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Araştırma Makalesi/Research Article

Evaluation of Passenger's Airline Selection Criteria

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Evaluation of Passenger's Airline Selection Criteria	Yolcuların Havayolu Seçim Kriterlerinin Değerlendirilmesi
<p>Abstract</p> <p>Globally, the daily count of flights ranging from 100,000 to 200,000 has led to a consistent rise in both air and passenger traffic. This escalation has triggered heightened competition among airlines, prompting them to devise distinct strategies that consider passengers' desires, needs, and prerequisites to gain favor among them. This research delved into identifying and examining the factors influencing passengers' preferences for domestic flights, drawing from the criteria utilized by airlines employing diverse strategies to garner preference. The foundational criteria for passenger preferences were grounded in the context of domestic flights within Turkey. Employing a qualitative research approach, the study employed a multi-criteria decision-making technique known as the Analytical Hierarchy Process (AHP). Structured interviews were utilized to collect data, which were subsequently analyzed using the AHP method—a widely adopted approach in multi-criteria decision making. The analysis revealed that, among the factors, the price criterion held the utmost significance for passengers when making their airline selection</p>	<p>Özet</p> <p>Tüm dünyada günlük yaklaşık 100.000 ile 200.000 arasında uçuş yapılmakta ve hava trafiği ve dolayısıyla da yolcu trafiği her geçen gün artmaktadır. Artan hava trafiği ve yolcu trafiğine paralel olarak havayolları arasında rekabet de artmakta, havayolları tercih edilmeyi sağlamak amacıyla yolcuların istek ve ihtiyaçlarını, taleplerini dikkate alan farklı stratejiler geliştirmekte ve uygulamaktadır. Bu çalışmada tercih edilmeyi sağlamak için farklı stratejiler uygulayan havayollarının dikkat ettiği kriterler esas alınarak yolcuların yurtiçi uçuşlar için havayolu tercihini etkileyen kriterler belirlenmiş ve analiz edilmiştir. Kriterler belirlenirken yolcuların yurtiçi uçuşlardaki (Türkiye) havayolu tercih kriterleri esas alınmıştır. Yöntem olarak nitel araştırma desenlerinden çok kriterli karar verme tekniği kullanılmıştır. Veriler yapılandırılmış görüşme tekniği kullanılarak elde edilmiş ve elde edilen veriler yaygın kullanılan çok kriterli karar verme yöntemlerinden Analitik Hiyerarşi Süreci (AHS) kullanılarak analiz edilmiştir. Yapılan analizler sonucunda fiyat kriterinin yolcuların havayolu tercihi yaparken en çok dikkat ettiği kriter olduğu görülmüştür.</p>
<p>Keywords: Aviation, Airline, Analytical Hierarchy Process, Decision Making</p>	<p>Anahtar Kelimeler: Havacılık, Havayolu, Analitik Hiyerarşi Süreci, Karar Verme</p>
<p>Jel Classification: M10, M19</p>	<p>JEL Sınıflandırması: M10, M19</p>
<p>Araştırma ve Yayın Etiği Beyanı: Bu çalışmada, araştırma ve yayın etiği kurallarına uyulduğu yazarlar tarafından taahhüt edilmektedir.</p> <p>Yazar Katkı Oranları: Birinci yazarın katkı oranı %50; İkinci yazarın katkı oranı %50</p> <p>Çıkar Beyanı: Yazarlar açısından ya da üçüncü taraflar açısından çalışmadan kaynaklı çıkar çatışması bulunmamaktadır.</p>	

1. Introduction

The emergence of the COVID-19 pandemic in Wuhan, China, marked a watershed moment in global history, introducing an unprecedented set of challenges that reverberated across numerous sectors. Among the most profoundly impacted was the aviation industry, which experienced severe disruptions in both its supply and demand chains, triggering a worldwide recession (Dube et al., 2021: p.1). All the flights almost suspended, and with this suspension (Erdoğan and Koçoğlu, 2020p.25), cargo flights, business flights, flights of lowcost airlines, non-scheduled flights and flights of traditional airlines decreased compared to 2019. Parallel to the lifting of travel bans, air passenger traffic has resumed as of June 2020 (Eurocontrol, 2020). ICAO's most recent examination of worldwide air traffic presents evident indications of a robust resurgence in global aviation activity. This resurgence is marked by heightened airline assurance, enhanced in-flight communication, and streamlined air travel facilitation. Notably, during the period spanning from January to April 2022, there was a notable 65% upswing in the quantity of passengers transported, in comparison to the corresponding period in 2021. Concurrently, aircraft flight departures also exhibited a 30% upsurge (ICAO, 2022).

However, the aftermath of the COVID-19 pandemic extends beyond mere numerical data. The pandemic's far-reaching impact has catalyzed transformative shifts in consumer behavior, thereby influencing the preferences and choices of air travelers. This study, against this backdrop, endeavors to delve into the intricate web of factors that shape passengers' airline preferences for domestic flights. This examination is anchored in the diverse strategies adopted by airlines operating within an intensely competitive environment, each striving to position itself as the preferred choice for discerning passengers.

Crucially, this research also seeks to ascertain whether the concept of hygiene, which has gained unprecedented prominence in the post-pandemic era, exerts a discernible influence on passengers' airline preferences. While the air traffic demand rebounds, various studies across disparate fields underscore the notion that the COVID-19 pandemic has precipitated a transformation in consumers' purchasing behavior. This shift extends to the realm of air travel, wherein considerations of hygiene and safety have been thrust to the forefront of passenger decision-making processes.

In light of these considerations, this study employs a comprehensive analytical framework to explore the interplay between airline strategies, passenger preferences, and the evolving significance of hygiene in the post-COVID-19 airline selection process. By interrogating these intricate dynamics, this research aims to contribute nuanced insights that illuminate the multifaceted nature of post-pandemic airline preferences for domestic flights.

2. Airline Selection Criteria for Passenger

In the contemporary era of rapid globalization and the consequent surge in air travel, the global aviation industry is witnessing an elevation in the benchmarks for air travel consumers' preferences (Kim and Parl, 2017: p.76). Understanding passenger expectations, their purchasing inclinations, and behaviors holds pivotal significance for airlines, underscoring the imperative of delivering tailored airline services (Milioti et al, 2015: p.46; Truog et al, 2020: p.1;). While numerous studies have delved into the factors influencing airline choice decisions, the relative importance of each factor manifests fluctuations among passengers, contingent upon their sociodemographic attributes and trip particulars (Milioti et al, 2015: p.46). Price, service quality, airline image, frequent flyer programs (FFPs), and value for money have historically framed passengers' preferences in the aviation domain (Park, 2010: s.287). However, the

landscape shifted notably with the advent of the COVID-19 pandemic, reshaping customer behaviors and preferences.

Amid the pandemic, empirical evidence from studies conducted in Malaysia showcases a spectrum of behavioral changes instigated by COVID-19, including panic buying, avoidance of healthcare facilities, and even mass travel during movement restrictions (Yau et al, 2020: p.45). Extant research conducted during this global crisis illuminates the transformative impact of the pandemic on passengers' criteria for selecting airlines. This study affirms that not only does the evolving status of the COVID-19 pandemic exert influence, but factors such as self-isolation, travel destinations, the aviation sector's anti-infectious measures, and the societal perception of international travel collectively shape decisions regarding the resumption of air travel (Song and Choi, 2020: p.2). In this context, the research endeavors to dissect the criteria underpinning passengers' airline preferences, and it scrutinizes this phenomenon across three temporal dimensions: before COVID-19, during the pandemic, and in the post-COVID-19 era.

3. Literature Review

Degraeve et al. (2004) detailed a model that selects suppliers for multiple services and simultaneously specifies the market share of the selected suppliers. The results showed a total cost of ownership savings of 19.5% compared to the current ad-hoc purchase policy.

Fourie and Lubbe (2006) conducted a study to investigate factors that might influence business travelers South Africa to choose full-service airlines or low-cost airlines. Even though the results were similar to studies conducted in the UK and Brazil for many service elements, it was confirmed that two groups of business travelers in different countries looked at service attributes such as frequent flyer programmes, flight schedules/frequency; in-flight services and business lounge selection similar. Price is an important factor in choosing a low-cost or full-service airline in South Africa.

In 2010, Park (2020) formulated a conceptual framework to explore the influence of frequent flyer programs. This investigation scrutinized the interconnections between such programs and key aspects including airline service quality, passenger contentment, pricing structures, airline reputation, and the selection of airlines. Ultimately, the study discerned that frequent flyer programs wield both direct and indirect impacts on pricing, passenger satisfaction, airline image, and the decision-making process regarding airline selection.

Durak and Yılmaz (2016) conducted a study to identify the criteria influencing airline selection for air cargo and to calculate the significance level of these criteria. The analysis results show that "price" is the most important criterion in airline selection criteria.

Delice (2016) developed a new fuzzy multi-criteria model for airline selection based on customer requirements in an uncertain environment using the Karnot model (KM), fuzzy VIKOR and fuzzy TOPSIS methods. According to reports, among the ten service standards identified, the most important standard is the "flight safety" standard.

Kim and Park (2017) conducted a study to reveal the significance of airline choice attributes that passengers consider crucial for choosing an airline. Taking 32 overseas aviation experts and 34 Korean aviation experts as the target sample group, they analyzed the effect of attribute selection based on airline type, full-service airline (FSC) and low-cost airline (LCC) through Delphi analysis. It has been verified that the most significant factors related to flight service reliability, whether in the field of FSC or LCC

aircraft operations, include safety, punctuality, and the ability to handle delays/cancellations when selecting an airline.

Küçükaltan and Topçu (2019) conducted a study to develop a strategic decision-making model that incorporates key choice indicators through a systematic approach and seek out the significance of these indicators for passengers. The study shows that among the 32 key selection indicators, factors related to price and customer satisfaction the more outstanding dimensions for passengers to choose the best airline.

Truong et al. (2020) conducted a study in order to improve an extended Theory of Planned Behavior (TPB) model to search how passengers' behavioral factors influence their purchase intentions in Southeast Asia. The results suggest that low-cost carrier (LCC) passengers in Southeast Asia are driven by price. In contrast, the extended Theory of Planned Behavior (TPB) model has been shown to explain well the attitudes and purchasing behavior of LCC passengers in the region

Thepchalerm et al (2021) determined the attractive characteristics of airlines within the context of the COVID-19 pandemic. The results show that precautions against infectious diseases have become an attribute of passenger concern during the COVID-19 pandemic

Mahendra (2022) has conducted study to solve the problem which confuses customers while choosing airlines. While using the FUCOM-MARCOS method and taking 8 criteria and 6 testing alternatives into consideration, it has been seen that price is the most important factor.

Before delving into the specifics of the sub-criteria, it's important to acknowledge that the pandemic significantly disrupted the aviation industry, leading to shifts in passenger preferences. Thus, comparing these criteria across timeframes offers insights into the post-pandemic recovery period.

When delving into the literature, it has been seen that there are studies about airline selection criteria before and during pandemic (COVID-19). The aim of study is to analyze the passengers' airline selection criteria after the pandemic and compare these criteria in 3 dimension; before, during and after COVID-19.

The proposed analysis, structured around the Analytical Hierarchy Process (AHP) model, is commonly used for selection, classification, was used for the analyze. Three main criteria; Flexibility (C1), Affordability (CR2), and Quality (CR3); 11 Sub-criteria; On Time Departure (SC1), Frequency (SCR2), Direct Flight (SCR3), Airline Image (SCR4), Ticket Price (SC5), Extra Baggage Fee (SCR6), Catering Services (SC7), Hygienic Competence (SC8), Ease of Transaction (SC9), Distance Between Seats (SC10), Staff Attitude (SC11) has been determined in the light of conducted studies in the literature. It is obvious that this research has the potential to shed light on the transformation of the aviation industry and guide airlines in tailoring their services to meet post-pandemic passenger expectations.

4. Methodology

The Analytical Hierarchy Process (AHP), a prominently favored model for multi-criteria decision-making, was established by Saaty (Al-Harbi, 2001). It has been adopted as the most fitting approach for the selection process. Several procedural stages within this methodology have been adhered to.

Step 1

The hierarchical structure of the decision problem has been established, along with its intended purpose. This structure encompasses the objective, primary criteria, subordinate criteria, and available choices, all of which have been clearly defined.

Step 2

Paired comparison matrix between main criteria and sub-criteria on the same level has been specified (Durmaz and Cingöz, 2023).

To serve this aim Saaty's nine-point scale which was given in Table 2 has been utilized and comparison matrix for the main criteria has been created

Table 2. Saaty nine-point importance scale

Degree of Significance	Explanation
1	Equal
2	Weak or slight
3	Moderate
4	Moderate plus
5	Strong
6	Strong plus
7	Very strong or demonstrated
8	Very, very strong
9	Extreme importance

Source: Akdeniz, 2018: p.65

Table 3. Pair-wise comparison matrix for the main criteria

Primary Factors or Main Criteria	CR1	CR2	CR3
CR1	1,00	1/5	1,00
CR2	5,00	1,00	4,00
CR3	1,00	1/4	1,00
Total	7,000	1,450	6,000

Step 3

Table 4. Normalized pair-wise matrix and local priorities for the main criterion

Airline Selection	CR1	CR2	CR3	Local Priorities
CR1	0,143	0,138	0,167	0,149
CR2	0,714	0,690	0,667	0,690
CR3	0,143	0,172	0,167	0,161

The normalized matrix was computed by performing the following steps: First, the values within each column were totaled. Then, each element within the column was divided by the sum of that respective column, resulting in the normalized matrix. Subsequently, the average of each row within the matrix was calculated, leading to the determination of local priorities.

Step 4

The entirety of priorities matrices has been derived. This process involved multiplying the local priorities, previously determined, by the initial comparison matrix provided at the outset.

Table 5. All Priorities of main criteria

	CR1	CR2	CR3	All Priorities
CR1	0,149	0,138	0,161	0,448
CR2	0,746	0,690	0,643	2,079
CR3	0,149	0,173	0,161	0,482

Step 5

After the matrix calculations were finalized, the consistency index was computed using

Equation 1:

CR= CI/RI, Where:

CI: Consistency Index

RI: Random Index

To calculate the consistency index (CI), Equation 2 was employed

Equation 2:

CI=(λ_{max} -n)/n-1. Where:

λ_{max} Eigenvalue calculated by dividing the total priorities by the local priorities and averaging those values.

n: Number of criteria or alternatives

The procedure for calculating λ_{max} for each sub-criterion is illustrated in Table 6.

Table 6. Eigen value calculation for main criterion

All Priorities (T)	Local priorities (L)	T/L	λ_{max}
0,448	0,149	3,003	3,006
2,079	0,690	3,011	
0,482	0,161	3,003	

To determine the Consistency Index, Equation 2 was utilized:

$$CI = (\lambda_{max} - n) / (n - 1)$$

For main criterion;

$$CI = (3,006 - 3) / (3 - 1) = 0,003$$

For calculating the Consistency Ratio, the Random Consistency Index Table developed by Saaty (1980) was employed. This table is displayed as Table 7.

Table 7. Random Consistency Index (RI) Table (Saaty, 1980)

n	2	3	4	5	6	7	8
RI	0,0	0,58	0,90	1,12	1,24	1,32	1,41
n	9	10	11	12	13	14	15
RI	1,45	1,49	1,51	1,48	1,56	1,57	1,59

Consistency Ratio for main criterion has been calculated according to Equation 1:

$$CR = CI / RI = 0,003 / 0,58 = 0,005$$

The identical procedure was replicated for the sub-criteria and alternatives, yielding outcomes that are presented in Tables 8 to 19, located in the appendix.

The consistency index is expected to fall within the range of $0,001 \leq 0,1$ to ensure reliable and consistent outcomes (Saaty, 1980; Şahin and Yurdagül, 2018: p. 382). Based on the results obtained, all the comparisons exhibit consistency.

The alternatives were systematically compared in pairs concerning each sub-criterion. The evaluations provided by experts for the comparison of alternatives against each sub-criterion are outlined in Tables 11 to 19. The weight attributed to each sub-criterion, derived from the nine matrices in Tables 11 to 19,

was combined with the weights of the alternatives corresponding to the sub-criteria. This multiplication process was carried out to establish the priorities of alternatives based on the main criteria. As an illustration, the assessment of Alternative 1 concerning the Flexibility main criterion was computed as follows:

$$(0,490 \cdot 0,182) + (0,198 \cdot 0,201) + (0,312 \cdot 0,231) = 0,201$$

The comprehensive weights for the three alternatives were computed by multiplying the priority associated with each main criterion in Table 4 by the corresponding priority of each alternative. The determination of the overall ranking for the alternatives was executed in the subsequent manner:

Table 20. Final Priorities of the alternatives.

	Local priorities of primary factors			AHP Results
	CR1 0,149	CR2 0,690	CR3 0,161	
ALT1	0,201	0,608	0,215	0,484
ALT2	0,687	0,224	0,530	0,342
ALT3	0,112	0,169	0,255	0,174

$$(0,149 \times 0,201) + (0,690 \times 0,608) + (0,161 \times 0,215) = 0,1484 \text{ (Alternative 1)}$$

$$(0,149 \times 0,687) + (0,690 \times 0,224) + (0,161 \times 0,530) = 0,506 \text{ (Alternative 2)}$$

$$(0,149 \times 0,112) + (0,690 \times 0,169) + (0,161 \times 0,255) = 0,325 \text{ (Alternative 3)}$$

Data Analysis and Tools

Existing literature has been thoroughly examined, leading to the identification of criteria for the airline selection process. Data collection involved structured interviews conducted with passengers. Subsequently, the analysis was carried out using Microsoft Excel.

5. Findings

The findings presented in Table 4 provide a clear insight into the hierarchy of importance among the main criteria for airline selection. Evidently the Affordability main criterion (CR2) is the most important factor with the 0,690 priority value, followed by Quality (CR3) with 0,161 priority value and Flexibility (CR1) with 0,149 priority value

Delving deeper into the analysis, Table 8-10 elucidate the priority values attributed to each sub-criterion within their respective main criteria. Notably, the sub-criterion On Time Departure (SCR1) emerges as pivotal within the Flexibility main criterion, commanding a substantial score of 0.490. In the realm of affordability, the sub-criterion Ticket Price (SCR4) takes center stage with an impressive score of 0.595, confirming its role as a major determinant of airline preference in *Affordability* main criterion. Meanwhile, within the Quality main criterion, Hygienic Competence (SCR8) attains a significant score of 0.464, reaffirming its enduring importance, particularly in the aftermath of the COVID-19 pandemic.

Moreover, the study's results transcend beyond individual criteria and sub-criteria. The synthesized insights from Table 8-10 distinctly indicate that hygiene considerations maintain their relevance for airline selection in the post-COVID-19 era, underlining the sustained importance of cleanliness and safety.

Conclusively, the assessment of alternative choices yields a discerning revelation. Alternative 1, commanding a rating of 0.484, emerges as the foremost preference among passengers, followed sequentially by Alternative 2 and Alternative 3. This hierarchy underscores the hierarchy of priorities post-pandemic travelers attribute to their airline choices, providing airlines with valuable insights to tailor their services in alignment with passenger preferences.

6. Conclusion

In conclusion, the advent of the COVID-19 pandemic has wrought profound changes in the perceptions and preferences of passengers, significantly influencing their decision-making processes and purchase behaviors within the airline industry. This study aimed to systematically assess the evolving criteria for airline selection in the post-COVID-19 era. The findings of this research underscore the enduring importance of hygiene as a pivotal determinant in the choice of airlines, reaffirming its status as a critical factor that directly impacts passenger confidence and satisfaction.

Furthermore, the investigation revealed a notable shift in the hierarchy of priorities, with affordability emerging as the foremost consideration among passengers when navigating their options. The pronounced emphasis on cost-effectiveness implies that while hygiene remains pivotal, passengers now seek a balance between safety and economic feasibility when selecting airlines. This shift in perspective reflects the broader societal and economic changes catalyzed by the pandemic, highlighting the adaptability of consumer preferences in response to extraordinary circumstances.

In a holistic view, these findings illuminate the nuanced interplay between evolving passenger expectations and the strategic considerations of airline providers. Airlines must adeptly respond to these transformed criteria, tailoring their services to address both the heightened emphasis on hygiene measures and the imperative of affordability. As the airline industry endeavors to rebound and thrive in the post-pandemic landscape, a comprehensive understanding of these recalibrated passenger preferences will undoubtedly guide the formulation of effective strategies that cater to the contemporary traveler's demands.

References

- Akdeniz, E. (2018). AHP Yöntemi İle Bir İşletmede En İyi Çalışanın Seçilmesi: Bt Sektöründe Bir Organizasyon İncelemesi. *Süleyman Demirel Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, (31), 61-90.
- Degraeve, Z., Labro, E., & Roodhooft, F. (2004). Total cost of ownership purchasing of a service: The case of airline selection at Alcatel Bell. *European Journal of Operational Research*, 156(1), 23-40.
- Delice, E. K. (2016). Havayolu firmaları seçimi için bulanık çok kriterli bir model. *Gazi Üniversitesi Mühendislik Mimarlık Fakültesi Dergisi*, 31(2).
- Dube, K., Nhamo, G., & Chikodzi, D. (2021). COVID-19 pandemic and prospects for recovery of the global aviation industry. *Journal of Air Transport Management*, 92, 102022.
- Durak, M. Ş., & Yılmaz, A. K. (2016). Airline selection criteria at air cargo transportation industry. *Transport & Logistics*, 16(40), 10-18.
- Durmaz, V., & Cingöz, K. N. (2023). Analysis of Airport Stakeholder Collaboration With AHP Method to Provide Safe Air Travel Adventure Through Digital Means to Disabled Passengers. In *Challenges and Opportunities for Aviation Stakeholders in a Post-Pandemic World* (pp. 29-48). IGI Global.

- Erdoğan, Yeşim, Filiz Koçoğlu, Celil Sevim (2020). "Covid-19 pandemisi sürecinde anksiyete ile umutsuzluk düzeylerinin psikososyal ve demografik değişkenlere göre incelenmesi." *Klinik Psikiyatri Dergisi*, 23
- Eurocontrol, Türkiye'de Covid-9 Etkileri, Erişim tarihi: 09.05.2021, <https://www.eurocontrol.int/publication/eurocontrol-comprehensive-assessment-covid19s-impact-european-air-traffic>
- Fourie, C., & Lubbe, B. (2006). Determinants of selection of full-service airlines and low-cost carriers—A note on business travellers in South Africa. *Journal of air transport management*, 12(2), 98-102.
- International Civil Aviation Organization (2022) . Erişim tarihi: 18.10.2022, <https://www.icao.int/Newsroom/Pages/Latest-air-traffic-forecasts-illustrate-encouraging-recovery-and-higher-growth-in-global-air-travel.aspx>.
- Kim, S. B., & Park, J. W. (2017). A study on the importance of airline selection attributes by airline type: An emphasis on the difference of opinion in between Korean and overseas aviation experts. *Journal of Air Transport Management*, 60, 76-83.
- Kucukaltan, B., & Topcu, Y. I. (2019). Assessment of key airline selection indicators in a strategic decision model: passengers' perspective. *Journal of Enterprise Information Management*.
- Mahendra, G. S. (2022). Decision Support System Using Fucom-Marcos for Airline Selection In Indonesia. *JITK (Jurnal Ilmu Pengetahuan dan Teknologi Komputer)*, 8(1), 1-9.
- Milioti, C. P., Karlaftis, M. G., & Akkogiounoglou, E. (2015). Traveler perceptions and airline choice: A multivariate probit approach. *Journal of Air Transport Management*, 49, 46-52.
- Park, J. W. (2010). The effect of frequent flyer programs: A case study of the Korean airline industry. *Journal of Air Transport Management*, 16(5), 287-288.
- Park, J. W. (2010). The effect of frequent flyer programs: A case study of the Korean airline industry. *Journal of Air Transport Management*, 16(5), 287-288.
- Thepchalerm, T., Ho, P., & Kongtaveesawas, N. (2021). Factors Affecting Airline's Passenger Choice During COVID-19 Pandemic. *Journal of Humanities and Social Sciences Thonburi University*, 15(3), 13-24.
- Truong, D., Pan, J. Y., & Buaphiban, T. (2020). Low cost carriers in Southeast Asia: How does ticket price change the way passengers make their airline selection?. *Journal of Air Transport Management*, 86, 101836.
- Truong, D., Pan, J. Y., & Buaphiban, T. (2020). Low cost carriers in Southeast Asia: How does ticket price change the way passengers make their airline selection?. *Journal of Air Transport Management*, 86, 101836.
- Yau, E. K. B., Ping, N. P. T., Shoesmith, W. D., James, S., Hadi, N. M. N., & Loo, J. L. (2020). The behaviour changes in response to COVID-19 pandemic within Malaysia. *The Malaysian journal of medical sciences: MJMS*, 27(2), 45