

## The Perception of Clean: Consumer Trust in Hotels amid COVID-19

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### **ABSTRACT**

*The coronavirus pandemic had a detrimental effect on the hospitality industry along with shifting travelers' perception of safety and sanitation of accommodations. This exploratory study sought to investigate the impact of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2, commonly known as COVID-19) on prospective hotel guests by dissecting their perceptions and expectations for cleanliness before, amid, and beyond the pandemic. Additionally, this study examines how the COVID-19 pandemic altered travelers' needs for safety and sanitation and identifies trust-inducing factors to help market and operate appealing accommodations post-pandemic. The analysis consisted of comparative techniques to source insights into travelers' perception of safety and trust in accommodations. The results of this study contribute to the growing COVID-19 related literature by hypothesizing and testing how various factors influence post-pandemic guests' needs. Recommended actions that contribute to a long-term trusting relationship between a service provider and guest are also provided for lodging operators.*

### **Keywords**

Cleanliness, covid-19, lodging, safety, sanitation, trust

### **INTRODUCTION**

Hotel housekeeping is no longer about being “flawless yet invisible” (Mogelonsky, 2020). While guestroom cleaning has traditionally happened behind closed doors, the psychosocial effects of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2, commonly known as COVID-19) now require cleanliness to take center stage in communications and throughout the hotel guest experience. Hotels need to develop trust with their guests by having practices that overtly expose cleanliness measures to assure guests that safety is a priority (Szende et al., 2020). Due to the extent of physical and spatial contact with travelers, hotels especially need sensitivity and an appropriate response to dynamic changes in guests' perceptions of personal safety and sanitation. Subsequent change is thereafter needed to advance cleaning protocols from observation-based toward medical-grade, to integrate digital and contactless technologies at touchpoints in the guest experience, and to undertake other steps to ensure the safety and satisfaction of guests and hotel employees.

The COVID-19 pandemic has disrupted the hospitality and tourism industry in multiple ways. As researchers around the world frantically document and respond to the situation, it is evident that COVID-19 will trigger a paradigm shift and will serve as a new pre- and post-pandemic baseline for future research activities (Iacobucci et al., 2021; Verma and Gustafsson, 2020). Health risk and crisis response strategies (Abraham et al., 2020; Aldao et al., 2021; Buhalis et al., 2019; Godovykh et al., 2021; Liu et al., 2021) as well as trust-building efforts (Lee et al., 2020) will be among the key drivers of the recovery process and thus will be at the forefront of research. This study sought to examine the concerns that travelers had during the pandemic. The literature review expands on the understanding of trust factors that a guest needs to feel safe in an environment outside their home. Additionally, the advent of technological advances in cleanliness can produce solutions to mitigate this crisis and maintain operational effectiveness (Buhalis, 2019, 1998; Buhalis et al., 2019).

## LITERATURE REVIEW

### Traveler Choices Based on Cleanliness

Cleanliness is a key driver of guests' quality perceptions and loyalty, and it has a significant impact on overall guest satisfaction in services (Barber and Scarcelli, 2010; Lee and Kim, 2014; Miles et al., 2012; Pizam and Tasci, 2019; Torres and Kline, 2006; Vos et al., 2019). When guests are asked to identify and rank various factors surrounding cleanliness, dimensions of perceived cleanliness can be identified (Barber and Scarcelli, 2010; Vos et al., 2019). Dutch researchers developed their Cleanliness Perceptions Scale (CPS) that is appropriate for any service setting. To measure perceived cleanliness, three major dimensions have been isolated: *Cleaned*, *Fresh* and *Uncluttered* (Vos et al., 2019). Surfaces in a hotel room may not be perceived as equally touched. In an excellent pre-COVID-19 study, guests were asked to identify high-touch and low-touch areas. Guests identified 16 high-touch areas in hotel guestrooms. Guests reported to have touched three areas the most frequently: bed sheets, blankets, and television remote controls (Haelk et al., 2019). This study usefully identifies and, to a certain extent, prioritizes these touchable elements based on the frequency of contact; such touchable elements warrant respective levels of attention when considering sterilization, hygiene, and the perception of cleanliness amid COVID-19.

Social media platforms encourage guests to share their experiences. In addition, social networks help customers with their purchasing decisions. The analysis of consumer ratings of cleanliness (among other attributes) on TripAdvisor, as well as management responses given to complaints, revealed a significant positive correlation with hotels' performance (Markham-Bagnera, 2016; Xie et al., 2014). Based on a travel blog analysis, focusing on determinants of customer delight, the second most frequently mentioned variable is cleanliness (Magnini et al., 2011); other scholars determined that cleanliness is the top criterion in terms of hotel choice (Zaman et al., 2016). Another study of reviews on TripAdvisor relied on Herzberg's classic two-factor theory: The authors revealed that one of the common "dissatisfiers" in both the limited-service and full-service segment was *dirtiness* (Kim et al., 2016). Stringham and Gerdes (2010) examined over 60,000 user reviews, and customers were repeatedly concerned about hotel cleanliness.

Irrespective of geographic location, cleanliness has been an emphasis among scholars across the world. In Brazil, three- to five-star hotels have been analyzed based on user-generated content. Findings indicated a clear correlation between cleanliness and guest satisfaction, specifically in the three- and four-star categories. Guests in the five-star properties have more complex expectations; cleanliness is likely assumed (Limberger et al., 2014). Similarly, a study of customer satisfaction in Portugal revealed that management should pay attention to cleanliness in lower-segment hotels (Pacheco, 2017). Focusing on United Kingdom hotels, six substantial attributes, including cleanliness, have been examined to determine their importance to encourage guests to return. Oddly, cleanliness was shown as a satisfier among chain

hotels demonstrating that the cleanliness in one property can enhance the image of the entire group (Ramanathan and Ramanathan, 2011). Surveying business clientele in Mumbai, India, indicated that hygiene and cleanliness are of the highest importance when selecting a hotel (Gumaste and Bhosle, 2019). Another Asian study, conducted in Thailand, revealed likewise that cleanliness is a key factor affecting guest satisfaction (Prayukvong et al., 2007). Studying the preferences of Chinese clientele, cleanliness has been shown as the most prominent attribute (Gu and Ryan, 2008). Another study on the perception of Chinese chain hotel guests indicated some predisposition in terms of cleanliness favoring western hotel companies (Sun, 2014). A survey conducted in New Zealand found that guests ranked bathroom and toilet cleanliness as critically important (Lockyer, 2003). To respond to COVID-19, Sharma and Kaushik (2012) recently re-evaluated the notion of clean in hotel housekeeping settings. Another study is looking into the changing tourist behavior during the pandemic (Ningrum and Septyandi, 2021).

### **Building Consumer Trust**

Service relationships involve various activities between a service provider and a consumer in order to co-create value. Consumer trust is a key factor in the establishment of service relationships. Consumer trust can be defined as “the expectations held by the consumer that the service provider is dependable and can be relied on to deliver on its promises” (Sirdeshmukh et al., 2002, p. 17). Trust is essential in social contexts and is a prerequisite for strong customer relationships (Acar-Burkay et al., 2014; Purnasari et al., 2015; Reichheld and Scheffer, 2000; Sirdeshmukh et al., 2002; Urban et al., 2000). In fact, customer satisfaction and trust complement and fuel each other. Customer satisfaction triggers and reinforces consumers’ trust (Hsu, 2012; Webber et al., 2012), and trust has an equally positive impact on consumer satisfaction (Purnasari et al., 2015).

Researchers seem to agree that trust is multidimensional. Some scholars found that a cognitive (competency-based) trust level is complemented by an affective (emotional-based) trust component (Acar-Burkay et al., 2014; Johnson and Grayson, 2005; Webber et al., 2012). Furthermore, the level of interpersonal trust depends on social, historical and cultural factors that drive behavioral norms; accordingly, we can distinguish between low-trust and high-trust societies (Zak and Knack, 2001; Zanini and Migueles, 2018).

The initial interaction between customer and service provider is typically a single transaction and may result in a transactional trust (Bortoli et al., 2017; Szende et al., 2018; Taylor et al., 2014). At this stage, the two parties do not have reliable information about the other side; any emotional bond between them is lacking (McKnight et al., 1998). The trust formation process between service providers and consumers is complex. “Trust develops gradually through repeated interactions” and is reinforced through repeat purchases (Szende et al., 2018, p. 7), which may result in a long-term relationship that contributes to a relational trust (Garbarino and Johnson, 1999).

An expanding body of literature is focusing on repeated interactions between brands and consumers, how brands deliver what they promise. One research study explored the conditions under which brand relationships drive loyalty (Khamitov et al., 2019); another one examined factors that influence consumer trust and distrust (Mal et al., 2018). A recent study exploring the role of affective and cognitive trust found that affective trust has a more substantial effect on loyalty formation (Ozdemir et al., 2020). South African scholars found that brand authenticity has a direct impact on trust development (Portal et al., 2019).

### **Building Trust in the Tourism and Hospitality Industry**

Wang et al. (2014) systematically examined trust-related literature in the hospitality and tourism industry. The scholars determined that in addition to the research focusing on the relationship between firms such as airlines, hotels, restaurants, travel agencies and ultimate customers, three additional categories of trust-related studies can be recognized: (i) relations with goods and service suppliers, (ii) internal relationships, and (iii) relationships with local customers.

Trust in the hospitality industry can be discerned as a deliberate behavior of customers when booking a hotel room. This act involves a component of uncertainty and risks that make them vulnerable (Ratnasingam, 2012). According to the findings of Ratnasingam (2012), there are three types of trust that apply to the hospitality industry: competence, predictability, and goodwill. Competence trust proposes that guests believe in the hotel's and its employees' knowledge and skills to provide the promised service to its customers (Bortoli et al., 2017; Ibrahim and Ribbers, 2009; Ratnasingam, 2012). This initial trust has two basic sources: One is based on the customer's own investigation about available information on the hotel, and the second one is centered on any information provided by third-party services (McKnight et al., 1998; Ratnasingam, 2012). After the initial hotel visits, the competence trust progresses into a so-called predictability trust. Based on the initial experiences, guests can now form expectations regarding future hotel stays. Predictability trust, the second type, may provide an assurance to customers that a consistent quality of services will be delivered (Khan and Malluhi, 2010; Ratnasingam, 2012; Siau and Shen, 2003). The third trust level is a goodwill or relationship trust that can assure guests that hoteliers will not only behave in a competent and predictable manner but will be honest and exhibit care and concern (Bortoli et al., 2017; Ratnasingam, 2012; Sijoria et al., 2019). Perceptions of hotel guestrooms' high-touch and low-touch areas, as discussed earlier in this paper, may also affect the level of consumer trust (Haelk et al., 2019).

A survey-based study found that guests of socially responsible hotels may exhibit a favorable attitude toward the company that results in a significant impact on the brand reputation and customer trust in general (Jalilvand et al., 2017). Positive consumer evaluation of a hotel brand is essential. As suggested by Sijoria (2019), electronic word-of-mouth content can only serve its purpose (i) if superior information is provided by the brand; (ii) the online community has trust in the information exchange; (iii) guests have previous satisfactory stays; (v) enhanced loyalty is present toward the hotel company; and (vi) strong social relationships among reviewers exists. In summary, trust in online reviews can serve as a catalyst in augmenting brand equity (de Matos and Rossi, 2008; Ha and Im, 2012; Hsu, 2012; Sijoria et al., 2019). Another research stream is centered on the role of the sharing economy in the industry. Remarkably, interpersonal trust development follows a tiered fashion, based on the "guests' perception of hosts' ability, benevolence and integrity" (McKnight et al., 1998; Park and Tussyadiah, 2020, p. 1408). The formation of trust between Airbnb guests and hosts is complex and problematic; guests are often spending the night in a bed of an unknown person. The hosts should employ sophisticated and effective self-marketing strategies (Tussyadiah and Park, 2018).

A recent study concentrated on trust development in hybrid travel websites. This thought-provoking article helps understand the complexity of trust formation in tourism. Four categories of trust antecedents are isolated: "consumer-based, company-based, transaction-based and review-based" (Leung and Ma, 2020, p. 286). Online travel purchases continue to show major growth. The main prerequisites of "trust are perceived information quality and perceived security" (Bonsón and Ratkai, 2013, p. 286). Affiliate marketing is a fashionable performance-based technique that involves promoting other people's products to earn commission. To build trust, even in this unusual business setting, affiliates are expected to exhibit their competence and integrity (Gregori et al., 2013).

## **Emerging Technologies and Cleanliness Strategies**

The presence of technology in hotels pre-pandemic was seen more as a nice-to-have or as an added novelty, but certainly not required (Baratti, 2020; Pohlman and Asemota, 2020); COVID-19 on the other hand has advanced the adoption of technology. With so much uncertainty, guests want to feel safe physically and emotionally (Carlino, 2020). This has led to the creation of what has been called “cleanliness theater,” bringing the once hidden functions of the housekeeping department to the forefront (Mogelonsky, 2020). However, implementing this is only half the battle to restore consumer trust. Before the coronavirus outbreak, 78% of hotel guests agreed that cleanliness played a major role in their selection of and loyalty to a certain hotel brand (Sogno, 2020). This percentage is expected to grow as cleanliness is no longer just about hygiene but also safety. For guests to feel comfortable traveling again, they need to believe they will be safe (Carlino, 2020).

In May 2020, the American Hotel and Lodging Association (AHLA) announced its “Safe Stay” program, which was developed by industry leaders and public health officials in response to COVID-19 (AHLA, 2020). This program detailed the enhanced safety protocols to serve as an industry standard and best practice for hotels to implement. These guidelines were then used as a jumping off point for all major hotel brands to build their own set of company-specific guidelines and protocols (AHLA, 2020). A breakdown of each major hotel company’s specific cleanliness program can be seen in Exhibit 1. All the major hotel companies have implemented some form of physical distance enforcement measures and the requirement of mask wearing for all guests to follow. Additionally, the increased presence of hand sanitation stations throughout hotel common areas is consistent across all brands.

**Exhibit 1. Hotel Brand Cleanliness Programs**

Association	Cleanliness Program	Front Desk	Public Areas	Guest Rooms	Other Operational Initiatives
AHLA	Safe Stay	<ul style="list-style-type: none"> <li>• Use every other workstation</li> <li>• Installation of transparent barriers / shields</li> <li>• Updated floor plan</li> <li>• Installation of touchless / contactless technology for check-in/out</li> <li>• Self-park over valet parking</li> <li>• Increased disinfecting of shuttle van if it must be used</li> </ul>	<ul style="list-style-type: none"> <li>• Increased availability of soap in restrooms</li> <li>• Touchless hand sanitizers</li> <li>• Increased frequency of cleaning for high-touch areas</li> <li>• Signage to promote social distancing of 6-feet</li> <li>• Removal of lobby furniture to provide the recommended social distancing</li> </ul>	<ul style="list-style-type: none"> <li>• No stayover room cleaning unless requested by the guest</li> <li>• Increased cleaning attention to high-touch hard nonporous items</li> <li>• Discard all single-use items</li> <li>• Confirmed positive case rooms should be quarantined for 24-hours, with enhanced cleaning protocols followed</li> </ul>	<ul style="list-style-type: none"> <li>• Facial masks required of everyone in public areas of the hotel.</li> <li>• Launder linen according to CDC guidelines on the warmest setting possible</li> <li>• Provide signage to restrict number of elevator occupants</li> <li>• Signage should direct flow of traffic, to include stairwells</li> <li>• F&amp;B should be limited, contactless, prepackaged, single-use disposable products</li> </ul>
<b>Hotel Brands</b>					
Accor	ALL Safe and Well	<ul style="list-style-type: none"> <li>• Temperature checks</li> <li>• Offer masks and hand sanitizer upon arrival</li> <li>• Barriers at desk</li> <li>• Contactless payment</li> <li>• Disinfect guest keys</li> <li>• Wellness kit provided (masks, gloves, hand sanitizer and wipes)</li> <li>• Contactless check-out</li> </ul>	<ul style="list-style-type: none"> <li>• Physical distancing</li> <li>• Hand sanitizer stations</li> <li>• Display cleaning time sheets</li> <li>• Removal of coffee and water stations</li> <li>• Maximum occupancy in elevators</li> <li>• Additional signage</li> </ul>	<ul style="list-style-type: none"> <li>• Designated floors for individuals who have fever</li> <li>• Removal of collateral</li> <li>• Hand washing procedures in bathroom</li> <li>• 48-hour resting period in between guests</li> <li>• Cleaning every 3 days</li> </ul>	<ul style="list-style-type: none"> <li>• ALL SAFE Ambassadors</li> <li>• ALL SAFE label from accreditation program to demonstrate certain cleaning standards and operational procedures have been met</li> <li>• Partnered with AXA to provide guests with medical support at hotels</li> </ul>
Best Western	We Care Clean	<ul style="list-style-type: none"> <li>• Mobile Concierge platform to streamline check-in/out</li> </ul>	<ul style="list-style-type: none"> <li>• Physical distancing</li> <li>• More wipes and sanitation stations</li> <li>• Sanitizing with electrostatic fogging</li> <li>• Ozone generators</li> <li>• Ultraviolet devices</li> </ul>	<ul style="list-style-type: none"> <li>• No guest will enter if possible for 24-72 hours after previous guest checks out</li> <li>• Removal of unnecessary items, daily service on request only</li> </ul>	<ul style="list-style-type: none"> <li>• Partnered with EPA, OSHA and CDC</li> <li>• Grab and go breakfast options</li> </ul>
Choice	Commitment to Clean	<ul style="list-style-type: none"> <li>• Increased cleaning protocols for high traffic</li> <li>• Areas partitions</li> <li>• Key drops for check-out</li> </ul>	<ul style="list-style-type: none"> <li>• Hospital grade disinfectants</li> <li>• More hand sanitizer locations</li> <li>• Signage of CDC social distancing guidelines</li> </ul>	<ul style="list-style-type: none"> <li>• Personal hand sanitizer provided</li> <li>• Housekeeping upon request</li> </ul>	<ul style="list-style-type: none"> <li>• Commitment to Clean Captain</li> <li>• Close association with Ecolab</li> </ul>
Four Seasons	Lead with Care	<ul style="list-style-type: none"> <li>• Wait free check-in/out via app</li> <li>• Mobile check-in</li> </ul>	<ul style="list-style-type: none"> <li>• More sanitizer stations</li> <li>• Electrostatic sprayer</li> <li>• Ozone tech for air purification</li> <li>• UV tech for HVAC systems</li> <li>• Social distancing</li> </ul>	<ul style="list-style-type: none"> <li>• Daily disinfection with EPA products and a black light inspection by attendants</li> <li>• Lead with Care Kits in each room with masks, sanitizer, and wipes</li> </ul>	<ul style="list-style-type: none"> <li>• Consulting agreement with Johns Hopkins Medicine International</li> <li>• COVID 19 advisory board</li> <li>• Hygiene officer</li> <li>• Contactless in-room delivery (IRD) delivery</li> <li>• Digital restaurant menus</li> </ul>
Hilton	Clean Stay	<ul style="list-style-type: none"> <li>• Mobile check-in/out</li> <li>• Digital key access</li> </ul>	<ul style="list-style-type: none"> <li>• Physical distancing</li> <li>• Sanitation stations</li> <li>• Wipes</li> </ul>	<ul style="list-style-type: none"> <li>• Room seal sticker on door</li> <li>• Contactless delivery of amenities that are also sealed in plastic</li> </ul>	<ul style="list-style-type: none"> <li>• Partnership with RB (makers of Lysol and Dettol)</li> <li>• Contactless food delivery</li> </ul>
Hyatt	Global Care & Cleanliness Commitment	<ul style="list-style-type: none"> <li>• Touch free registration options</li> <li>• Mobile check-in/out</li> <li>• Mobile entry</li> </ul>	<ul style="list-style-type: none"> <li>• Sanitation stations</li> <li>• Social distancing</li> <li>• Elevator spacing</li> </ul>	<ul style="list-style-type: none"> <li>• Removal of high touch non-essential items</li> </ul>	<ul style="list-style-type: none"> <li>• Hygiene and Wellbeing Leader</li> <li>• Panel of trusted medical professionals such as at the Cleveland Clinic</li> <li>• Temperature checks</li> <li>• Knock and go contactless delivery option</li> </ul>
IHG	Way of Clean	<ul style="list-style-type: none"> <li>• Reduced contact at check-in</li> <li>• Touchless transactions</li> <li>• Plexiglass screens</li> </ul>	<ul style="list-style-type: none"> <li>• Sanitizer stations</li> <li>• Social distancing</li> <li>• 'Last cleaned' charts</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of non essential items</li> <li>• Electrostatic sprayers</li> <li>• In-room IHG Clean Promise Cards</li> </ul>	<ul style="list-style-type: none"> <li>• Partnership with Cleveland Clinic, Ecolab and Diversey</li> <li>• Information on cleanliness protocols on booking sites</li> <li>• IHG Clean Promise - a guarantee to make it right if the guest doesn't feel the standards of clean were met</li> <li>• Global Cleanliness Board and Clean Champions</li> </ul>
Marriott	Commitment to Clean	<ul style="list-style-type: none"> <li>• Mobile check in/out</li> <li>• Mobile key</li> <li>• Ultraviolet light technology</li> <li>• Contactless payment</li> </ul>	<ul style="list-style-type: none"> <li>• Increased sanitizer stations</li> <li>• Social distancing signage</li> <li>• Electrostatic sprayers</li> </ul>	<ul style="list-style-type: none"> <li>• Wipes in each room for guests to use</li> <li>• Contactless food ordering</li> <li>• Contactless service requests</li> <li>• Electrostatic sprayers</li> </ul>	<ul style="list-style-type: none"> <li>• Marriott Global Cleanliness Council</li> </ul>
Red Roof Inn	RediClean	<ul style="list-style-type: none"> <li>• Use of exterior corridors to access rooms instead of walking through the building</li> </ul>	<ul style="list-style-type: none"> <li>• Use of EPA products to clean common areas</li> <li>• Encouraging social distancing</li> </ul>	<ul style="list-style-type: none"> <li>• Do not enter room to clean if it is less than 4 days</li> </ul>	
Wyndam	Count on Us	<ul style="list-style-type: none"> <li>• Disinfecting wipes with keys at check-in</li> </ul>	<ul style="list-style-type: none"> <li>• More cleaning of high touch areas</li> <li>• Social distancing measures</li> <li>• Sanitation stations</li> </ul>	<ul style="list-style-type: none"> <li>• Complimentary hand sanitizer in each room</li> <li>• Non essential items removed</li> </ul>	<ul style="list-style-type: none"> <li>• 24-72 hour rest period between guests in a room</li> <li>• Expanded relationship with Ecolab</li> </ul>

*Note.* These standards are effective as of June 2020. All brands require the use of facial masks. Material sourced from these websites for this chart (Accor, 2020; AHLA, 2020b; Best Western Hotels & Resorts, 2020; Choice Hotels, 2020; Hilton, 2020; Hyatt Hotels & Resorts, 2020; IHG, 2020; Marriott International News Center, 2020; Red Roof's Message to Valued Guests: Coronavirus Notice, 2020; Tuite, 2020; Wyndham Hotels, 2020).

Armed with the foundation of the Safe Stay program, hotels have now been looking to hospitals for lessons on how to properly and efficiently sanitize and disinfect along with which technologies and procedures can ensure safety. These innovations range from the basics of providing employees with personal protective equipment (PPE) (e.g. face shields, goggles, masks) and plexiglass barriers to more high-tech solutions such as electrostatic sprayers with hospital-grade disinfectants to properly sanitize rooms (Ray, 2020). Beyond that, hotels have expanded the use of existing technologies such as mobile check-in and check-out and keyless entry via mobile phone applications (Hospitality Net, 2020; Klasko et al., 2020; Mohan and Mehtani, 2020; Ray, 2020; Zambello, 2020).

Although the role of emerging technologies is not the focus of our study, it is useful to point out that presently, hotel companies are becoming more conversant on the best methods for cleaning and disinfecting. A list of some cleanliness technology examples can be found in Exhibit 2. Devices like electrostatic sprayers, ultra violet-c (UVC) light technology, and high-efficiency particulate air (HEPA) filtration systems are quickly becoming an industry standard (Baratti, 2020; Pohlman and Asemota, 2020). For example, the Westin Houston Medical Center was the first one to incorporate the LightStrike Germ-Zapping Robot from Xenex Disinfection Services to kill viruses, bacteria, and fungi with intense xenon UV light (Helfenbaum, 2020; Hospitality Net, 2020; Walker, 2016).

### Exhibit 2: Emerging Cleanliness Technology

Device	Definition	Example
Electrostatic Sprayers	The sprayers are capable of using the CDC recommended disinfectants to rapidly clean and disinfect entire guest rooms, lobbies, fitness centers and other public areas. The electrostatic application of chemicals dramatically increases droplet attraction and attachment to surfaces.	<ul style="list-style-type: none"> <li>• CIRQ+ CLEAN Cbot</li> <li>In-room autonomous Touchless Sterilization Innovation that can dispense an EPA-registered fluid through an electrostatic spray with no manual labor</li> </ul>
Ultra Violet-C (UVC) Light	UV-C light destroys bacteria and viruses, even the ones traditional cleaning methods might miss. It is a form of radiation known to disinfect the air, water, and nonporous surfaces. Referred to as "germicidal" lamps. Human skin exposure can cause burning, recommended to be turned on and left unattended or used in an air filtration system.	<ul style="list-style-type: none"> <li>• Germ-Zapping Robot</li> <li>Developed by Xenex Disinfection Services</li> <li>Uses UV-C light</li> <li>Disinfects in a matter of minutes</li> <li>• Cleanse® products</li> <li>Offered by Lighting Source provide UV protection</li> </ul>
HEPA Filters	High efficiency particulate air (HEPA) is a type of pleated mechanical air filter. It can theoretically remove at least 99.97% of dust, pollen, mold, bacteria, and any airborne particles with a size of 0.3 microns. It is typically used in an ozone generator.	<ul style="list-style-type: none"> <li>• Sentry Air Systems</li> <li>Should be used as a secondary defense tactic to a disinfectant product</li> </ul>
Chlorine Dioxide	A yellow-green gas that has been used since the early 1900s as a disinfectant. The antimicrobial properties of chlorine dioxide are used to disinfect food, surgical tools, and more. It can help sterilize peroxide- and UV-resistant spores in hospital environments. In the tablet form it can be effective at killing off the bacteria and virus.	<ul style="list-style-type: none"> <li>• Tristel Products</li> <li>Include cleaning wipes</li> <li>Generally used in the medical field for equipment disinfection</li> </ul>
Hydrogen Peroxide Vaporizer	With the use of a device to make the hydrogen peroxide a fine mist or vapor it can then be dispersed as a thin film across exposed services, including walls and floors, as a disinfectant.	<ul style="list-style-type: none"> <li>• HaloMist</li> <li>Developed by Halosil</li> <li>Delivered through a HaloFogger system as an approved EPA dry fog disinfectant</li> </ul>

*Note.* Material sourced for the development of this chart (Center for Devices and Radiological Health, 2020; *Chlorine Dioxide*, n.d.; "Chlorine Dioxide: Use, Benefits, and Chemical Safety Facts," 2015; *Chlorine Dioxide - an Overview*, n.d.; *Halosil*, 2020; Deros, 2020; Killion, 2020; March, 2012; Sentry Air Systems Inc, n.d.; Triology, 2020; US EPA, 2019).

These technological advances alone will not restore consumer trust in travel. Cleanliness theater will be the new normal for all hotels as cleaning practices move to center stage, instead of working behind the scenes (Mogelonsky, 2020; Szende et al., 2020; Zambello, 2020). Hotels need to focus on increasing the consistency and quality with which they clean, and do so in a way that guests will see it happening. Public areas should be cleaned during peak times, sanitation stations should be present throughout the hotel, and marketing collateral (both virtually and on location) should explain in detail how the space is cleaned, how often, and with what products (Mogelonsky, 2020). Other strategies hotels should adopt are disinfecting all amenities in the rooms, such as remote controls and light switches, and removing nonessential items like magazines and throw pillows that are harder to clean and disinfect regularly (Firshein, 2020; Killion, 2020). Additionally, the process of wrapping certain items in plastic such as cups, utensils, or extra linen could provide guests with an added sense of security in knowing that the item is uncontaminated (Szende et al., 2020).

## **METHODS**

The data for this study was collected at the end of 2020 via online surveys distributed to multiple sites to mitigate potential sampling bias among online populations. The online sites consisted of a mix between paid respondents sourced from Amazon Mechanical Turk and volunteer respondents recruited from Facebook and LinkedIn via snowball sampling technique (Palabiyik et al., 2022). The survey targeted frequent overnight travelers who had traveled before the pandemic, aged 18 and older, and who lived in the United States. In total, there were 403 respondents who met the aforementioned criteria.

To accurately capture the intensity of respondents' feelings toward the construct being measured, a collective mix of three- and five- choice points, categorical and rank ordering questions were used to create the survey. To help respondents uncover distinctions among a larger set of items, shorter rating scales can be complemented by expanded scales (Chakrabarty, 2020; Taherdoost, 2019). Accordingly, answers rated on a combination of Likert scales may maximize the validity and reliability of instruments. Respondents were first asked a series of criteria-based questions such as if they had traveled in the past two years and their age. Next, respondents answered a series of categorical and rank-based questions based on their current comfort levels including their trust in hotel operational initiatives with overnight stays since the COVID-19 pandemic. Respondents were then asked how safe they felt overall in their overnight stays during the pandemic along with if they knew anyone who has contracted COVID-19. These two questions were then followed by a series of questions on respondents' travel history and stay preferences before, during and after the pandemic. The survey concluded with a series of typical demographic and socioeconomic status-based information.

Analysis of the data consisted of comparative techniques to source insights on travelers' perception of safety and trust in accommodations. Comparative techniques include chi-square tests for nominal based responses, Kruskal-Wallis test for ordinal and ranked responses, and Tukey's test for in-depth investigation of respondents' trust in accommodations (Hecke, 2012; McHugh, 2013). The aforementioned tests were conducted as these are robust to deviations to normality within the distributions resulting in higher power and hold ease of computation with detailed interpretable results (Hecke, 2012; McHugh, 2013). Additionally, for all comparative tests,  $\alpha$  was set to 0.05.

Initial analysis included descriptive results on respondents' demographic and socioeconomic characteristics to validate respondents of all backgrounds are represented and compare to the U.S. population, along with comparing respondents' travel frequency during the pandemic to their travel frequency before the pandemic. Respondents' trust in accommodation type was first analyzed by comparing their safety concerns for lodging type (e.g. branded hotels) to how respondents perceived their safety when traveling. Next, multiple iterations of Kruskal-Wallis test, along with Tukey's test for post hoc evaluation, were conducted to investigate the following: travelers' ranking of importance of hotel operational initiatives, travelers' trust (rank ordering and Likert) in hotel's cleaning protocols, and travelers' ranking of hotels' methods to communicate cleaning procedure.

## **RESULTS**

### **Descriptive Statistics**

All regions of the United States were well represented, with respondents living in a total of 48 of the 50 states. Overall as reported in Table 1, respondents were younger, more likely to be married, employed and college educated than the U.S. population. Of 403 respondents, 59% were between the ages of 25 and 44, 73% were employed, 58% stated they were married, and 71% had at least a four-year degree, while these segments represent 26%, 61%, 48%, and 34% of the total U.S. population, respectively (U.S. Census, 2019; U.S. Census Bureau, 2020). Other characteristics of respondents such as gender and income were



more closely aligned with U.S. averages. The study data and research panel analyses of recent COVID-19 related papers (Bhaduri et al., 2020; Bidder et al., n.d.; Politis et al., 2021) indicate that in spite of different socioeconomic variables used, the composition of traveler panels is comparable and closely resemblant across studies.

**Table 1. Respondents Demographics & Socioeconomic Characteristics**

<b>Characteristics</b>	<b>#</b>	<b>% of</b>	<b>Characteristics</b>	<b>#</b>	<b>% of</b>
	<b>Travelers</b>	<b>Travelers</b>		<b>Travelers</b>	<b>Travelers</b>
<i>Age</i>			<i>Income</i>		
18 to 24 years	30	7%	Under \$30K	61	15%
25 to 34 years	<b>131</b>	<b>33%</b>	31K to \$50K	78	19%
35 to 44 years	103	26%	\$51K to \$100K	<b>156</b>	<b>39%</b>
45 to 54 years	60	15%	Over \$101K	89	22%
55 to 64 years	59	15%	Unknown	19	5%
Age 65 or older	20	5%			
			<i>Employment Status</i>		
<i>Gender</i>			Employed (Full Time)	<b>294</b>	<b>73%</b>
Female	<b>210</b>	<b>52%</b>	Not Employed	105	26%
Male	191	47%	Unknown	4	1%
Other	2	0.5%			
			<i>Education Level</i>		
<i>Marriage Status</i>			High School (or Less)	28	7%
Married	<b>233</b>	<b>58%</b>	Some College	85	21%
Single	159	39%	4 Year Degree	<b>198</b>	<b>49%</b>
Widowed	9	2%	Graduate +	90	22%
<i>Region</i>			<i>Ethnicity</i>		
Northeast	83	21%	Caucasian	<b>317</b>	<b>79%</b>
South	101	25%	African American	24	6%
Mid West	<b>118</b>	<b>29%</b>	Asian	37	9%
West	101	25%	Other / Mix	25	6%

*Notes: (1) Modes for each demographic & socioeconomic are in bold*

In terms of respondents' travel and stay preferences as shown in Table 2, 16% reported they prefer staying at independent hotels. As of 2019, independent hotel rooms comprise 34% of total hotel rooms in the United States (Weed, 2020). While respondents preferring independent hotels are substantially lower than the room inventory, this may be an indicator of survey-takers mitigating uncertainty and thus risks with staying at independent establishments (Ratnasingam, 2012). Moreover, the results hint that during times of crisis, respondents may rely more on predictability trust when choosing where to stay overnight (Bortoli et al., 2017; Ibrahim and Ribbers, 2009; Ratnasingam, 2012). Additionally, based on chi-square tests comparing respondents' travel frequency before the pandemic and after, respondents reported significant decreases in taking both leisure and business trips since COVID-19 hit. In fact, after the pandemic was declared, 32% of respondents reported not taking any leisure trips, while this figure was only 2% before the pandemic.

**Table 2. Respondents Travel History**

<i>Star Preference (Likert)</i>	<i>1 Star (Economy)</i>	<i>2 Stars</i>	<i>3 Stars (Mid Scale)</i>	<i>4 Stars</i>	<i>5 Stars (Luxury)</i>
1 - Does Not Prefer	<b>21%</b>	7%	3%	3%	2%
2	<b>25%</b>	15%	7%	6%	5%
3	<b>20%</b>	19%	10%	11%	9%
4	26%	<b>45%</b>	45%	42%	35%
5 - Highly Prefers	9%	13%	35%	38%	<b>50%</b>
<i>Preferred Hotel Chain</i>	<i># Resp.</i>	<i>% Resp</i>			
Choice	34	8%			
Hilton	116	29%			
Hyatt	39	10%			
IHG	45	11%			
Marriott	106	26%			
Other	63	16%			
<i>Leisure Trips (Per Year Avg.)</i>	<i>Before COVID</i>	<i>After COVID</i>	<i>% Before</i>	<i>% After</i>	<i>% Change*</i>
None	9	130	2%	32%	1,344%
1 to 3 Trips	139	185	34%	46%	33%
4 to 7 Trips	105	39	26%	10%	(63%)
8+ Trips	150	49	37%	12%	(67%)
<i>Business Trips (Per Year Avg.)</i>	<i>Before COVID</i>	<i>After COVID</i>	<i>% Before</i>	<i>% After</i>	<i>% Change*</i>
None	42	163	10%	40%	288%
1 to 3 Trips	116	173	29%	43%	49%
4 to 7 Trips	79	29	20%	7%	(63%)
8+ Trips	166	38	41%	9%	(77%)

Notes: (1) \* indicates significance at  $\alpha=0.05$  level.

### Guests' Trust in Accommodations

Respondents reported they felt significantly safer when staying at branded hotels ( $\mu_1=3.9$ ) and with relatives ( $\mu_1=3.8$ ) compared to how safe they feel in general when traveling ( $\mu=3.5$ ), as shown in Table 3. Similarly, of the two more trusted accommodations, branded hotels had the highest top-two-box ("Safe" and "Very Safe") response rates at 76%, but staying with relatives had the highest top-box response rate at 31%. Given individuals will place greater trust in accommodations that cultivate goodwill and exhibit care (Bortoli et al., 2017; Ratnasingam, 2012; Sijoria et al., 2019), the findings show this translates to feeling safer at these familiar establishments. Since individuals will have more potential interactions with branded hotels given their respective size in the market (Weed, 2020), along with branded hotels having to maintain consistency in service standards, these two factors may contribute to guests holding more predictable trust in lodging chains. Moreover, individuals will have a lifetime of experiences with their relatives to develop stronger relationship trust (Khan and Malluhi, 2010; Siau and Shen, 2003). On the other hand, respondents reported feeling significantly less safe staying at shared accommodations such as Airbnb ( $\mu_1=3.2$  vs.  $\mu=3.5$ ), and they held greater safety concerns with staying at independent hotels ( $\mu_1=3.3$ ). However, concerns with independent establishments did not significantly differ from their concerns with traveling overnight in general during the pandemic. Our findings show guests not only have trouble developing trust given the complexity and unknowns of shared-economy relationships (McKnight

et al., 1998; Tussyadiah and Park, 2018, p. 1408), this lack of trust also inhibits guests' comfort in their safety.

**Table 3. Respondents' Safety Concerns with Travel**

Safety Concern (Overnight Stay)	Branded Hotels	Ind. Hotels	Sharing (Airbnb)	Staying w/Relatives	Personal Safety (Overall)
Very Unsafe	3%	6%	<b>9%</b>	4%	7%
2	9%	17%	<b>18%</b>	9%	24%
3	11%	<b>26%</b>	24%	19%	7%
4	<b>50%</b>	41%	36%	38%	29%
Very Safe	26%	10%	13%	<b>31%</b>	33%
Avg. Safety Rating	3.9	3.3	3.2	3.8	3.5
Diff ( $\mu_1 - \mu$ )	0.4*	(0.2)	(0.3)*	0.3*	

# Know someone w/COVID

Yes	206
No	197

Notes: (1) \* indicates significance at  $\alpha=0.05$  level when compared to the mean ( $\mu$ ) of Personal Safety (Overall)

### Guests' Trust Preferences

When guests are staying at establishments, according to Tukey's test as shown in Table 4, they prioritize cleanliness of direct contactable items. It follows, in order to further trust in their relationship with establishments, guests prioritize cleaning of the beds ( $\mu_{Rank} = 1.9$  out of 10) significantly greater at  $\alpha = 0.05$  level than any other item in the bedroom, while other sanitizing of items such as television remotes ( $\mu_{Rank} = 3.9$  out of 10) and nightstands ( $\mu_{Rank} = 3.9$  out of 10) was ranked high as well. For guest bathrooms, respondents unanimously ranked sanitizing of the toilet ( $\mu_{Rank} = 1.0$  out of 5) as most important, with all other touchpoints in the bathroom holding significantly lower importance. Other items in the bedroom that are non-necessary touchpoints, such as luggage racks ( $\mu_{Rank} = 8.3$ ), phones ( $\mu_{Rank} = 6.4$ ), and TVs ( $\mu_{Rank} = 6.4$ ), were ranked significantly lower in importance of sanitizing. Since bed linens and television remotes are among the most touched items in the room (Haelk et al., 2019), accommodations that actively cleanse these items are most likely going to influence guests' perceptions, while cultivating competence in trust (Ratnasingam, 2012). Additionally, cleaning objects that guests directly interact with may lead to more favorable evaluations in the form of online reviews as images of these items are readily sharable. As a result, an increase in positive online reviews can help cultivate stronger social bonds (Sijoria et al., 2019) and further enhance guests' trust in the establishments (Jalilvand et al., 2017).

Considering communication protocols that induce trust, more proactive, direct methods, such as verbal acknowledgement at the front desk ( $\mu_{Rank} = 2.9$  out of 12), pre-arrival email notifications ( $\mu_{Rank} = 3.0$ ), website disclaimers at the time of booking ( $\mu_{Rank} = 3.3$ ), and surface stickers ( $\mu_{Rank} = 3.6$ ) are preferred far more than more passive, incidental modes like welcome letters ( $\mu_{Rank} = 5.5$ ) and tent cards ( $\mu_{Rank} = 6.1$ ). With respect to communication mode preferences, a similar theme emerges: Proactive messages by email ( $\mu_{Rank} = 1.5$  out of 6) and upon check-in at the front desk, either verbally ( $\mu_{Rank} = 1.9$ ) or in letter form ( $\mu_{Rank} = 2.0$ ), are significantly more preferred over signage ( $\mu_{Rank} = 3.0$ ) and notices within guestrooms ( $\mu_{Rank} = 3.3$ ).

A large number of hotel occupancies are transient, thus temporary in nature. The trust formation may be based on discrete, single transactions (Borden et al., 2020; Szende et al., 2018). Therefore, to shape a trust-based relationship that leads to re-purchase intention, it is essential that credible and meaningful information is provided.

In being directly communicated to, guests may see establishments showing greater care and concern, both key elements to developing goodwill (Bortoli et al., 2017; Ratnasingam, 2012; Sijoria et al., 2019). Moreover, having the information be directly provided to them can further cultivate trust in the establishment (Ratnasingam, 2012). Another benefit is that direct approaches carry substantially fewer operating costs than welcome letters, tent cards, and the labor required for blacklight tours or in-house health coordinators, all of which guests held in less regard.

**Table 4. Trust in Hotel Cleanliness**

Rank	Hotel Room	Hotel Bath	Trust in Hotel Protocols	Communication Preference				
1	Bed	1.9 <sup>a</sup>	Toilet	1.0 <sup>a</sup>	Verbal Front Desk	2.9 <sup>a</sup>	By Email	1.5 <sup>a</sup>
2	TV Remote	3.9 <sup>b</sup>	Sink	1.9 <sup>b</sup>	Pre Arrival Email Notification	3.0 <sup>a</sup>	Front Desk - Verbal	1.9 <sup>a</sup>
3	Nightstand	3.9 <sup>b</sup>	Tub & Shower	2.1 <sup>b</sup>	Website Disclaimer	3.3 <sup>a</sup>	Front Desk - Letter	2.0 <sup>a</sup>
4	Thermostat	5.7 <sup>c</sup>	Door Handles	2.5 <sup>b</sup>	Warning Surface Stickers	3.6 <sup>a</sup>	Notice on Website	2.2 <sup>a</sup>
5	Desk	5.9 <sup>c</sup>	Vanity Counter	2.5 <sup>b</sup>	Tape Sealing Off Areas	4.4 <sup>b</sup>	Signage on Property	3.0 <sup>b</sup>
6	Fridge	6.0 <sup>c</sup>			Signage For Social Distancing	5.3 <sup>c</sup>	Within the Guest's Room	3.3 <sup>b</sup>
7	Chairs	6.2 <sup>c</sup>			Welcome Letter	5.5 <sup>c</sup>		
8	Phone	6.4 <sup>c</sup>			Tent Cards - Warnings	6.1 <sup>d</sup>		
9	TV	6.4 <sup>c</sup>			Signage - Elevator	6.5 <sup>d</sup>		
10	Luggage Rack	8.3 <sup>d</sup>			Black Light Tour	6.9 <sup>d</sup>		
11					In-House Health Coordinator	7.7 <sup>e</sup>		
12					Website - Other Information	10.7 <sup>f</sup>		

Notes: (1) Figures are average ranking placement within the list, (2) Ranking of 1 indicates most important within each list, (3) lower figures are of higher ranked importance, while higher figures are of lower ranked importance, (4) means that do not share the same superscript (i.e. a and b) are significantly different at  $\alpha=0.05$  level

### Protocols with Cultivating Guests' Trust

Even though service providers can cultivate trust with their customers through three aspects: humanic, mechanical, and functional (Bitner, 1990; Garbarino and Johnson, 1999), our results in Table 5 indicate that humanic (i.e. service initiatives) and functional clues (i.e. sensory elements) are more likely to cultivate trust in guests, while mechanical clues (i.e. tangible elements) were least effective in building trust. It follows that the top-rated trust-building initiatives were human clues such as enforcing masks be worn by guests ( $\mu_{trust}=2.71$ ) and employees ( $\mu_{trust}=2.75$ ) and functional clues such as positioning hand sanitizer stations ( $\mu_{trust}=2.71$ ), advanced cleaning chemicals ( $\mu_{trust}=2.70$ ), and cleaning technology ( $\mu_{trust}=2.69$ ). On the other hand, mechanical-based initiatives that impacted building usage such as the closure of food and beverage (15%) and recreational facilities (13%) had the highest rates in diminishing trust with the hotel guests. Additionally, while humanic clues that are vividly apparent to guests are the most effective at cultivating trust, more discrete forms such as self-attestations, where information is extracted from guests, were less effective in developing trust, with less than half of respondents (43%) perceiving that it builds their trust, while 9% say it actually diminishes trust. Given the direct nature of the more apparent humanic clues, the results may suggest guests need to see and visualize the clues in order for them to be effective in triggering positive consumer responses that are critical to cultivating trust (Bitner, 1990; Garbarino and Johnson, 1999; Szende et al., 2018; Wall and Berry, 2007).

**Table 5. Trust Effectiveness in Hotel Operational Activities**

<i>Hotel Operational Initiative</i>	<i>Diminishes Trust (1)</i>	<i>No Effect (2)</i>	<i>Builds Trust (3)</i>	<i>Avg. Trust Score</i>
<i>Hotel Protocols</i>				
Advanced Cleaning Chemicals	6%	17%	<b>77%</b>	2.70 <sup>c</sup>
Cleaning Technology	7%	17%	76%	2.68 <sup>bc</sup>
Contactless Payments	7%	26%	67%	2.59 <sup>bc</sup>
Mobile Keys	6%	31%	63%	2.56 <sup>bc</sup>
Mobile Check-ins	6%	31%	63%	2.57 <sup>bc</sup>
Sanitizer Stations	4%	20%	76%	2.71 <sup>c</sup>
Digital Menus	7%	32%	61%	2.54 <sup>ab</sup>
Contactless Service	8%	28%	65%	2.57 <sup>bc</sup>
Closed F&B Outlets	<b>15%</b>	33%	52%	2.37 <sup>a</sup>
Closed Rec Outlets	13%	<b>35%</b>	52%	2.38 <sup>a</sup>
<i>Guest Protocols</i>				
Mask Enforcement	5%	20%	<b>75%</b>	2.71 <sup>b</sup>
Temperature Checks	7%	28%	65%	2.57 <sup>ab</sup>
Self Attestation	<b>9%</b>	<b>43%</b>	48%	2.39 <sup>a</sup>
<i>Employee Protocols</i>				
Mask Enforcement	4%	17%	<b>79%</b>	2.75 <sup>b</sup>
Gloves Enforcement	7%	29%	64%	2.58 <sup>ab</sup>
Temperature Checks	6%	24%	70%	2.64 <sup>ab</sup>
Self Attestation	<b>8%</b>	<b>37%</b>	55%	2.46 <sup>a</sup>

*Notes: means that do not share the same superscript (i.e. a and b) are significantly different at  $\alpha=0.05$  level*

## DISCUSSION

### Theoretical

The results of this study have numerous theoretical implications in contributing to the understanding of cultivating trust among travelers during times of crisis, particularly pandemics. Given the COVID-19 pandemic has had a far-reaching negative impact on the lodging industry, the results indicate that travelers during pandemics are more likely to trust accommodations that are more familiar to them and where they have already had a chance to develop a stronger relationship. On the other hand, accommodations that are more unique, such as Airbnb and independent establishments, were perceived as less trustworthy. The results support recent studies such as Bortoli et al. (2017), Ratnasingam (2012) and Sijoria et al. (2019) that found individuals feel safer in familiar locations. The results further suggest that individuals not only find more familiar locations safer, they are more likely to place their trust in them as well.

Likewise, the results point to branded establishments being the best positioned to provide more trustworthy overnight accommodations during pandemics, outside of one staying with close friends or relatives. Moreover, as individuals' purchasing intentions are influenced by how trustworthy they deem the seller (Ahmad et al., 2020; Torres et al., 2019), our results indicate branded hotels may rebound more quickly from the pandemic. Future studies may also want to investigate whether the role of trust in travelers' purchasing intentions is still valid outside times of crises at less familiar establishments. Additional research may also want to investigate the longitudinal effect of trust cultivated by lodging establishments taking additional measures during times of crisis.

While familiar accommodations were more trustworthy, our results also showed that establishments should emphasize operational initiatives that exhibit vivid humanic clues. While numerous studies have found mechanical clues to be one of the main determinants in cultivating trust (Bitner, 1990; Garbarino and Johnson, 1999; Szende et al., 2018; Wall and Berry, 2007), our results suggest that modifying the establishment by closing off sections within the lodging accommodation may do more harm than good. Furthermore, familiarity as aforementioned was central in how much trust guests placed in a lodging establishment (Bortoli et al., 2017; Ratnasingam, 2012; Sijoria et al., 2019). Given this, the reasoning of the diminished trust could be the removal of familiar features (e.g. closing off sections) that guests have come to expect. Future studies may want to investigate the interaction effect between familiarity and mechanical clues in cultivating guests' trust.

### **Practical**

The outcomes of this study have immediate applicability for hotel managers seeking to market and operate experiences that will appeal to and satisfy guests. In both respects, a single concept holds true and paramount: "cleanliness theater." Coined by Mogelonsky (2020) and analogous to the kindred "security theater" concept that emerged following the Sept. 11, 2001, terrorist attacks in the United States, the essence of cleanliness theater suggests that communication of sanitation practices may be even more critical to perception-building than the efficacy of the practices themselves.

From a communications and marketing standpoint, the results suggest the importance of using proactive means to convey cleanliness protocols. Consider the data presented in Table 4, which generally highlights that direct methods (e.g. verbal acknowledgement at the front desk, pre-arrival email notifications, website disclaimers at the time of booking, and surface stickers) are preferred (rank higher) over the more passive, incidental modes like welcome letters and tent cards. Not only do the proactive methods demonstrate the priority the organization places on sanitation, they also do so in more overt (versus covert) manners. With respect to communication mode preferences, a similar theme emerges in Table 4: proactive messages by email and upon check-in at the front desk (verbal or in letter form) are preferred over more passive approaches via websites, signage, and notices within guestrooms. Hotels should deploy the proactive means to communicate early on, to convey the priority of safety and set expectations for the hotel's practices and the responsibilities of guests.

With respect to marketing efforts to foster consumer confidence, the results also lend meaningful insights for hotel managers. Given the difference in safety ratings between branded and non-branded operations as shown in Table 2, strategies might slightly diverge. For establishments operating under well-known brands, marketers should leverage brand equity and perceptions of expertise to foster competence and predictability trust, referring to trust forms identified by Ratnasingam (2012). Distinctly, independent hotels may lack brand equity, and thus both competence and predictability trust. To counteract these deficits, independent hotels might consider strategic partnerships with brands known for cleanliness (such as reputable cleaning product sellers) to garner reputation by brand association. In either case, considering the superior average safety rating of staying with family versus in hotels, accommodation providers should play up a "home away from home" feeling in advertising.

Operationally, several recommended tactics also emerge from the research. Looking at touchpoints within guestrooms, the items with which a guest must come into contact have the highest average rankings for sanitation importance; refer to Table 4. Especially with respect to beds, television remotes, nightstands, and bathroom features, hotels must communicate and execute strict cleaning protocols. In addition to prioritizing the cleaning of these features (and to overtly communicate that prioritization and cleaning methods), hotel managers might ensure there are clear visual cues to reinforce for guests that these touchpoints have been properly sanitized: stickers or notes to certify cleaning are useful, and operators

must absolutely erase stains, fluid traces, tears, marks, or other visible irregularities that would suggest a guestroom feature is defective from the cleaning protocols. Again, priority ought to be placed on those features with which a guest is most prone to interact.

Other tactics can provide visual cues as cleanliness theatrics – and as legitimate practices to abate the spread of COVID-19 (Kim and Han, 2022). The evident use of advanced cleaning chemicals and cleaning technologies are among the greatest builders of trust, according to Table 5. Hotels need to make clear they are using effective chemicals, techniques, and technologies that fight COVID-19. Whereas in the past housekeeping practices may have been preferred by guests to be hidden, contemporary guests actually want to see such technology in action (almost as props) to provide assurance of a hotel’s quality. There may be a limit to the overtness of cleanliness measures, however. The closure of food and beverage and recreational facilities builds trust in just over half of respondents, but the closures also result in higher rates of diminished trust, suggesting that some measures may go too far – either inconveniencing guests and underestimating their risk tolerance, or making too visible the signs of abnormal times and evoking the “spillover effect” (making guests too uncomfortably wary of safety risks in public establishments).

Further to the last point, the use of self-attestations is not remarkably effective at developing trust; perhaps being another instance where guests lose comfort from being made too aware of risks. Nonetheless, some human-centered interventions (enforcing masks be worn by guests and employees, and positioning hand sanitizer stations) are absolutely critical to building trust, on top of the operating procedures hotels use to sanitize facilities. The coronavirus pandemic demanded our instant research response. Although, over the last year, “high levels of immunity and availability of effective COVID-19 prevention and management tools have reduced the risk for medically significant illness and death,” “COVID-19 remains an ongoing public health threat,” and therefore, we believe that our study remains more relevant than ever (Massetti, 2022).

### **Limitations**

As noted in the results, the geographic focus of this study was restricted to the United States. Results may not be equally applicable to travelers and hotels in other parts of the globe. Further, given the fact that government travel restrictions largely halted movement between countries, results covering mid-pandemic travel may disproportionately represent experiences with domestic (versus international) lodging. It is important to note that this study was conducted during the height of the pandemic prior to the distribution of vaccinations. As the virus has morphed into additional variants, practices by both operators and consumers have since changed on some level. For example, the practice of temperature checks prior to entering was significant as a reactive measure to the virus; as a greater scientific understanding of the virus has become clear, this practice is no longer at the forefront. An opportunity for further research could include which lodging brands’ cleanliness practices will remain in the evolution of their operation. As scientific evidence and government requirements continue to be implemented, the practices will continue to evolve.

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