

ANALYZING THE RELATIONSHIP BETWEEN CONSUMER CONFUSION AND BRAND CHOICE ON SURGICAL MASK SHOPPING DURING COVID-19 PANDEMIC

Abdul Mureed Adalat KHAH, MBA Candidate, Istanbul Aydin University, Institute of Graduate Studies, , Istanbul, Turkey

Ilkay Karaduman, Assoc.Prof., Istanbul Aydin University, Faculty of Economics and Administrative Sciences, Istanbul, Turkey

ABSTRACT

The goal of this study is to enhance current stimuli-based consumer confusion measures so that they can account for confusion caused by personal traits and situational circumstances. In addition to the literature review, focus group interviews were done to select the items, and a pilot study for scale purification was undertaken. The aim of this study is to understand the relationship between consumer confusion and brand choice on surgical mask shopping during Covid-19, in this study survey method has been implemented. As sampling methodology convenience sampling has been chosen and sample size has been calculated as 150 consumers'.

A questionnaire form has been prepared and distributed to 150 participants, data collected has been analyzed by SPSS program and relationship between two research variables "consumer confusion" and "brand choice" has been tested by correlation analysis.

However, the study proposal is presented in the first chapter, followed by a literature review in the second chapter. In addition, study methodology is presented in the third chapter, followed by results and analysis, and finally, conclusion and suggestions.

The COVID-19 epidemic disrupted international economy and drove governments to implement a lockdown that prohibited any physical activity. The company had to transfer its operations online, and the pandemic killed 3.86 million individuals worldwide. The epidemic expanded to over 200 countries, and global health institutions failed to respond to the infection. The study focuses on the association between customer uncertainty and brand choice while purchasing surgical masks during the COVID-19 epidemic.

Keywords: *COVID-19 pandemic, surgical masks, customer preferences, lockdown, consumer confusion.*

1. INTRODUCTION

The COVID-19 pandemic shattered the international economies and forced nations to impose a lockdown restricting all types of physical activities. The business had to shift their activities online and the pandemic killed 3.86 million people around the globe. The pandemic spread around 200 nations in the world and the global health systems failed to respond to the virus. The major reason behind the fact is that no nation was prepared for the pandemic and the world has no vaccine to control the spread of the virus. World Health Organization and other such local and international health organizations like Red Cross provided some sops for controlling the spread of the virus. The most significant sops in this context were wearing a facemask (Ha & Trinh, 2021). Health organizations around the world along with the governments discovered that the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) can easily enter the human body through the respiratory system. Therefore, people need to wear a facemask to resist the entrance of the SARS-CoV-2 in the nasal cavity. The use of a facemask covers the mouth and nose and reduces the chances of the entrance of SARS-CoV-2. Some researchers found that it is easy to control the spread of SARS-CoV-2 by 90% by wearing a facemask (Ha & Trinh, 2021).

Most of the people used surgical masks in this context and some went for cloth or fabric masks and N95 masks. However, surgical masks were commonly used throughout the world. The major issue in this context is that the consumers were confused about the brand choice of surgical masks during shopping in the pandemic. Various companies offer surgical masks and the healthcare staff use these masks during surgeries and related functions (Cankurtaran & Beverland, 2020). Nevertheless, people seemed confused about the brand choice of surgical masks, as they did not know which surgical mask could better prevent them from SARS-CoV-2. It is the major reason that the world experienced an issue of surgical mask shortage as well and even the healthcare staff was unable to access these masks as people bought surgical masks in bulk during this confusion in search of a better surgical mask (Cankurtaran & Beverland, 2020).

The study highlights the relationship between consumer confusion and brand choice on surgical mask shopping during the COVID-19 pandemic. The world is experiencing the third wave of the COVID-19 pandemic and people are helpless because no effective or proven vaccination is yet developed to counter the pandemic. Some developed nations like the USA, Russia, and China have developed some vaccines to limit the deadliest health impacts of the pandemic but these vaccines cannot completely ensure elimination of the virus. The major reason behind the fact is that numerous people are going through the second attack of the virus after being vaccinated during the first attack of SARS-CoV-2 (Shaker et al., 2020). Therefore, WHO and other local, regional, and international organizations along with governments around the world are forcing people to take precautionary measures to stay safe from the deadliest attack of SARS-CoV-2. Likewise, these organizations and governments are proposing significant sops for the public to obey for avoiding the spread of the virus-like social distancing, using hand sanitisers, wearing facemasks, and other such measures.

2. LITERATURE REVIEW

2.1 Surgical Masks in the COVID-19 Pandemic

People around the world used different types of facemasks for avoiding the pandemic. The governments around the world asked their citizens to wear facemasks to save themselves from the virus. Wearing a facemask is a mandatory sop to follow for avoiding the spread of the COVID-19 virus in the world. Many nations are imposing heavy fines for not wearing a face mask. Numerous researchers and scholars investigate the type of facemask effective for avoiding the propagation of the COVID-19 virus. For instance, Lepelletier et al. (2020) targets different types of facemasks and their uses during the pandemic. The author highlights the French guidelines about the facemasks in this context. The study suggests that wearing a facemask during the COVID-19 pandemic has become essential in homes, offices, hospitals, and other places having gatherings. The author states that most people in the world are using surgical masks or filtering facepiece (FFP) masks and most of the consumers are not aware of the specificity of these masks (Lepelletier et al., 2020). It is the major reason that the world is facing a serious shortage of specified facemasks and the affected people cannot access them easily (Lepelletier et al., 2020).

The author suggests that the authorities have played their important role in this context to guide people about different types of facemasks and their uses during the COVID-19 pandemic for avoiding the shortage of surgical masks for frontline soldiers like hospital staff and nurses during the COVID-19 pandemic (Lepelletier et al., 2020).

Moreover, another study, Chiang et al. (2020) targets the practice of wearing facemasks during the pandemic. The author takes the Chinese case as a reference to support his stance. The author states that the use of a facemask helped to control influenza transmission. The study reveals that if a person infected by coronavirus or influenza wears a facemask then the chances of the virus spread are limited (Chiang et al., 2020). In the same manner, the author highlights the case of Taiwan and Singapore as a comparison to illustrate the effectiveness and importance of wearing a facemask during the pandemic. The study states that Taiwan faced 348 cases of coronavirus on April 3, 2020, and Singapore faced 1,114 cases of the pandemic on the same date (Chiang et al., 2020). Both nations took effective measures to control the spread of the virus. However, Taiwan made the use of a facemask compulsory immediately after the detection of cases. On the other hand, Singapore did not focus on making the use of a facemask mandatory for its citizens (Chiang et al., 2020). The results were different. The number of cases of the COVID-19 pandemic declined in Taiwan because the infected people wore facemasks and they did not transmit the virus to the healthy community (Chiang et al., 2020). On the other hand, the number of cases of the pandemic increased for Singapore because the infected individuals did not wear facemasks and they played a vital role in transmitting the virus to the healthy community (Chiang et al., 2020).

2.2 Consumer Confusion and Surgical Masks

Consumer confusion about facemask selection is a serious issue experienced around the world. The major reason behind the fact is that no local, national, and international health organization provided clear guidelines about the brand selection of facemasks. Moreover, the state and federal governments around the world failed to provide these guidelines as well. Therefore, people faced numerous issues about selecting a brand for facemasks. Consumers around the world faced serious challenges regarding the surgical facemasks selection based on the brand of surgical facemasks. Numerous researchers tried to investigate the subject during the pandemic. For instance, Howard et al. (2021) suggest that the primary route of transmission of the virus is the respiratory system. It is the major reason that presymptomatic, paucisymptomatic, and asymptomatic individuals can contribute to the transmission of the COVID-19 virus. The author states that wearing a mask is a good option to limit the transmission of the COVID-19 virus (Howard et al., 2021). However, there is serious confusion regarding the selection of a facemask. The study states that most people in the world are using surgical facemasks and they are confused about the selection of a surgical facemask based on its brand (Howard et al., 2021). Nevertheless, the reality is that the surgical mask is not a good option for the public during the COVID-19 pandemic because the excessive purchase of surgical facemasks by the public is creating a serious shortage of these masks for healthcare staff (Howard et al., 2021). It is the major reason that the study recommends using a cloth mask or a fabric mask to the public during the COVID-19 pandemic.

2.3 Brand Choice of Surgical Masks Shopping

Brand choice of surgical masks shopping is a serious confusion for the public. They have no idea which mask could protect them from the droplets of SARS-CoV-2 entering into their bodies effectively and vice versa. The lack of government support and the lack of support and guidelines by the healthcare organizations is adding fuel to the fire and making the decision difficult for the public. Therefore, Liao et al. (2021) technically reviews the role of facemasks in preventing the droplets of SARS-CoV-2 from entering the human body. The author states that social distance, hand hygiene, and face mask-wearing are the major sops for avoiding the spread of the SARS-CoV-2 virus adopted by numerous nations around the world (Liao et al., 2021). The study states that the most effective and the most efficient sop for avoiding the droplets of SARS-CoV-2 entering into the human body is wearing a facemask. The major reason behind the fact is that the SARS-CoV-2 virus enters the human body using the nasal cavity or respiratory system. The face mask covers the nasal cavity by covering the mouth and nose (Liao et al., 2021). Therefore, it is the most efficient sop for avoiding SARS-CoV-2 infection. Various types of facemask brands are available in the market including cloth masks and surgical masks like N95 and others (Liao et al., 2021). The major aim of all types of the mask is to cover mouth and nose. However, some masks have two layers and some have more than two layers. It means that the major difference in different types of facemasks is the number of layers of a mask. Moreover, some masks have filters in them and some masks are without filters (Liao et al., 2021).

2.3.1 Types of Facemasks

Various types of facemasks are available in the market like cloth facemasks, surgical facemasks, N95 facemask, FFP3 masks, KN95 masks, and various other such masks. The most important thing is that masks are different from each other based on their number of

layers and their material. Some masks use nylon and some use other materials. Likewise, some masks have two layers and some masks have more than two layers. The standard for masks and respirators include filtration efficiency, FE, differential pressure, and fit tests. The fit test is important because it helps to understand the way in which a facemask would seal the face of a worker. People around the world used various types of facemasks during the COVID-19 pandemic to avoid the spread of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). However, there was serious consumer confusion about the selection of the type of facemasks used during the COVID-19 pandemic. Various researchers target different types of facemasks used around the globe during the COVID-19 pandemic. For instance, Greenhalgh et al. (2020) targets various types of facemasks for the public during the COVID-19 pandemic. The study suggests that the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) can enter the human body via the respiratory system. It is the major reason that covering the cavities leading to the respiratory system is important for preventing the spread of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Greenhalgh et al., 2020). Therefore, the public can use various types of facemasks in this context. The author suggests that the cloth masks are good to do the job. However, wearing a surgical, medical facemask or an N-95 facemask is a good choice as well.

3.METHODOLOGY

The technique, strategies, and procedures used to conduct the study and obtain the data and analysis for this research are outlined in this part. The methodology section will define the research methodologies, the type of research approach, the research questions, and the hypothesis, as well as any additional justifications. The researcher picks the methodology based on the study's purpose and variables, the society in which the study will be done. The inquiry used the internet to acquire information on all social media users in Turkey. The survey questionnaire, which will be scored on a 5-point Likert scale, will take up the majority of this research.

3.1 DATA COLLECTION

A gathering data pre-test questionnaire was created to collect primary data in light of the exploratory study, which included an in-depth literature investigation. Because of the quick dissemination possibilities and obvious interaction with the target group, an online survey was conducted between November 2nd and November 29th, 2021. An internet survey is a questionnaire that is posted on the internet and filled out by the respondents. Respondents can answer to the survey by simply clicking or pressing on a response on the screen. This popular method is easy to implement and helps both respondents and researchers. It's really quick and simple when you're online. It is also easier to reach the inaccessible target demographic since it is ageless and global. The online questionnaire, which was created using Google Forms, took around 6 minutes to complete. To begin, 150 people in Istanbul were provided a link to the poll, the majority of whom had a big number of followers on social media platforms and organizations they follow. Personal messages and e-mails were sent to these people who are active on social media and interact with the target audience. They were encouraged to participate as well as share the link with friends or acquaintances in their social network who possessed the necessary characteristics. Many of them shared the link on social networking platforms including Instagram, Facebook, Twitter, and LinkedIn, among others. Face-to-face interviews were conducted in order to obtain as many respondents as possible, despite the risk of a low participation rate. In Istanbul, millennial-friendly locations such as cafés and retail malls were visited. In exchange for their participation, a group of volunteers contacted these young people and gave them tablets, cellphones, or hardcopies of the survey.

3.2 RESULTS AND ANALYSIS

The results and analysis of the questionnaire replies are included in this chapter. The section would analyze the outcomes of each of the questions and their responses independently and present them in the form of a chart. Similarly, the chapter would explain the results of each question in the questionnaire separately based on the questionnaire respondents' responses. The researchers would use pie charts to compare the responses of the interview responses, and they would create the pie charts in Excel. The visual depiction of the results of each questionnaire question would enable the researchers to debate the results of each question and show them to the audiences or readers to help them comprehend the results of each question. The research would also give an overall assessment of the questionnaire data. The research highlights significant connection or relationship between consumer confusion and brand choice on surgical mask shopping during covid-19 pandemic.

This implies that the study will look at both the advantages and disadvantages of the connection between consumer misunderstanding and buying decisions on surgical mask purchases during the COVID-19 pandemic. It implies that the study intends to investigate many components or perspectives of the subject. As a result, it is appropriate to state that the study is descriptive, intending to investigate the link between consumer uncertainty and brand choice on surgical masks purchasing during the pandemic in a variety of ways. The response of each of the questions of the questionnaire is explained below in the study. The result of each question is explained in detail as well.

3.3 Reliability Testing

This test is for measuring how reliable and good the questionnaires are which respect to the study and results, in easy words reliability testing shows how much sufficient and reliable the survey questionnaires are. In this section, I used Cronbach's Alpha analysis to extent the level of internal consistency among the survey items. Sekaran and Bougie (2011) stated that Cronbach's Alpha values should more or equal to 0.7 which higher values will show greater reliability of scales.

Reliability Test			
Reliability Statistics for Brand choice and consumer confusion			
Cronbach's Alpha Based			
Cronbach's Alpha	on Standardized Items		N of Items
Brand Choice	.884	.884	14
Consumer Confusion	.905	.905	6

As we can see in table Cronbach's Alpha all the question in questionnaire are highly reliable internally and very consistent because all result values are more than 0.7.

Hypothesis Testing Summary

Hypothesis	Results
H1:there is a significant relationship between consumer confusion and brand choice during COVID-19 pandemic on surgical mask shopping.	Accptted

4. CONCLUSION

The chapter would highlight the relationship between consumer confusion and brand choice on surgical mask shopping during the COVID-19 pandemic. Furthermore, the chapter would make important suggestions to shoppers and healthcare institutions on how to address the problem of buyer ambiguity about brand choice when purchasing facemasks during the COVID-19 global epidemic. The research provides the investigators with an outlook as well as substantial limitations of the precision research.

4.1 Recommendation: The chapter summarizes the discussion of the previous chapters of the thesis and provides valuable recommendations to people across the world to overcome their confusion regarding brand choice of surgical mask shopping during the COVID-19 pandemic. The COVID-19 epidemic smashed worldwide financial systems and compelled governments to enforce a lockdown that prohibited all tangible operations. The company had to switch their operations digitally, and the global epidemic killed 3.86 million individuals globally. The pandemic scattered to over 200 countries, and worldwide health care systems failed to react to the viral infection (Chakraborty & Maity, 2020). The chief factor for this is that no country was ready for the deadly virus, and there is no antiviral drug to regulate the disease's propagation. The World Health Organization and other domestic and international health organizations, such as the Red Cross, proffered some strategies to limit the disease's propagation.

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) was revealed by healthcare organizations and authorities all over the universe to quickly access the human body through the circulatory tract. As a result, individuals must wear a protective mask to prevent SARS-CoV-2 from entering the nasopharynx. Using a facial mask covers the nose and mouth, decreasing the possibility of SARS-CoV-2 entering the body. Wearing a protective mask, according to some scientists, can stop the prevalence of SARS-CoV-2 by 90% (Ha & Trinh, 2021). In this situation, many individuals wore surgical masks, but some wore linen or fabric facemask as well as N95 masks. Surgery masks, on the other hand, were widely used throughout the world. The main point of consideration is that throughout the disease outbreak, buyers were perplexed about the brand preference of surgical masks. Numerous retailers offer surgical masks, which are used by health professionals during reconstructive surgery and other procedures. Nonetheless, individuals appeared perplexed about the particular brand of facemasks, as they were unsure which respirator mask would best protect them from SARS-CoV-2 (Ha & Trinh, 2021).

The chapter would highlight the relationship between consumer confusion and brand choice on surgical mask shopping during the COVID-19 pandemic. Furthermore, the chapter would make important suggestions to shoppers and healthcare institutions on how to address the problem of buyer ambiguity about brand choice when purchasing facemasks during the COVID-19 global epidemic. The research provides the investigators with an outlook as well as substantial limitations of the precision research. and refurbishing, and the airline should make its truth regarding the services it provide and the exact time specially on the flight timing which it provides and at most it should also make accounts zero from errors. Willingness and intention of helping the passengers and giving them the good service will definitely satisfy customers.

4.2 FOREWORD

With my best wishes and gratitude, I'd like to give special thanks to Associate Prof. Dr. ILKAY KARADUMAN, my thesis advisor, for his outstanding and competent guidance

and assistance, as well as for making appropriate suggestions, thoroughly assisting, and inspiring me throughout my master's program and research dissertation phase.

Furthermore, I would like to express my gratitude to my parents and family members for their constant encouragement and motivation throughout my postgraduate studies.

In addition, I would like to express my appreciation to members of the Social Sciences Department for their regular assistance and all of the professors of the Department of Business Administration at Istanbul Aydin University (IAU) for their tremendous assistance and support during my master's program.

NOTE: This study has been derived from MBA Thesis prepared by Abdul Mureed Adalat KHAH and supervised by Ilkay Karaduman.

REFERENCES

CANKURTARAN, P., & BEVERLAND, M. B. (2020). Using design thinking to respond to crises: B2B lessons from the 2020 COVID-19 pandemic. **Industrial Marketing Management**, 88, 255–260. <https://doi.org/10.1016/j.indmarman.2020.05.030>

CHAKRABORTY, I., & MAITY, P. (2020). COVID-19 outbreak: Migration, effects on society, global environment and prevention. **Science of the Total Environment**, 728(138882), 138882. <https://doi.org/10.1016/j.scitotenv.2020.138882>

CHENG, X., FU, S., & DE VREEDE, G.-J. (2018). A mixed method investigation of sharing economy driven car-hailing services: Online and offline perspectives. **International Journal of Information Management**, 41, 57–64. <https://doi.org/10.1016/j.ijinfomgt.2018.03.005>

CHIANG, C.-H., CHIANG, C.-H., & CHIANG, C.-H. (2020). Maintaining mask stockpiles in the COVID-19 pandemic: Taiwan as a learning model. **Infection Control & Hospital Epidemiology**, 1–2. <https://doi.org/10.1017/ice.2020.226>

CHIANG, C.-H., CHIANG, C.-H., CHIANG, C.-H., & CHEN, Y.-C. (2020). The Practice of Wearing Surgical Masks during the COVID-19 Pandemic. **Emerging Infectious Diseases**, 26(8). <https://doi.org/10.3201/eid2608.201498>

CLAPP, P. W., SICKBERT-BENNETT, E. E., SAMET, J. M., BERNTSEN, J., ZEMAN, K. L., ANDERSON, D. J., WEBER, D. J., & BENNETT, W. D. (2020). Evaluation of Cloth Masks and Modified Procedure Masks as Personal Protective Equipment for the Public During the COVID-19 Pandemic. **JAMA Internal Medicine**. <https://doi.org/10.1501/jamaintern.med.2020.8168>

CLARKE, E., & VISSER, J. (2018). Pragmatic research methodology in education: possibilities and pitfalls. **International Journal of Research & Method in Education**, 42(5), 455–469. <https://doi.org/10.1080/1743727x.2018.1524866>

ESPOSITO, S., PRINCIPI, N., LEUNG, C. C., & MIGLIORI, G. B. (2020). Universal use of face masks for success against COVID-19: evidence and implications for prevention policies. **European Respiratory Journal**, 55(6). <https://doi.org/10.1183/13993003.01260-2020>

HA, T. M., & TRINH, V. D. (2021). Green Brand Equity and COVID-19 Post-Pandemic: The Case of the World's First Coffee Face Mask in Vietnam. **The ICT and Evolution of Work**, 65–86. https://doi.org/10.1507/978-981-33-4134-0_4

-sensitive indicators in Dutch hospitals: A descriptive exploratory research study. **Health Policy**, 122(7), 755–764. <https://doi.org/10.1016/j.healthpol.2018.05.015>

KIM, M.-N. (2020). What Type of Face Mask is Appropriate for Everyone-Mask-Wearing Policy Amidst COVID-19 Pandemic? **Journal of Korean Medical Science**, 35(20). <https://doi.org/10.3346/jkms.2020.35.e186>

LEPELLETIER, D., GRANDBASTIEN, B., ROMANO-BERTRAND, S., AHO, S., CHIDIAC, C., GÉHANNO, J.-F., & CHAUVIN, F. (2020). What face mask for what use in the context of COVID-19 pandemic? The French guidelines. **Journal of Hospital Infection**. <https://doi.org/10.1016/j.jhin.2020.04.036>

LIAO, M., LIU, H., WANG, X., HU, X., HUANG, Y., LIU, X., BRENAN, K., MECHA, J., NIRMALAN, M., & LU, J. R. (2021). A Technical Review of Face Mask Wearing in Preventing Respiratory COVID-19 Transmission. **Current Opinion in Colloid & Interface Science**, 101417. <https://doi.org/10.1016/j.cocis.2021.101417>

LIMA, M. M. DE S., CAVALCANTE, F. M. L., MACÊDO, T. S., GALINDO-NETO, N. M., CAETANO, J. Á., & BARROS, L. M. (n.d.). Cloth face masks to prevent Covid-19 and other respiratory infections *. **Revista Latino-Americana de Enfermagem**, 28. <https://doi.org/10.1590/1518-8345.4537.3353>

LIU, X., & ZHANG, S. (2020). COVID-19: Face Masks and Human-to-human Transmission. **Influenza and Other Respiratory Viruses**. <https://doi.org/10.1111/irv.12740>

LIU, Y., LEACHMAN, S., & BAR, A. (2020). Proposed approach for reusing surgical masks in COVID-19 pandemic. **Journal of the American Academy of Dermatology**. <https://doi.org/10.1016/j.jaad.2020.04.099>

MATNEY, B. (2018). A Knowledge Framework for the Philosophical Underpinnings of Research: Implications for Music Therapy. **Journal of Music Therapy**, 56(1), 1–29. <https://doi.org/10.1093/jmt/thy018>

MCCHESENEY, K., & ALDRIDGE, J. (2019). Weaving an interpretivist stance throughout mixed methods research. **International Journal of Research & Method in Education**, 42(3), 1–14. <https://doi.org/10.1080/1743727x.2019.1590811>

MUNAWAR, S., TOOR, S. K., ASLAM, M., & HAMID, M. (2018). Move to Smart Learning Environment: Exploratory Research of Challenges in Computer Laboratory and Design Intelligent Virtual Laboratory for eLearning Technology. **Eurasia Journal of Mathematics, Science and Technology Education**, 14(5), 1645–1662. <https://doi.org/10.29333/ejmste/85036>

Shaker, M. S., Oppenheimer, J., Grayson, M.,). Covid-19: Pandemic Contingency Planning For The Allergy And Immunology Clinic. **The Journal Of Allergy And Clinical Immunology: In Practice**. <https://doi.org/10.1016/J.Jaip.2020.03.012>