baker and Stockton, 2013; Holland, 2020). On November 21, 2020, the CDC issued a level 4 warning with the recommendation that all people should avoid travel on cruise ships because of the very high risk of COVID-19 (Centers for Disease Control and Prevention, 2020f). Consequently, cruise line companies have been forced to reinvent their dining services by providing safe social servicescapes from a public health perspective (Shortsleeve, 2020). Despite the health risk, passengers are motivated to take a cruise during the COVID-19 pandemic, believing that they could enjoy interacting with other passengers in dining rooms (Ng, 2020). Saad (2020) outlined how 40% of U. S. women are going out for socializing and are not worried that they might contract COVID-19. Moreover, Romanenko (2020) argued how mature passengers feel devastated by losing a full year of socialization in cruise ship dining rooms, and thus they feel encouraged to book a cruise in 2021 (Romanenko, 2020). Consequently, we put forward the following hypothesis:

Hypothesis 5c. . Perceived health risks from COVID-19 have a significantly positive moderating influence in the relationship between interaction with other guests and female guests' emotional responses.

2.2.5. Emotions and approach behavior

The cruise experience is a highly emotional, memorable event (Radic and Popesku, 2018) that is co-created by the multisensory servicescape and interactive social servicescape (Radic, 2019). Thus, positive emotional responses evoked from hedonic consumption under the

influence of dining stimuli have a direct influence on purchase intention (Kim and Song, 2020). Mengual-Recuerda et al. (2020) have used neuromarketing techniques to measure the emotional response to haute cuisine in a Michelin starred restaurant, and these authors confirmed that emotional arousal had a positive effect on future behavior related to dining choices. The positive emotional response from dining can lead to a memorable experience, which has a long-lasting impact as it influences consumers' future decisions and behavior (Sthapit et al., 2017). Positive emotions elicited by the ethnic setting and cultural aspects of background music led to an enjoyable experience for customers who dined with their families to the point where such customers expressed positive behavioral intention (Wen et al., 2020). Moreover, emotional responses such as pleasure, which are elicited under the influence of ambient stimuli, have a significant positive affect on customers' approach behavior (Bufquin et al., 2020). Similarly, positive emotions, both pleasure and arousal have a significant, positive, indirect effect on loyalty, and satisfaction has a significant positive direct effect on approach behavior (Carneiro et al., 2019). Based on emotional contagion theory, guests' social interactions positively affect guests' emotional experiences, that lead to favorable behavioral intentions (Chang, 2016). In tourism and hospitality it is considered that customers who exhibit approach behavior are more likely to revisit, repurchase and spread positive word of the mouth (Bowie et al., 2017). Consequently, the following hypothesis is proposed:

Hypothesis 4. Female guests' emotions have a positive impact on approach behavior.

3. Methods

This study adopted a post-positivistic paradigm which, as Creswell and Creswell (2017) argue, anticipates the imperfection of observation in human behavior studies; accordingly, all theories can be amended. It

also adopted an action research strategy which permits the researchers to apply various frameworks of contemporary knowledge in untangling actual industry concerns (Coghlan, 2019). A cross-sectional survey and covariance-based structural equation modeling (CB-SEM) were applied to evaluate the research model. CB-SEM allows testing and validation of current theories and comparisons of different theories (Hair et al., 2017). *In nuce*, a deductive approach accompanied by a cross-sectional time horizon and quantitative techniques for data collection were used in this study.

3.1. Sampling and data collection procedure

The community of our attention was composed of experienced female guests who had dined multiple times at cruise ship dining rooms, themed restaurants and ethnic restaurants in the previous 18 months. Female guests were chosen for this study because they represent the dominant gender within cruise travelers (Cruise Lines International Association, 2018) and due to their higher tendency for health risk perception (Karl et al., 2020). To thoroughly explore the nature of the conceptual model of the dining experiencescape, data were collected via a self-administrated online survey using cloud-based software (Survey-Monkey®) over a seven week period between September and October 2020. A purposive sampling technique was applied in this study because as Teerovengadam and Nunkoo (2018) argue, such a technique provides well-chosen participants established according to certain criteria. Possible female participants were invited to take part in the survey via Facebook groups including “Carnival Cruise Dining,” “Princess Cruises - Passenger Forum,” “Celebrity Cruises,” “Royal Caribbean Cruising,” “MSC Cruises Fan Page,” “Norwegian Cruise Line (NCL) Latitudes Members,” “Holland America Line Fans,” “Costa Cruise Lines Fans,” “P&O Cruises - UK Fan Page”, and via the Cruise Critic group “Cruise Foodies”.

Potential female participants were introduced to the purpose of the study via a short explanatory section that was incorporated in the survey. Individuals that understood the purpose of the study and agreed to participate in the survey qualified to continue with the screening questions of the questionnaire. Screening questions were used to verify that only those guests who have cruised before and who had dined multiple times at dining rooms, themed restaurants and ethnic restaurants, participated in the survey. Individuals were asked to answer on a nominal scale (“yes” or “no”) to the following questions, “Have you cruised in the last 18 months?” and “Have you dined multiple times in one of the cruise ships’ dining rooms, themed restaurants and ethnic restaurants?”. A total of 402 questionnaires were valid and the average time taken by respondents to complete questionnaire was 18 min. Lastly, truthful revealing of undisclosed information while completing the survey, was encouraged, by assuring confidentiality and anonymity of the respondents.

The sample was composed of 402 females from dominant cruise passenger markets (88% from North America and 12.0% from Europe). The participants’ ages fell within 30–60 + years old, with 70.4% being older than 60 + . Regarding the education level, 51.7% indicated that they have a university degree while 33.3% specified that they had a college degree. Moreover, 6.2% reported that they have a high school degree and 8.7% confirmed that they have a graduate degree. Lastly, the vast majority (98.8%) had cruised more than four times while 91.3% indicated that they cruised without children.

3.2. Measures

The survey contained a mix of multi-item and dual-item measures (see Appendix A for a complete list of items). Scale items to measure the variables were adopted from validated measurement items from the existing literature and were anchored on a 5-point scale. Perceived crowdedness had three items (e.g. “Too many people are in this dining room”) and was measured with adjusted scales based on Machleit et al.,

(1994), Quan and Han (2019). Ryu and Jang (2008) DINESCAPE scale was adjusted to measure dining atmospherics with four items (e.g. “The furniture, tablecloth and cutlery make me feel special”). Interaction with other guests had two items (e.g. “Interacting with other guests is interesting”) and was measured with an adjusted scale from Radić, and Popesku (2018). Emotions with pleasure and arousal components were measured with two items from an adjusted Pleasure-Arousal-Dominance (PAD) emotional state model (Mehrabian and Russell, 1974). Lastly, Perceived health risk with three items (e.g. “The thought of dining at a cruise dining place makes me anxious although the COVID-19 pandemic is completely under control (or ceased) in the future”) was measured with adjusted scale from Al-Ansi, Olya and Han (2019), while approach behavior with three items (e.g. “When other people ask you about your dining rooms experience on board cruise ship you will tell them positive things”) was measured with an adjusted scale from Radić et al. (2019). In a pre-test, the initial version of the survey questionnaire including these measurement items and questions about personal characteristics were thoroughly reviewed by academic experts and improved accordingly.

4. Results

4.1. Reliability and validity assessment

Scale validity and measuring model fit was achieved through a confirmatory factor analysis (CFA). The result of the CFA showed that the model included a satisfactory level of the goodness-of-fit statistics ($\chi^2 = 278.170$, $df = 104$, $\chi^2/df = 2.675$, $p < .000$, $RMSEA = 0.065$, $CFI = 0.947$, $IFI = 0.948$, $TLI = 0.931$). All standardized loadings between observed variables and latent factors were significant ($p < .01$). Complete details of the CFA results are exhibited in Table 2.

Values for composite reliability ranged from .701 to .960, thereby, the internal consistency of the construct measures was achieved as all values were above the suggested cutoff of .700 (Hair et al., 2019). Regarding the average variance extracted, values fell between .149 and .75. Additionally, as manifested in Table 2, the average variance extracted AVE values were all greater than the square of between-variable correlations. Accordingly, the convergent validity and discriminant validity of the measurement items were apparent (Hair et al., 2019).

4.2. Structural model and hypotheses testing

In this study structural equation modeling (SEM) with a maximum likelihood estimation approach was performed. The results of the SEM (Table 3) revealed that the model had an adequate level of goodness-of-fit statistics ($\chi^2 = 236.091$, $df = 70$, $\chi^2/df = 3.373$, $p < .000$, $RMSEA = 0.077$, $CFI = 0.910$, $IFI = 0.911$, $TLI = 0.883$) (Hair et al., 2019).

In summary, the proposed conceptual framework was deemed adequate for the total variance in emotions (18%) and approach behavior (23.8%), which were within the acceptable levels for studies in social sciences, as per Aneshensel (2013). Furthermore, the hypothesized relations between study variables were assessed. As laid out in Table 3, perceived crowdedness was not a significant predictor of female guests’ emotions ($\beta = 0.001$, $p > .05$). However, dining atmosphere showed a significant and positive influence on female guests’ emotions ($\beta = 0.219$, $p < .01$). Similarly, interaction with other guests demonstrated a significant and positive influence on female guests’ emotions ($\beta = 0.274$, $p < .01$). Consequently, Hypothesis 1 was not supported, however Hypotheses 2 and 3 were supported. Hypothesis 4 was also supported as female guests’ emotions illustrated a significant and positive influence on participants’ approach behavior ($\beta = 0.488$, $p < .01$).

4.3. Test of moderating effect

To evaluate the hypothesized moderating effect of the perceived

Table 2
Discriminant validity.

Constructs	1	2	3	4	5	6	Composite reliability
1. Perceived health risk	.943						.960
2. Dining atmospherics	.075	.699					.792
3. Interaction with other guests	-0.049	.473	.736				.701
4. Emotions	.192	.337	.357	.825			.809
5. Approach behaviors	-0.041	.263	.332	.472	.762		.803
6. Perceived crowdedness	.018	.278	.429	.173	.149	.696	.732

Goodness-of-fit statistics: $\chi^2 = 278.170$, $df = 104$, $p < .000$, $\chi^2/df = 2.675$, $RMSEA = 0.065$, $CFI = 0.947$, $IFI = 0.948$, $TLI = 0.931$

Note: Squared AVE values are shown on the main diagonal (**Bolded**).

health risk, a test for metric invariance was examined. Using a cluster analysis based on perceived health risk from COVID19, a total of 283 respondents were grouped into a high perceived health risk group and 119 respondents into a low perceived health risk group. Furthermore, a baseline model comprised of these groups was produced. Results demonstrated that the conceptual model had an acceptable level of the goodness-of-fit statistics ($\chi^2 = 398.599$, $df = 200$, $\chi^2/df = 1.993$, $p < .000$, $RMSEA = 0.050$, $CFI = 0.903$, $IFI = 0.906$, $TLI = 0.868$). A juxtaposition was performed between produced baseline model and a sequence of nested models where a specific relationship is limited to be parallel over high and low groups of perceived health risk. Subsequently, a chi-square test was used for this comparison.

Table 4 and Fig. 2 summarize the baseline model assessment and the results of the chi-square test. Results revealed that the moderating role of perceived health risk was not significantly different between the two groups as indicated on the path from perceived crowdedness to emotions ($\Delta\chi^2 [1] = 0.961$ $p > .05$). This result shows that Hypothesis 5_a was not supported. Conversely, the result of the structural invariance assessment demonstrated that the connection between dining atmosphere and emotions significantly differed between high ($\beta = 0.241$) and low ($\beta = 0.193$) groups although chi-square difference across groups did not differ significantly ($\Delta\chi^2 [1] = 0.006$, $p > .05$). Accordingly, perceived health risk significantly moderates the relationship between both constructs and, thus, Hypothesis 5_b was supported. Similarly, the link from interaction with other guests to emotions was also significantly different between the two factors (High = $\beta = 0.224$, Low = $\beta = 0.354$) groups ($\Delta\chi^2 [1] = 0.287$ $p > .05$). Thus, Hypothesis 5_c was supported.

5. Discussion

The cruise ship dining experiencescape model developed on Mehribanian and Russell (1974) S–O–R paradigm and on Tasci and Pizam (2019) expanded nomological network of experiencescape managed to

Table 3
Structural model assessment (n = 402).

Hypothesized paths	Coefficients	t-values	Supported or Not
H1 Perceived crowdedness → Emotions	.001	.013	Not supported
H2 Dining atmosphere → Emotions	.219	2.993**	Supported
H3 Interaction with other guests → Emotions	.274	3.149**	Supported
H4 Emotions → Approach behaviors	.488	7.718**	Supported
Indirect effect on Approach behaviors:	Total variance explained:		
Perceived crowdedness = 0.000	R ² for Emotions = 0.180		
Dining atmosphere = 0.107**	R ² for Approach behaviors = 0.238		
Interaction with other guests = 0.134**			

Goodness-of-fit statistics: $\chi^2 = 236.091$, $df = 70$, $p < .000$, $\chi^2/df = 3.373$, $RMSEA = 0.077$, $CFI = 0.910$, $IFI = 0.911$, $TLI = 0.883$

** $p < .01$

make an important contribution to the understanding of female cruise travelers’ emotional responses and approach/avoidance behavior during the COVID-19 pandemic. As seen in Fig. 2 the recomposed cruise ship dining experiencescape model under the influence of the moderating effect of perceived health risk from COVID-19, leads towards positive emotional responses and approach behavior.

In the stimuli domain dining atmosphere and interaction with other guests showed positive effect on the guests’ emotional responses. This is due to the human brain that rewards social behavior with positive neurochemical feedback loops. As social interaction has been essential to the continuity of our progenitors for least 800,000 years, it might be that the human brain is hardwired to become addicted to social interactions (Renner, 2020). Women socialize more than men (Yarrow, 2018), and despite the fact that 60% of U.S. women are worried that they might contract COVID-19 (Saad, 2020), prohibiting cruises and closing the dining rooms on cruise ships as a mean of fighting COVID-19 appears ineffective. These findings are supported by recent studies that showed that 45% of women prefer socializing outside their workplace including restaurants (Miller and Adkins, 2020) while 41% of women feel less connected during the COVID-19 pandemic (McCarthy, 2020).

In this study, perceived crowdedness as stimulus did not have a positive effect on the guests’ emotional responses. This is understandable as from March 1 to July 10, 2020, human density and spatial crowdedness on cruise ships led to 99 COVID-19 outbreaks on 123 different cruise ships (Centers for Disease Control and Prevention, 2020a). Hence, despite the fact that cruise line companies have declared that they will operate at reduced capacities, this did not resonate enough with female cruise travelers in a way to change their perception of crowdedness in cruise ship dining rooms. This is most likely due to the influence of mass media that labeled cruise ships as crowded “petri dishes” during the COVID-19 cruise tourism crisis (Radic et al., 2020).

Examination of the structural invariance assessment revealed that the interconnections between dining atmosphere and emotions, and between interaction with other guests and emotions were significantly influenced by perceived health risk from COVID-19. The robustness of the interrelations was greater in the high perceived health risk group than in the low perceived health risk group. Moreover, these results suggest that under the indistinguishable extent of dining atmosphere and interaction with other guests, female cruise travelers with high perceived health risk from COVID-19 experience intensified emotions compared to those with low perceived health risk from COVID-19. Because of likely increased confidence of female cruise travelers based on their advanced knowledge about the COVID-19 pandemic and cruise ship enhanced public health safety protocols, capitalizing on the postulate of female cruise travelers’ perceived health risk from COVID-19 as the moderator might be of paramount importance for deciphering female cruise travelers’ emotional responses and their approach behavior. It appears that advanced public health safety protocols (e.g. medical screening prior to boarding, improved air ventilation and enhanced cleaning and sanitation frequencies) are increasing the consumers’ confidence and are appealing to female cruise travelers. The findings suggest that despite the emotional intensity of the COVID-19 pandemic, female cruise travelers are adapting to the “new normal”. These results are supported by a recent study by Crabtree (2020) who

Table 4
Metric invariance results for perceived health risk from COVID-19.

Paths	High group (n = 283)		Low group (n = 119)		Nested model (Constrained to be Equal)	Non-restricted
	Beta	t-value	Beta	t-value		
H5 _a : Perceived crowdedness → Emotions	.049	.660	.025	.116	χ^2 (200) = 398.599 χ^2 (200) = 398.599 χ^2 (200) = 398.599	χ^2 (201) = 398.602 χ^2 (201) = 398.605 χ^2 (201) = 398.886
H5 _b : Dining atmosphere → Emotions	.241	2.791 **	.193	1.442		
H5 _c : Interaction with other guests → Emotions	.224	2.328*	.354	1.551		
Chi-square difference test:					Goodness-of-fit statistics for the baseline model:	
a $\Delta\chi^2$ (1) = 0.002, p = .961, > 0.05 (Not supported)					χ^2 = 398.599, p < .000, χ^2/df = 1.993, RMSEA = 0.050,	
b $\Delta\chi^2$ (1) = 0.006, p = .938, > 0.05 (supported) ^a					CFI = 0.903, IFI = 0.906, TLI = 0.868	
c $\Delta\chi^2$ (1) = 0.287, p = .592, > 0.05 (supported) ^a						

* p < .05.

^a While dining atmosphere (H5_b) and interaction with other guests (H5_c) linkages to emotions for the high group were significant, the (H5_b) and (H5_c) paths for the low group were not significant. Thus, although chi-square difference across groups did not differ significantly, these hypotheses are supported.

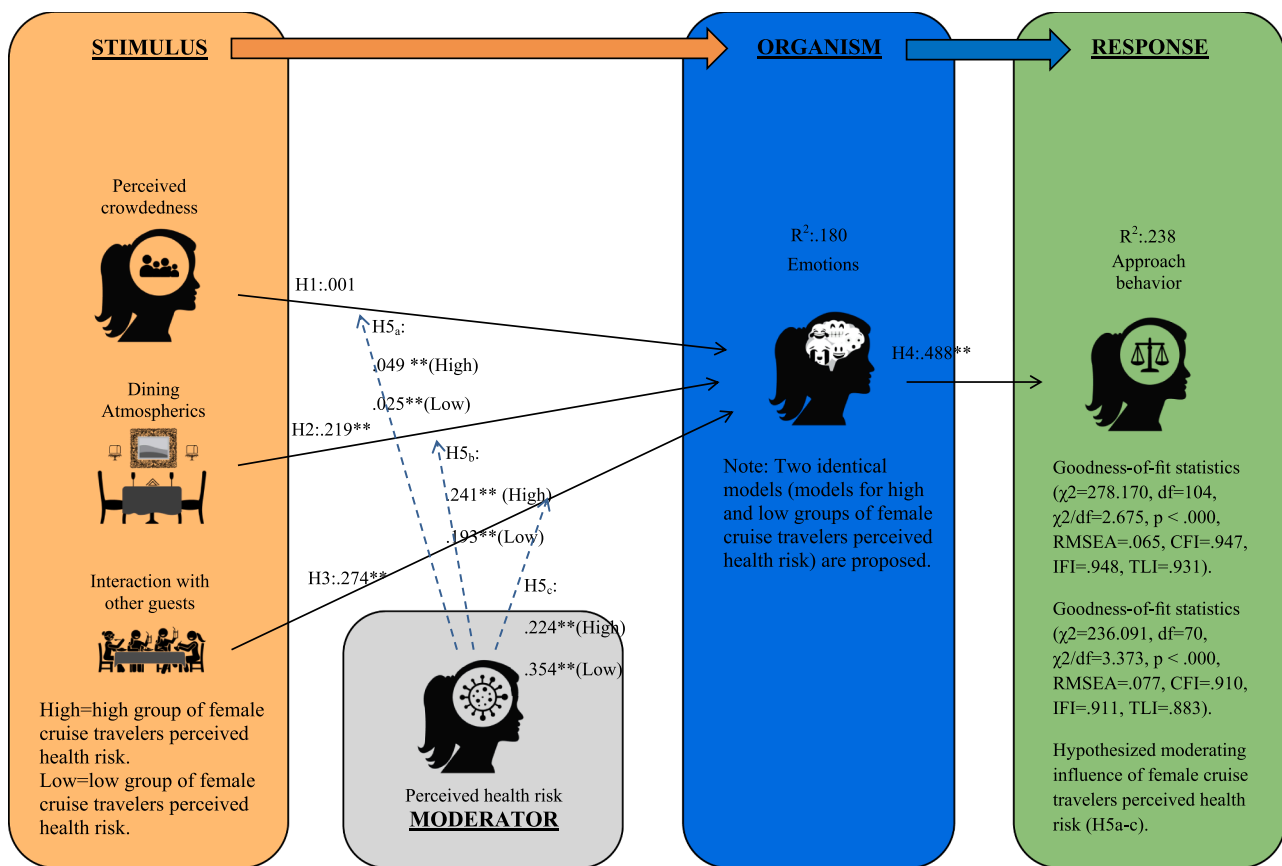


Fig. 2. Results of the structural model and invariance model.

found that during the COVID-19 pandemic 21% of U.S. residents said they or someone in their household had dined at a indoor/outdoor restaurant in the past 24 h, while 39% of U.S. residents said they would likely eat in a restaurant with 75% capacity. Similarly, [Dataessential report \(2020\)](#) shows that 38% of U.S. residents would dine in an inside sit-down restaurant, 50% would dine in an outdoor seating area of a restaurant, while among consumers who have eaten at restaurants throughout the COVID-19 pandemic, 41% will continue to do so, even with new CDC’s learnings.

Humans recall with their feelings, where authentic memories as human responses are not in details of the memory, but in the strength of experienced emotions. Emotional responses within the domain of the organism in the proposed framework showed that female cruise travelers hold predominantly robust, positive emotions such as pleasure and arousal towards the cruise ship dining experiencescape. This can be

ascribed to the likelihood that in the cruise ship dining rooms, positive emotions are effortlessly stimulated because the cruise ship dining experiencescape is particularly guided by hedonic principle. Consequently, findings of this study also suggest that positive emotions from the cruise ship dining experiencescape are remembered by preference over negative emotions.

Lastly, this study showed that approach behavior within the approach or avoidance response domain is influenced by the emotional responses. More precisely, it appears that female cruise travelers are exhibiting certain psychological traits which allow them to recognize the context of perceived health risk from COVID-19, build up self-confidence and experience positive emotions from the cruise ship dining experiencescape. Consequently, due to the impact of positive emotions elicited from dining atmosphere and interaction with other guests, female cruise travelers choose approach response as their future

behavior.

5.1. Theoretical implications

The novelty of the present study is that it is the first study to assess the cruise ship dining experiencescape among female cruise travelers during the COVID-19 pandemic. This study revealed a state-of-the-art social phenomenon within the domain of cruise tourism and hospitality with regard to the cruise ship dining experiencescape. Our research employed Mehrabian and Russell (1974) S–O–R paradigm, and Tasci and Pizam (2019) expanded nomological network of experiencescape were used to illustrate a process in which female cruise travelers can feel positive emotions in cruise ship dining rooms during the COVID-19 pandemic. By combining these approaches, we have provided a model that can explain the cruise ship dining experiencescape in time of the COVID-19 pandemic.

This study extends the cruise tourism and hospitality literature, demonstrating that while dining atmosphere and interaction with other guests positively influence guests' emotional response, the influence of perceived crowdedness during the COVID-19 pandemic does not have a positive influence on the emotional response. These findings differ from those in the expanded nomological network of experiencescape conceptualized by Tasci and Pizam (2019). However, the moderating role of perceived health risks from COVID-19 has a significant positive influence on the relationship between the cruise ship dining atmosphere and guests' emotional responses; and between the interaction with other guests and guests' emotional responses. These findings confirmed the expanded nomological network of experiencescape conceptualized by Tasci and Pizam (2019) where personal and situational moderators have an influence on the relationship between stimuli (dining atmosphere and interaction with other guests) and organism (guests' emotional response). Furthermore, in this study it was confirmed that guests' emotional response (organism) has a positive impact on approach behavior (response). Consequently, results of this study confirmed Mehrabian and Russell (1974) S–O–R paradigm and Tasci and Pizam (2019) expanded nomological network of experiencescape in the particular conditions of cruise ship dining rooms during the COVID-19 pandemic.

This study opens new avenues for future research on the cruise ship dining experiencescape. Gössling, Scott and Hall (2020) argue that the cruise industry is doomed without an efficient COVID-19 vaccine, and considering that Dr. Anthony Fauci recently stated that wide vaccination in U.S. will not be available before late 2021 (Miller and Weaver, 2020), cruise line companies are experiencing an existential threat (Radic et al., 2020). This forecast reinforces the need to further investigate the role of the cruise ship dining experiencescape in what Klein (2020) calls "social recession" era with its strong implications on physical distancing.

Lastly, in this research, a theoretically important improvement was made to the existing socio-psychology model (Mehrabian and Russell's S–O–R (1974). Specifically, this research effectively broadened and deepened the S–O–R paradigm by taking into account such crucial conceptualization of Tasci and Pizam (2019) expanded nomological network of experiencescape and such crucial concepts of perceived crowdedness, dining atmospherics, interaction with others, and perceived health risk from COVID-19. The approach of the present study offers theoretically valuable insights into research on cruise travelers' approach decision-making processes and behaviors. Given the ongoing crisis of COVID-19 and its influence worldwide, cruise tourism is facing a stronger crisis than ever. Involving COVID-19 health risk influence, this research offers a valuable guiding framework that helps cruise academics and operators to maximize travelers' positive experiences and behaviors for cruise tourism.

5.2. Practical implications

Cruise line companies are facing uncharted territory as a strict CDC

Conditional Sailing Order has entered in force on November 1, 2020 (Centers for Disease Control and Prevention, 2020b). While there is a glimpse of hope for the cruise industry, there is the real concern about how cruise line companies will face the CDC's strict requirements, and how they might place their businesses at legal risk should they fail to deliver the CDC's strict public health safety protocols.

Once cruise line companies can clearly demonstrate that cruise ships can provide an environment safe from COVID-19, it is suggested that cruise line companies engage in boosting consumers' confidence in a cruise ship dining experiencescape with specifically tailored digital-video marketing content that would target populations' personality traits. These marketing efforts would target populations of interest, mostly on social media networks, and affect their perceived health risk from COVID-19 and so decisively affect their decision-making processes.

Furthermore, cruise line companies should intensify their crisis communication strategies aimed at strengthening the positive impact of dining atmosphere and social interactions on female cruise travelers' positive emotional response. However, it is equally important to mitigate fear and worries of perceived crowdedness in dining rooms by lowering the occupancy on cruise ships and creating open seating dinner arrangements (prolonged dinner service) supported by various technological improvements that would provide real time monitoring of the human density in dining rooms. These practices would reinforce female cruise travelers' positive emotions by building on the feelings of closeness and affection between female cruise travelers and cruise line companies. Moreover, such emotional attachment would also create the meaningful relationships that could positively contribute to the well-being of female cruise travelers affected by the COVID-19 pandemic and associated lockdowns and curfews. Cruise line companies should also consider implementing a "health passport" system that would require from crew and passengers a proof of COVID-19 vaccination prior to boarding on cruise ship as such measure would mitigate fear and worries related to perceived crowdedness.

Lastly, cruise line companies must maintain open and transparent communication with policy makers, while policy makers must ensure that COVID-19 public health safety protocols are within even playing field and that COVID-19 public health measures are practically achievable. As such, cruise line companies would require a dedicated on board COVID-19 prevention and response task force. Such task force should be composed of various managers and crew members who have in-depth training and awareness related to the prevention of and response to a potential COVID-19 outbreak on board. This COVID-19 prevention and response task force would be obliged to meticulously and transparently address all potential COVID-19 concerns, as such practices would communicate cruise line companies' commitment to provide a COVID-19 safe environment for female cruise travelers.

5.3. Limitations and future research

This pioneering study has certain limitations that provide opportunities for future research. The first is that because of its focus, the study is based on particular constructs and theory related to the expanded nomological network of experiencescape conceptualized by Tasci and Pizam (2019). Further studies could include other constructs and concepts compatible with this network. The second limitation is the use of an online self-administered survey, which means that caution should be applied in generalizing the findings due to self-response bias. However, to lessen this challenge, the survey in this study was composed and validated following the suggestion of Podsakoff et al. (2003) in such manner that independent and dependent variables did not replicate the structure of the hypotheses. The third limitation is that participants are from societies with the western cultural perspective. Consequently, the results could differ with participants from societies with other cultural perspectives, for example the rapidly growing Chinese cruise market. The fourth limitation is the phase of cruise experience which was between reinterpretation and evaluation and pre-cruise decision and

planning phase. The study was conducted by asking female cruise travelers to recall their previous cruise ship dining experience. Consequently, the responses might be impacted by the preferences and recency effect as the participants were recalling the most recent cruise ship dining experience. Given the recent CDC Conditional Sailing Order for a phased-in approach and return to service for the cruise industry in the United States (Centers for Disease Control and Prevention, 2020b), future studies should employ an in situ approach to avoid potential shortcomings of this study. Lastly, despite its significant moderating influence on the paths from dining atmospherics and interaction with other guests to emotions, perceived health risk was not a significant moderator in the perceived crowdedness and emotions linkage. An additional effort should be made to identify any crucial concept that deepens this relationship in the future research.

6. Conclusions

Dining is one of the key aspects of travelers' overall cruise experience. Passengers fulfill their cruise travel needs and wants when dining in a pleasant environment. This research is an original and empirical endeavor to utilize perceived crowdedness, atmospherics, and interaction with others as main constituents of stimulus process and explore the possible influence of the variables on emotions and approach behaviors in the cruise dining context. The female travelers are irrefutably key spenders in the cruise sector (Cruise Lines International Association, 2018). Centering on their responses and behaviors, this research demonstrated the effectiveness of the proposed theoretical framework of cruise ship dining experiencescape. The theoretical framework of the

present research successfully embraced Mehrabian and Russell (1974) S–O–R paradigm and Tasci and Pizam (2019) conceptualization of expanded nomological network of experiencescape. The developed model of cruise ship dining experiencescape was further intensified by integrating perceived health risk and its influence. The convoluted mechanism among dining atmospherics, interaction with other guests, emotions, and perceived health risk unearthed in this study is of utmost importance in theory and practice. In addition, the entire processes incorporated in the hypothesized conceptual framework are evocative for better comprehension of female cruise passengers' approach behaviors in the COVID-19 era.

The COVID-19 pandemic created volatility in all spheres of contemporary society, leaving the cruise industry without certainty and with only few opportunities. Accordingly, the value and originality of this study lies in the effort to develop a cruise ship dining experiencescape framework that can be used not only during COVID-19 pandemic and in the recovery phase of the cruise tourism crisis, but also in the "new normal" of cruise tourism. However, these findings should be taken with caution as there might be differences between the responses from participants who were not infected COVID-19, who did not lose loved ones or their job due to COVID-19; and those who were infected with the virus, had severe symptoms or who lost a loved one or a job due to COVID-19.

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Appendix A. Constructs and measurement items

Constructs and items	Loadings	Mean	SD
Dining atmosphere <i>Strongly Disagree (1) – Strongly Agree (5)</i>			
• The furniture, tablecloth and cutlery make me feel special.	.701	3.83	.610
• Air quality and temperature of dining rooms are adequate.	.793	3.85	.625
• Dining rooms are clean and safe environment.	.672	4.06	.535
• Seating arrangement is comfortable.	.620	3.97	.621
Interaction with other guests <i>Strongly Disagree (1) – Strongly Agree (5)</i>			
• Interacting with other Guests is interesting.	.684	4.11	.616
• Socializing with other Guests is exciting.	.784	4.07	.642
Perceived crowdedness <i>Strongly Disagree (1) – Strongly Agree (5)</i>			
• Too many people are in this dining room.	.590	4.09	.491
• Because of the huge number of customers, I feel crowded in this dining room.	.606	3.90	.576
• Because of the spatial crowdedness, I feel stuffy while dining.	.860	3.97	.577
Emotions			
• Annoyed (1) ~ Pleased (5)	.827	4.40	.538
• Unhappy (1) ~ Happy (5)	.822	4.50	.520
Perceived health risk <i>Strongly Disagree (1) – Strongly Agree (5)</i>			
• The thought of dining at a cruise dining place makes me anxious although the COVID-19 pandemic is completely under control (or ceased) in the future.	.919	2.50	.648
• The thought of dining at a cruise dining place makes me feel psychologically uncomfortable although the COVID-19 pandemic is completely under control (or ceased) in the future.	.914	2.33	.675
• The thought of dining at a cruise dining place causes me to experience unnecessary tension although the COVID-19 pandemic is completely under control (or ceased) in the future.	.993	2.42	.666
Approach behaviour <i>Strongly Disagree (1) – Strongly Agree (5)</i>			
• When other people ask you about your dining rooms experience on board cruise ship you will tell them positive things.	.811	4.60	.520
• If someone asks your advice about cruise ship dining, you will recommend dining rooms.	.836	4.60	.535
• You will encourage your friends and family to dine on cruise ships.	.619	4.23	.534

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