How Consumers Behave in a Crisis: International Lessons (and Innovations) from COVID-19

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Abstract

Among the myriad challenges created by the COVID-19 pandemic, many touched on how individuals chose to utilize their resources to protect their personal well-being and the downstream impact on society. Marketing researchers rose to the challenge, and much work in the 2020–2022 period has been devoted to improving well-being by using marketing theory to create better health messaging, develop effective interventions, understand mechanisms that shift purchasing patterns, motivate cooperation and compliance, and speak to the high-impact decisions that people and organizations are being forced to make each day. Here, the author introduces the Protection Knowledge Model to synthesize much of the research to date on COVID-19 response. This model highlights the individual–institution interaction in how people choose (and institutions promote) protective strategies and focuses on the dangers of misalignment in individuals’ and institutions’ knowledge of each other and of the situation.

Theoretical Development

The key aspect of how consumers behave in a crisis, compared with more mundane times, is the element of threat. Much existing marketing research has explored how threat impacts our choices and our behavior. Threats can trigger a need to increase our perceived level of control by buying utilitarian products (Chen, Lee, and Yap 2017) or a need for concrete numerical information (Lembregts and Pandelaere 2019). Others have produced sizable literature reviews of COVID-related marketing or consumer research (e.g., Cruz-Cárdenas et al. 2021), so it is important now to find the patterns that underlie the body of work produced thus far. By adapting PKM’s basic mechanism of the self–other interaction, we can better identify the processes and pain-points that occur when individuals make crisis-related choices that impact both personal and societal well-being. Through this lens, we can see why some pandemic-related innovations succeeded where others failed and predict what lessons we will need to repeat in future global crises.

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also prompt impulsive buying (Sneath, Lacey, and Kennett-Hensel 2009) as consumers attempt to regain a sense of normalcy. We see how behaviors can shift in a variety of ways when consumers deploy resources to protect themselves and close others.

During COVID-19, we have observed many ways in which consumers sought some form of personal protection. Direct health choices included masking, hand washing or sanitizing, vaccination and boosters, vitamin/supplement consumption, over-the-counter drug use, or mental health apps. Indirect health choices included social distancing, the avoidance of indoor group activities (e.g., restaurants, movies, church, clubs, gyms, concerts), restriction of travel, staying in more expensive “cleaner” hotels (Kim et al. 2021), or the increase in solo activities. Finally, some pandemic-related choices were ancillary to health but still prevalent, such as stockpiling and hoarding (Di Crosta et al. 2021), income changes, shifts in housing preferences, purchase changes due to working from home, and increases in consumption of distraction-oriented entertainment. Through these kinds of choices and behaviors, consumers sought some way to protect their well-being, whether that was by protecting their physical and mental health, protecting against perceived scarcity and supply chain uncertainty, or protecting their livelihoods or their perceived world order. At a time when threat was continually salient, consumers responded by engaging in a great diversity of protection strategies.

But were these strategies effective for the individual or good for society? In many cases, institutions existed that had an opinion on the correctness of individual protection strategies and, further, sought to influence individual action for what they perceive to be the greater benefit to the population as a whole. For example, the World Health Organization offered advice on masking and social distancing, national and local governments promoted vaccination, retailers such as grocery stores counseled against stockpiling, conspiracy-theory groups spread false information to promote nonvaccination, business-to-business firms asked clients for patience regarding delayed services or delivery, mental health organizations offered advice on maintaining recreation and social connections, hospital systems postponed higher-profit elective surgeries, school systems promoted means to protect teacher and student health, professional sports leagues adapted fan experiences, and many more. These organizations recognized that they were asking people to consider benefits to the greater good that would sometimes be misaligned with the individual’s own actions for self-protection. In some instances, health institutions even explored the idea of paying people to get preventative medical care (Thirumurthy et al. 2022).

One critical lesson from the multitudinous impacts COVID-19 had on all aspects of life was that, as in all of these cases, it highlighted the importance of the interaction between the individual and an institution to create positive outcomes. Individuals and institutions could not be free agents or be unmindful of the other’s sense of threat but instead needed to be aware of how their well-being was coupled and where their protection strategies were aligned or misaligned. As consumers appraise threats and consider protective strategies, they jointly assess how institutions should be or are acting to mitigate risk (Kim et al. 2022). Considered conceptually, the elements of the interaction—what makes the protection effective for both the individual and the population—are similar to those described in Friestad and Wright’s (1994) seminal framework, the Persuasion Knowledge Model. By adapting PKM to describe a choice environment characterized by perceived threat and possible protective strategies, we can create a common framework to better understand the myriad ways that consumers responded to COVID-19.

Figure 1 presents the Protection Knowledge Model. The model focuses on the strategies that consumers use to protect themselves in response to large-scale threats (i.e., threats impacting the greater population). Specifically, individuals create salient protective strategies that are informed by their own characteristics and circumstances, and their intentions to engage in these strategies are based on their knowledge of the situation, their attitude toward the strategy, and their knowledge of the larger institution at work in the situation. On the other side, the institution also has knowledge of the situation, an attitude about the individual’s strategy, and their knowledge of the individual. The similarities of this crisis-based situation to PKM are that (1) there are two entities operating to maximize their own ends, (2) both entities hold knowledge about the situation (whether that knowledge is accurate or not), and (3) both entities hold knowledge about the other (again, whether that knowledge is accurate or not). The differences are that (1) the ultimate objective is protection and the execution, or not, of specific protection strategies; (2) the repercussions of the interaction impact the well-being of both individual and society (which then can impact later choices); (3) the interaction is specifically geared to one individual and one institution with responsibility for a larger population rather than two individuals; and (4) the extent to which success of the outcome for both parties relies on accuracy of each party’s knowledge of the other.

Consider two examples. First, one protective strategy that a consumer might engage in is buying N95 masks to wear in crowded areas. Their intention to do this is a function of what they know about the situation, such as the way coronavirus spreads, the efficacy of different kinds of masks, local infection rates, and the type of crowds with which they interact. They have developed an attitude toward mask wearing; perhaps they find it physically comfortable but feel some social embarrassment while wearing them. The local institution in this case may be a national or local health organization. This consumer knows the health organization and, through their experience/knowledge, is inclined to believe that the organization is benevolent, up-to-date, accurate, and trustworthy. The health organization has knowledge about the situation, too; it knows the way coronavirus spreads and the efficacy levels of different kinds of masks. However, its attitude about masks as a protection strategy is complicated; the organization knows that the latest scientific data suggest that N95 masks are the best at stopping transmission, but it does not want to emphasize this in its communications for fear that doing so will make people stop wearing the more accessible cloth
masks. The organization has knowledge of its population (whether through experience, research, or stereotyped beliefs) and believes people will not be motivated or able to process a nuanced mask message. It thus promotes the message that people should wear any mask they have and does not promote a “best mask” message. Here, then, the interaction occurs. The consumer intends to buy the N95 mask but is influenced by the health organizations messages to wear any mask; the N95 is expensive and harder to procure—perhaps it is not worth it after all? The consumer decides to buy a less expensive cloth mask. The consumer’s personal consequences are the mask’s efficacy level in preventing virus transmission but also the lower perception of security they feel in getting a cheaper mask. The population consequence is the mask’s efficacy in preventing virus transmission.

Here, we see that a mismatch or inaccuracy in the elements that each party brings to the interaction impact its success. In this mask scenario, both the individual and the institution would be better off if the individual bought the N95 mask. But, the institution’s knowledge of the individual is not accurate—the individual is more involved and risk-averse than the institution believes. Thus, they go with a less-nuanced “any mask” message. The individual—mistakenly thinking the institution is completely data-driven in its recommendations—takes this as support that higher-grade masks are not necessary. Ultimately, these are small inaccuracies and result in a small reduction in downstream benefits.

However, consider a second scenario where larger mismatches exist, one that is examined in this special issue by Ahmadi et al. (2022) and Sheng, Kim, and Ketron (2022). When pandemic-related supply chain disruptions occur, the delivery of common consumer goods (e.g., toilet paper) may become irregular, resulting in days when shelves are not full. Imagine a consumer who has sensitivity to scarcity of food or personal goods. A local TV station notes decreasing supplies of paper products. The consumer considers stockpiling or hoarding as a protection strategy. The consumer has knowledge of what stockouts are and how they happen (whether this information is correct or not); past food insecurity has taught them that empty shelves at home are painful. They have a positive attitude toward hoarding, seeing it as a smart thing that people with money frequently do. The consumer has knowledge of retailers and their motivations (again, whether this information is correct or not). They read on social media that retailers secretly exacerbate stockouts as a way to drive up prices. On their side, retailers have a very precise knowledge of stockouts and consumer runs on certain products. Retailers know projected delivery schedules and when restocking is likely to occur. They have a negative view of stockpiling, seeing it as an irritating and unnecessary behavior on the part of their customers as they are dedicated to getting customers what they need as quickly as possible. They see hoarding as unethical and selfish. Finally, retailers have knowledge of their customers (correct or not); they believe that customers

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Figure 1. The protection knowledge model: how consumers use resources in a crisis.
are irrational in panic-buying and that only rules will stop stockpiling. They do assume that their customers trust them to tell the truth about product availability. They do worry about customer satisfaction ratings if they are completely out of a product and fear that customers will go to competitors’ stores to find the scarce product. Given all of this, the store promotes non-stockpiling behavior; it institutes a “two products per customer” rule and posts signs on shelves stating that the next delivery is due in 48 hours. Here, we see two major misalignments: a mismatch between individual and institutional strategies and, importantly, inaccuracy in the consumer’s knowledge of the retailer. Thus, the consumer does not trust the retailer’s true information that more products will be available in 48 hours. They perceive malignant intent in the “two-per” rule and so do not feel bad about finding ways to break the rule, such as by entering the store multiple times in one day to get more than two products. The consumer’s consequence is that they successfully stockpile products and feel secure in that perceived abundance. The feeling of abundance helps mitigate other pandemic worries and positively impacts well-being. However, the population consequence is that the product suffers a more severe stockout and encourages other consumers to hoard, creating social media buzz and news coverage about pervasive scarcity, driving down community well-being. This exacerbates more stockpiling the next time a delivery schedule is interrupted in another product category. Here, we see that it was not just a misalignment in attitudes about the protection strategy of stockpiling; it was also the inaccuracies in the individual’s knowledge of the domain and the institution. A lack of trust and a belief in bad intent created a situation that led to short-term benefits for the individual but short- and long-term negative consequences for the population. Figure 2 depicts these scenarios within the Protection Knowledge Model.

Looking at the marketing-based research that has addressed the pandemic, it is clear that the Protection Knowledge Model provides a common structure for most key constructs that have been investigated. While exceptions exist, most work has captured the interplay between individual and societal motivations, examined choices or behaviors that are protective in some way to threats introduced by the pandemic, noted the role of information sharing and the accuracy of knowledge, and identified ways in which suboptimal outcomes are often caused or exacerbated by misalignment between the individual and a larger institution. This pattern is also present in the works presented in this special issue (Table 1).

Finally, what have we learned—at a larger level—about how people behave in a crisis? There are several key insights that have emerged from global research conducted during 2020–2022. Although this list is not exhaustive, it presents six themes that have immediate potential for future international marketing research.

1. **Marketplace theories are relevant to health care improvement.** The study of health-relevant decisions and industries has always been a domain of interest for marketing researchers (for an excellent monograph cataloguing the breadth of it, see Iacobucci and Popovich [2022]), and yet, given the size and impact of this domain, it has been relatively understudied (Moorman 2002; Wood and Schulman 2019). One very positive outcome of the COVID-19 pandemic is that it demonstrated to the medical world (from local doctors to the World Bank funding massive global vaccination efforts) the importance of marketing theories in understanding and intervening in health behaviors (Wood, Pate, and Schulman 2021). More than ever, stakeholders in health care see the value and patient-centric focus of our work and are keen to learn what we know. Marketing researchers can now build on this moment to create more bridges between marketing and medicine worldwide.

2. **Crisis is a great time for innovation.** While many (falsely) intuit that we crave the comforts of the past in times of upheaval (Wood 2010), times of “unprecedented” change are extraordinarily effective moments to break and make new habits (Sheth 2020). This is due to a combination of many factors. For example, necessity has prompted medical providers to design and execute telehealth systems with little preparation and motivated patients to give telehealth appointments a try. Providers and patients alike were compelled to do their best and to be more forgiving of wrinkles that were ironed out over time. And, in so doing, they have advanced telehealth 10–15 years in advance of what experts predicted; even after regular clinic visits were possible, 30% of visits remained via telehealth in the United States (Demeke et al. 2021). This “give it a try” attitude was observed in the creative ways that museums and theaters brought art to their grateful patrons (Mughal 2020), and stores, with some bumps, figured out curbside service (Maynard 2020). In this time of heightened needs and lowered standards, many innovations grew at a great pace.

3. **Psychographic segmentation is not intuitive in health domains, but nudges are.** Marketing research consistently documents the importance of psychological factors in consumers’ responses to medical interventions (e.g., Achar, Dunn, and Agrawal 2022). Early marketing approaches to promoting COVID-19 vaccination highlighted the need to think of consumer vaccine attitudes beyond being a simple dichotomy of political ideology and to work to identify (and then create targeted messages to) much smaller and more nuanced segments of vaccine interest or hesitance (Wood and Schulman 2021a, b). This approach was difficult to embrace for many in the health care sector (Moffitt et al. 2022), and much of this is due to medical training in “standards of care”—a mindset that determines the one best course of treatment to uniformly offer any patient with a given diagnosis. Health care stakeholders are more inclined to “nudge” approaches from behavioral economics because
nudges are delivered uniformly to populations. They do not require deep understanding of multiple patient segments and customized interventions. For example, great excitement was generated by the success of a large-scale field test of vaccination reminder texts (Buttenheim et al. 2022). Not surprisingly, governments and organizations are increasingly using behavioral nudges as interventions for health and other decisions (Benartzi et al. 2017). Ultimately, nudges and more involved consumer theory-driven interventions both have an

Figure 2. Applying the protection knowledge model to two pandemic-related consumer choices.
important place in health care interventions, but the latter may require more effort to implement.

4. **Global differences and similarities are tricky to predict.** Throughout the pandemic, much media attention and analysis focused on how different countries were faring in their citizens’ responses to COVID-19 (Oppenheimer 2021; Taylor 2020). Initially, it was feared that African countries with more poverty would be hit hard, but actual COVID deaths were far lower than predicted (Thomsen 2021). Some countries, such as New Zealand, appeared to be extraordinarily in-consensus on protection measures, but again this perception may not be fully descriptive of reality (Moffitt et al. 2022). Ultimately, the key conceptual elements suggested by the Protection Knowledge Model hint at why making cross-cultural predictions has been so difficult in this pandemic. The moving pieces include both the diverse knowledge and attitudes of the people and the diverse organizations—government or otherwise—that are on the other side of the interaction. How people in, say, Namibia or Germany feel about hoarding will impact their stockpiling behavior, but so too will their knowledge of local retailers’ motivations and trust-worthiness (Ahmadi et al. 2022). This will be further impacted by the retailers’ knowledge of their customers and promoted interventions. A large-scale set of recommendations requires a vast amount of local knowledge to create adaptations across many regions of the world (Wood, Pate, and Schulman 2021).

5. **Bad actors move faster than good.** There is much research examining the role of social media influencers as change (or antichange) agents during COVID-19 (e.g., Bierwiczonczek, Kunst, and Pich 2020; Sheng, Kim, and Ketron 2022). Not surprisingly, these digital change agents were extremely effective in shifting attitudes toward masking, vaccination, and other scientifically promoted health behaviors. The problem was that agents both for and against these behaviors existed. And, exacerbating that problem, the bad actors (or agents against scientifically supported health behaviors) were consistently faster to introduce influential content. This appears to be a function of the scientific process—when questions arose (e.g., Should pregnant women get vaccinated?), those with sincere intentions to communicate fact-based recommendations would require time to gather the relevant data and check the validity of their conclusions. In contrast, bad actors had no such need for time. Fake news needs no verification, and so fake stories often benefited from a “first to market” primacy effect. Some government health organizations in countries that were slower to receive vaccine supplies did not want to start their vaccine promotion campaigns until the first shots were ready to go. Unfortunately, in the meantime, bad actors had spread much antivaccination material that, when the shots and the campaigns began, the health care workers had months of antivaccination information to undo. The relative speed of falsehoods versus truth in communication is one underappreciated force in innovation diffusion.

6. **Reactance, resistance, and refusal are understudied.** The past two years have been witness to the large-scale refusal by some consumers to follow rules and mandates for everything from not wearing masks in retail spaces to illicitly self-treating COVID-19 with veterinary medicines that are forbidden for human use. Recent research explores how this reactance against marketplace regulations can be a function of political ideology (Irmak, Murdock, and Kanuri 2020). However, more research into the antecedents and consequences of reactance, resistance, and refusal is
desperately needed. Finding ways to compel cooperation among those who prefer to choose options that go against the grain will be critical to the future health and environmental challenges that face the world.

While it is clear that we have learned a lot in this short two-year period, it is true that we have also learned a lot about what we don’t know. Many of the findings described here are interesting or provocative but have not yet been tested for mechanism, robustness, or boundary conditions. Do findings about business-to-customer phenomena hold for business-to-business settings? Do findings about traditional marketplaces (e.g., how consumers overbuy in grocery stores) also apply to nontraditional exchanges (e.g., sharing exchanges such as free items on Craigslist)? How long will the effects of scarcity linger? How long will the effects of fear and anxiety linger? In what way can consumption and marketplace mechanisms help prepare and protect us in the next world health crisis? For marketing researchers, there is much good work yet to be done.

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