



# An Evaluation of Hospital Practices using Swot Analysis during Covid-19

## COVID-19 Pandemi Sürecinde Hastane Uygulamalarının SWOT Analizine Göre Değerlendirilmesi

Muhammed Emin DEMİRKOL<sup>®</sup>, Songül YORGUN<sup>®</sup>, Hakan ESEN<sup>®</sup>, Fatma İMKA ŞAFAK<sup>®</sup>, Beyhan ÖZTÜRK<sup>®</sup>, Zeynep BAYSAL<sup>®</sup>, Hatice ORMAN<sup>®</sup>

### ABSTRACT

In our current era, healthcare harbours many risks in its scope of its services, and practices and is placed in a category of dangerous professions. During this process, evaluation of risks and taking necessary precautions is inevitable. The recent pandemic that impacted our country and the world has once again showed the importance of risk evaluations in hospitals. The practices applied and those to be adopted during the pandemic are critical for the safety of healthcare workers and the safety of society in general. It is necessary to make speedy decisions and put these decisions in practice immediately during a pandemic. One of the most important instruments in strategic decision making is a SWOT analysis; an abbreviation made with the initial letters of Strengths, Weaknesses, Opportunities, and Threats in English.

**Objective:** The present study was conducted at a state hospital that was selected to serve specifically the pandemic patients with the aim to improve the processes and procedures and to develop further studies in this area by using a SWOT analysis conducted to evaluate pandemic from an institutional perspective during the pandemic; to maintain its strength, and empower its weaknesses, prioritize the opportunities, and to take immediate precautions for emerging threats. The study aimed to.

**Method:** The study described and analyzed the institutional strengths, and weaknesses, opportunities, and threats. Researchers first created the analytical instruments; the SWOT Analysis of Critical Factors to Prevent and Control the COVID-19 Outbreaks and the COVID-19 Strategic Opportunities Model to use in data analysis and identify the critical variables in the process. The study received institutional review board approvals from T. C. Ministry of Health, General Directorate of Health Services and Bolu Abant İzzet Baysal University Clinical Studies Ethical Board (2020/169).

**Results:** The major themes that emerged were; in terms of strengths, processes and procedures put in place by the ministry of Health to be updated with recent data, and aimed at specific issues, and were instructional. Another strength was that the upper administration was supportive of the healthcare workers. The weaknesses included the hospital having different satellite locations. The opportunities were about the staff at the hospital and how they were invested in the process. A threat was the general risks that were associated with the city of Bolu in general.

**Conclusion:** It is critical for institutions to reflect on and identify their strengths, weaknesses, opportunities, and threats (SWOT). As a result of this reflective process, the institutions can combine their strengths with the external opportunities and can address their weaknesses. It is important to conduct a SWOT analysis during the pandemic to identify the institutional possibilities and resources, address the weaknesses, and provide an example for future administrations. A SWOT analysis is therefore an important and helpful instrument to guide healthcare policy makers and administrations during a given emergency process. This study will contribute to previous literature significantly as it is the first example of a SWOT analysis conducted at the hospital level during the pandemic.

**Keywords:** SWOT analysis, pandemic, hospital

### Öz

Günümüzde sağlık hizmetleri, hizmet kapsamı ve uygulamalar dahilinde bir çok riski bünyesinde barındırmakta ve tehlikeli işler kapsamında yer almaktadır. Bu süreçte risklerin değerlendirilmesi ve bunlara yönelik önlemlerin alınması kaçınılmaz olmalıdır. Son aylarda gerek ülkemizi gerekse dünyayı etkileyen pandemi durumu hastanelerde risk değerlendirmelerini bir kez daha önemli kılmıştır. Pandemi durumunda yapılanlar, yapılacaklar gerek çalışanların sağlığı ve güvenliği gerekse toplum açısından önem arz etmektedir. Pandemiye hızlı ve etkin kararlar almak ve uygulamaya geçmek gerekmektedir. Stratejik kararlar almada yol gösterici en önemli araçlardan biri de SWOT (GZFT) analizidir. Stratejik planlamanın bir aracı olan SWOT analizi; İngilizce Strengths (güçlü yönler), Weaknesses (zayıf yönler), Opportunities (Fırsatlar) ve Threats (Tehditler) kelimelerinin baş harflerinden oluşmaktadır.

**Amaç:** Bu çalışma Sağlık Bakanlığı tarafından Pandemi Hastanesi olarak belirlenen bir devlet hastanesinde SWOT analizi ile pandemi sürecinin kurumsal açısından değerlendirilmesi, zayıf yönlerinin geliştirilmesi, güçlü yönlerinin sürdürülmesi, fırsatların öncelikli olarak kullanılması ve tehditlere karşı ivedi olarak önlemlerin alınması amacıyla yapılmıştır. Bu süreç bir nevi süreç geliştirilmesi, iyileştirilmesi ve bu konudaki çalışmaların geliştirilmesi için ön görülmüştür.

**Yöntem:** Çalışma ile pandemi sürecinde kurumun güçlü yönleri, zayıf yönleri, fırsatları ve kuruma yönelik tehditler tanımlanmıştır. Araştırmacılar tarafından analiz için ölçüm aracı olarak oluşturulan COVID-19 Salgını Önleme ve Kontrol Stratejisi İçin Kilit Faktörlerin SWOT Analizi Formu ve COVID-19 Stratejik Fırsat Analiz Modeli formu kullanılarak faktörler belirlenmiştir. Çalışma için kurumdan izin, T.C. Sağlık Bakanlığı Sağlık Hizmetleri Genel Müdürlüğü onayı ve Bolu Abant İzzet Baysal Üniversitesi Klinik Araştırmalar Etik Kurul Onayı (2020/169) alınmıştır.

**Bulgular:** Temelde güçlü yön T.C. Sağlık Bakanlığını uygulamalarının güncel, yerinde ve yönlendirici olması, üst yönetimin desteğinin tam olması, zayıf yön kurumun farklı lokalizasyonlarda yerleşmelerinin olması, fırsat olarak kurumun personel yapısı ve süreci sahiplenen özellikleri, tehdit olarak Bolu ili genelindeki riskler yer almıştır.

**Sonuç:** Kurumlar güçlü, zayıf yönlerini, fırsatlarını ve tehditlerini (SWOT) tanımak zorundadır. Daha sonrasında dış çevredeki fırsatlar ile güçlü yönleri birleştirecek, dış çevredeki tehditler ile zayıf yönleri azaltma davranışı gösterecektir. Pandemi sürecinde SWOT analizi ile kurumun imkan ve kaynaklarının tanımlanması, eksikliklerin giderilmesi, gelecek yönetimlere yol gösterici olması açısından anlamlıdır. SWOT analizi sağlık hizmeti karar vericilerine belirledikleri süreçte rehberlik etmesi açısından önemlidir ve iyi bir araçtır. Konu ile ilgili olarak daha önceden ve bu süreçte böyle bir çalışmanın hastane bazında ilk defa yapılmış olması çalışmanın kıymetini artırmaktadır.

**Anahtar kelimeler:** SWOT analizi, pandemi, hastane



© Telif hakkı SBÜ Gaziosmanpaşa Eğitim ve Araştırma Hastanesi. Logos Tıp Yayıncılık tarafından yayınlanmaktadır. Bu dergide yayınlanan bütün makaleler Creative Commons Atf-GayriTicari 4.0 Uluslararası Lisansı ile lisanslanmıştır.

© Copyright Association of Publication of the Gaziosmanpaşa Training and Research Hospital.

This journal published by Logos Medical Publishing.

Licensed by Creative Commons Attribution-4.0 International (CC BY)

Alındığı tarih: 03.07.2020

Kabul tarihi: 08.07.2020

Yayın tarihi: 31.08.2020

Atf vermek için: Demirkol ME, Yorgun S, Esen H, İmka Şafak F, Öztürk B, Baysal Z, et al. An Evaluation of Hospital Practices using Swot Analysis during Covid-19. Jaren. 2020;6(2):341-51.

Muhammed Emin Demirkol

Bolu İl Sağlık Müdürlüğü,

Bolu - Türkiye

✉ medemirkol@hotmail.com

ORCID: 0000-0001-6262-6103

S. Yorgun 0000-0003-4966-7861

H. Esen 0000-0001-9868-4583

F. İmka Şafak 0000-0003-0115-6245

B. Öztürk 0000-0003-3031-6420

Bolu İzzet Baysal Devlet Hastanesi,

Bolu, Türkiye

Z. Baysal 0000-0002-8557-6062

Bolu İl Sağlık Müdürlüğü,

Bolu, Türkiye

H. Orman 0000-0003-3902-4766

İstanbul Taksim Eğitim ve

Araştırma Hastanesi,

İstanbul, Türkiye



## INTRODUCTION

The continuously changing and developing technology in terms of contents of healthcare services as well as the increasing competitors and the conditions for competition getting more and more difficult make it a challenge for the institutions to adapt themselves to the current conditions and to continue their existence. The shortage of resources compared to the unlimited needs affect the consumer preferences <sup>(1)</sup>. However, the ever changing conditions in the country and the world make the institutions face with different situations and conditions. On December 31<sup>st</sup>, 2019, the office of World Health Organization (WHO) reported pneumonia cases with unknown etiology in Wuhan city of Hubei state of China. It appeared in Wuhan, the capital city of Hubei State of China, and quickly spread to different regions of Hubei and then to all other states of China and the entire world <sup>(2)</sup>. On January 7<sup>th</sup> 2020, it was defined as an effective new corona virus strain (2019-nCoV) that had not been previously detected in populations. Thereafter, the name of 2019-nCoV disease was adopted as COVID-19, and the virus was called as SARS-CoV-2 due to its close similarity to SARS CoV.

World Health Organization classified the COVID-19 epidemic as a “public health emergency on international scale” on January 30<sup>th</sup>, and defined it as a global epidemic (pandemic) on March 11<sup>th</sup> due to the COVID-19 cases in 113 countries other than China, and viral spread and intensity.

The studies on COVID-19 started on January 10<sup>th</sup> in Turkey and Ministry of Health of the Turkish Republic (R.T.) held its first meeting with the Scientific Consultative Committee on January 22<sup>nd</sup>. With the precautions taken, the first COVID-19 case was detected on March 11<sup>th</sup> after Europe and our neighboring countries such as Iran <sup>(3)</sup>.

Pandemic is a general name for the epidemics, which have a widespread impact on a very wide area in more than one country or continent in the world. It is possible to reduce the number of cases that will occur due to the pandemic by preventing or reducing the spread of infection among people through the use of precautions necessary for protection aga-

inst the factors acting on the disease. In this process, one of the strategic techniques that can be used for determining the strengths and weaknesses of the institution and the opportunities and threats caused by the internal and external environment is the SWOT analysis.

SWOT analysis is a strategic planning method used for evaluating the strengths and weaknesses and opportunities and threats of the institutions <sup>(4,21)</sup>. The initials of the English words Strengths (strong aspects), Weaknesses Opportunities and Threats are used for the abbreviation of SWOT <sup>(5,21)</sup>. In accordance with this, opportunities are external factors that can provide positive results for the institution, and threats are external factors that can prevent the maintenance of the existence of the institution, while strengths are the institution’s abilities that can make it superior to its competitors and weakness are internal factors, where the institution is inferior to its competitors <sup>(6)</sup>. SWOT analysis is important for healthcare institutions for strategic planning and for ensuring the healthy development of the healthcare institution <sup>(7)</sup>. SWOT analysis tries to determine the strengths and weaknesses of the institution and the opportunities and threats that the organization faces <sup>(8)</sup>.

Health institutions are open systems, where the level of ambiguity is high <sup>(9)</sup>. Although SWOT analysis is currently performed by many institutions, it has not reached the desired level of performance in the healthcare institutions. Therefore, the research that took place or will be conducted in this area will facilitate the performance of SWOT analysis by healthcare institutions and by this way, the healthcare institutions will be able to take easier and more appropriate strategic decisions.

### SWOT Analysis Concept

SWOT: strengths mean the capabilities of the institution or the work unit that ensure a successful performance, weaknesses mean the opposite, that is the lack of capabilities preventing a good institution or work unit performance; opportunities mean the tendencies, powers, events and thoughts of the institution that can be converted into capital; and the threats mean the powers and events that develop

out of the control of the institution <sup>(9,10)</sup>.

SWOT analysis is a control tool showing the condition of the organization in the evaluation of the existing condition. In the guidance of the process, there are some important hints on how to prepare the SWOT analysis. These are:

1. Being realistic about the strengths and weaknesses of the Hospital/Program,
2. Showing the difference between the current situation of the Hospital/ Program and the possible situation in the future.
3. There must be specific evidence rather than general evidence and gray areas must be avoided,
4. SWOT must be short and simple, complexity and excess analyses must be avoided.
5. It must not be forgotten that SWOT is an individualized instrument <sup>(11)</sup>.

SWOT analysis includes the analysis of both the internal and external environment of the institution for determining the opportunities and threats arising out of the external environment as well as the strengths and weaknesses inside the institution <sup>(12)</sup>. SWOT analysis provides two important benefits for the institutions: The first benefit is providing a tool for showing the existing situation of the institution. The first part of the analysis, which is expressed with the letters S and W, determines the strengths and weaknesses of the institution and provides important information, namely “knowing itself”. The external impacts, that is the opportunities and threats expressed with the letters O and T, constitute an analysis of what can be done against the situation of the market. Thus, the second part contains not the present time, but a situation assessment for the possible developments in the future; in this respect, it is a bit more based on estimation and subjective data <sup>(13,9)</sup>.

### Strengths

Strengths mean having a better resource advantage than the competitors and the potential of meeting the expectations in service provision. If the institution gains a competition advantage in the market, this means that it has shown its capabilities distinguishing itself from other institutions <sup>(14)</sup>.

### Weaknesses

The weaknesses are the internal environment factors of the institution and create a negative value for the client. Weaknesses result in a competition disadvantage for the institutions. The institutions in this situation have to accept their weaknesses and face the facts. The institutions have to find the answers to the following questions to determine their weaknesses <sup>(11)</sup>.

### External Environment Analysis

The external environment involves the people and institutions out of the borders of the healthcare institution, which directly or indirectly impact the healthcare institution. The first stage of the strategic management process is the external environment analysis. The purpose of external environment analysis is to determine the existing and expected opportunities and threats. The environment of the Healthcare Institutions is divided into two parts as the general environment and the duty environment <sup>(15,9)</sup>.

### Opportunities

Opportunities are the situations and developments that can help the hospital/program reach its target <sup>(9)</sup>.

### Threats

The threats are external situations and matters that have the possibility to keep the hospital/program from reaching its objectives <sup>(9)</sup>.

Originating from the matrix created as the result of SWOT analysis, the management will try to evaluate the opportunities with its strengths and will know its weaknesses against the situations that might pose a threat and will either try to take measures to make those aspects stronger or will seek ways to avoid such threats <sup>(16)</sup>.

The SO (Strengths - Opportunities), WO (Weaknesses - Opportunities), ST (Strengths - Threats), WT (Weaknesses - Threats) strategies are included in SWOT matrix and they are defined as follows <sup>(17,20)</sup>;



- **SO Strategy:** It is the strategy of obtaining maximum benefit both from the strengths and the opportunities out of the organization. It is the strategy of using the strengths of the institution to obtain maximum benefit from the opportunities.
- **WO Strategy:** It is the strategy targeting the minimization of weaknesses while making use of the superiorities created by the opportunities.
- **ST Strategy:** It is the strategy, where the strengths of the organization are in abundance, however it becomes subject to external threats to a great extent. In ST strategy, the strengths are brought to foreground in coping with the external threats and dangers.
- **WT Strategy:** It is a situation where both the weaknesses of the organization should be remedied, and certain measures against the threats should be developed <sup>(9)</sup>.

## METHOD

The present study was conducted at a public hospital assigned as a “Pandemic Hospital” by the Ministry of Health in order to evaluate the pandemic process in an institutional point of view using SWOT analysis; to improve the weaknesses, to maintain the strengths, to prioritize the opportunities, and to take urgent precautions against the threats. It is a definitive type of study. This study was carried out for the development and improvement of the institution during the pandemic process and for providing an example for future studies in this subject. Researchers first created the analytical instruments; the SWOT Analysis of Critical Factors to Prevent and Control the COVID-19 Outbreaks and the COVID-19 Strategic Opportunities Model to use in data analysis and identify the critical variables in the process. The study received institutional review board approvals from T. C. Ministry of Health, General Directorate of Health Services and Bolu Abant İzzet Baysal University Clinical Studies Ethical Board (2020/169).

## RESULTS

### STRENGTHS

**\*R.T. Ministry of Health practices being up-to-date, appropriate and instructive;** Timely studies were started by quickly sharing the practices of R.T. Ministry of Health Scientific Committee with the

field, by updating them and by following up the process. Administrative support was provided to institutions in the supply of medications, protective equipment and cleaning materials. The staff was not aggrieved by providing free accommodation and food in the area of accommodation. This also resulted in employee satisfaction. Filiation practice ensured the control of the field and early diagnosis, and isolation of cases.

**\*Full support by top management;** Pandemic committee was created and its active operation was ensured. The committee prepared the pandemic plan and rapidly updated it under the current conditions and the works for remedying the shortages were started early. The pandemic committee consisted of the managers, relevant directorates, occupational health and safety and other relevant branches and took an active role in the process. The management activated the Occupational Health and Safety (OHS) Committee and Infection Control Committee (ICC) and ensured compliance with the decisions of the committees. As a role model, the management acted sensitively about the pandemic and the relevant process. The hospital management quickly put the decisions into practice, ensured a fast purchase process, and provided full support for the fast application of procedures compliant with the “Health and Safety Signs Regulation” in the pandemic process, and for paying attention to the quality studies.

**Fast, effective cooperation and communication process;** The hospital operation process was successfully managed by quickly meeting the needs for entrance- exit, admittance, policlinic services, clinic organization, personnel planning, personal protective equipment (PPE) and disinfection; provision of materials and manpower for the institution, and the use of person and department based messages through a message system. Ability to hold unit-based meetings in all units, the fast work starting by the newly recruited personnel, their placement in the field and providing appropriate training for them, determination and appropriate planning of personnel to be employed in the areas, where Covid-19 diagnosed patients are kept (emergency services, clinics, intensive care units), arrangement of rest hours, reduction in the daily and monthly working hours, appropriately planning the number of personnel, and appropriate use of algorithms by the

teams.

**\*Strong institutional structure;** The strong institutional structure ensured the fast application of institutional structuring, fast organization and performance of occupational health and infection trainings, holding required committee meetings once a week, fast performance and update of risk analysis in the process, daily controls and checks, fast practice of applications that will make the employees feel safe and the relevant sensitivity, paying importance to the recommendations of employees, making fast decisions and putting such decisions into practice, performing scientific committee implementations promptly, announcing them to the field rapidly, fast training and material provision, and rapidly taking the precautions for occupational health and safety and against spread of infection.

**Experienced staff structure;** Eager for participation in the trainings and practices, fast staff planning, fast completion of shortages in the process, directing the personnel in the routine to the field in order to increase the number of staff in the units, supporting other areas and thereby reducing staff exhaustion for spare personnel planning, fast determination of area disinfection and cleaning rules, staff symptom follow-up, and health screening application,

**Collaboration and Cooperation Attempts:** The possibility of cooperation with Bolu Health Sciences Faculty and other hospitals, possibility of inter-institutional and inter-provincial information sharing,

## WEAKNESSES

**Physical structure and location of the hospital;** The hospital is established at three different locations and provides service in different service branches, which results in problems while trying to perform all practices simultaneously. Provision of services in by different health facilities in buildings on different campuses.

(Mental Health Training Research Hospital, Bolu Abant İzzet Baysal University Training Research Hospital, Physical Treatment Training Research Hospital), presence of different institutions within the same building so as to intersect in operation.

**Insufficiency of physical area;** Absence of a negative pressure chamber, and isolation rooms with adequate living conditions, inadequate areas reserved for resting, and use by staff, difficulties in terms of reserved areas for social distance practices after the pan-

demic,

**Insufficiency of mechanical and technical infrastructure areas;** Inappropriate ventilation, infrastructure not being the same in every unit,

**Inability to replace materials and devices;** Decrease in the availability of PPE in the market, material problems caused by the suppliers, inadequate supply of diagnostic devices (time passed while awaiting for the termination of when cleaning and ventilation processes).

**Shortages not anticipated in the documents;** Insufficient pandemic coverage in the risk analysis, insufficient prediction of biological threats, Pandemic section being superficial and far from meeting the needs in the Hospital Disaster Plan,

**Risk of sharing, and spreading gossip and false information;** The conspiracy theories produced about COVID-19, spread of false information demoralizing the employees, wrong data counting, spread of information without a scientific basis for the prevention of the disease,

**Differences/insufficiencies in perception;** Violation of the rules by the patients and relatives/visitors of the patients, insufficiency of perception of some employees in relation with the subject and precautions, comparison of the staff in Covid-19 units and other units in terms of practices, compliance with the trainings and rules by certain occupational groups and in compliance with them by other occupational groups,

## OPPORTUNITIES

**Properties of institution staff;** Existence of staff committed to the process, the bellicosity and tenacity of the staff, the auto-control provided by the staff, the staff investing their non-health related skills into the system (support provided by the staff for the sowing work during the short-term problem in PPE provision).

**Province-wide loyalty and support for healthcare staff;** Existence of institutions providing material and moral support, ability to provide free PPE (mask, visor, goggles etc), donations, volunteering and SKT, the personnel support provided by the Provincial National Education Directorate for a more effective institution cleaning.

**Localization of the institution in different campuses;** The structure consisting of three different units has been important in terms of providing support for



pandemic isolation and staff planning whenever required.

**In-place and effective provision of emergency services;** there were no problems in terms of capacity, service, and sufficiency in organization.

**Fast and effective training planning;** Ability to provide in-situ, online, on-the-job trainings, existence of appropriate technical infrastructure for this purpose and fast informing,

**THREATS**

**Province-wide Risks;** The accommodation of the people, who came from other countries, in our province, Bolu being at a point of intersection, between highways, roads etc. and at the focal point of the international highway transportation firms,

**COVID-19 Obscurity;** Although new information is obtained on Covid-19 everyday, the obscurity continues in our country as is the case with the entire world. The obscurity in this process required sensitively approaching every incoming patient as if (s)he had Covid-19.

**Institutional properties;** Being a regional hospital for

some branches, patients coming from external centers, the problems that may occur in staff planning due to consisting of three different units, the leaders not acting as role models for some practices.

**Inconsistency in staff properties;** The high number of staff on administrative leave, the risk of time loss taking into consideration the adaptation period in relocation of staff, the self-centered behaviors of staff in case of relocation, and contradiction of the taken decision with the professional practice,

**Ambiguity of Legislation;** It is ambiguous whether the staff exposed to Covid-19 would be deemed to have an occupational disease or an occupational accident, quarantine and home-isolation conditions of infected healthcare staff after the pandemic,

**Ambiguity in information and frequent updates;** Frequent change of the guide in the scientific committee, the personal efforts for finding the changes, the ambiguity of the change in the content, the negative impact on the field created by the frequent changes and interpretation of it as contradicting decisions,

**Ambiguity about the process;** The pandemic pro-

**Table 1. SWOT analysis of key factors for the strategy of prevention and control of COVID-19 epidemic <sup>(20)</sup>.**

Factor	Content
Strengths (S)	S.1. The up-to-date, appropriate and instructional practices of R.T. Ministry of health S.2. Full support by top management S.3. Fast and effective cooperation and communication process S.4. Strong institutional structure S.5. Experienced staff structure S.6. Collaboration and Cooperation Attempts
Weaknesses (W)	W.1. Physical structure and location of the hospital W.2. Insufficiency of physical areas W.3. Insufficiency of mechanical and technical infrastructure areas W.4. Inability to replace materials and devices W.5. Shortages that are not anticipated in the documents W.6. Gossip and false information sharing risk W.7. Differences/ insufficiencies in perception
Opportunities (O)	O.1. Properties of institution staff O.2. Province-wide loyalty and support for healthcare staff O.3. Localization of the institution in different campuses O.4. Provision of appropriate and effective emergency services O.5. Fast and effective training planning
Threats (T)	T.1. Province-wide risks T.2.COVID-19 obscurity, T.3. Institutional properties T.4. Inconsistency of staff properties T.5. Ambiguity of legislation T.6. Ambiguity of information and frequent updates T.7. Ambiguity about the process T.8. Risk of precaution fatigue T.9. Impact on economy T.10. Probability of psychological problems

*Note: Strengths (S), Weaknesses (W), Opportunities (O) and Threats (T)*

cess being a new and unknown one, the lack of past experience, the process being a long one, the ambiguity in the process and the tiredness of people. Precaution tiredness risk, If the process takes a long time, risks such as exhaustion and fatigue of employees, insensitivity about precautions, etc.

**Impact on Economy;** The increase of the price of personal protective equipment and materials, increase in the use of personal protective equipment in the process,

**Psychological impact;** the gap in the process of obtaining psychological support and problems in accessing the service, the risk of development of fear and

panic at the beginning of the process, impact on motivation during the process, the impact of ambiguity on psychology, the tiredness caused by the use of personal protective equipment, the psychological problems and resistance about staff participation at the beginning of the process.

**Strength - Opportunity (SO) Strategy**

**SO1: Ensuring the Continuation of Pandemic processes in emergency disaster management structuring in healthcare;** It must be ensured that the ambiguities about the pandemic process are remedi-

**Table 2. COVID-19 strategic opportunity analysis model (20).**

Internal environment	S	W
<b>Strategic Analysis</b>  <b>External environment</b>	S.1. The up-to-date, appropriate and instructive practices of R.T. Ministry of Health S.2. Full support by top management S.3. Fast, effective cooperation and communication process S.4. Strong institutional structure S.5. Experienced staff structure S.6. Collaboration and Cooperation Attempts	W.1. Physical structure and location of the hospital W.2. Insufficiency of physical areas W.3. Insufficiency of mechanical and technical infrastructure areas W.4. Inability to replace materials and devices W.5. Shortages not anticipated in the documents W.6. Gossip and false information sharing risk W.7. Perception differences/insufficiencies
	O	SO
O.1. Properties of institution staff O.2. Province-wide loyalty and support for healthcare staff O.3. Localization of the institution in different campuses O.4. Provision of emergency services appropriately and effectively O.5. Fast and effective training planning	SO1: Ensuring the continuation of pandemic processes in emergency management structuring in healthcare,  SO2: Management with human-focused understanding,  SO3: Reinforcement of training information systems /modules and their integration in the operation,  SO4: Integration and upgrade of emergency healthcare information system  SO5: Cooperation with universities and other institutions	WO1: Creation of appropriate localized areas for pandemics and emergencies  WO2: Determination of normalization processes in stages in the business plans,  WO3: Supply process cooperation with external shareholders  WO4: Creation of an emergency/pandemic culture in health and establishment of an applicable system  WO5: Revision of documents so as to contain all units for pandemic and emergencies,
T	ST	WT
T.1. Province-wide risks T.2. COVID-19 Obscurity, T.3. Institutional properties T.4. Inconsistency of personnel properties T.5. Ambiguity of legislation T.6. Ambiguity of information and frequent updates T.7. Ambiguity about the process T.8. Precaution fatigue risk T.9. Impact on Economy T.10. Psychological problem probability	ST1: Use of effective communication ways, informing the units in time through bulletins, messages etc, ST2: Strengthening the economic structure, planning local connections, ST3: Strengthening inter-institutional and local connections ST4: Complete development of medical and healthcare system plans ST5: Process-focused plain approach management ST6: Establishment of a training team ST7: Strengthening the scientific research and studies for the major infectious diseases	WT1: Strengthening the employees WT2: Creation of an arrangement for returning to the work schedules for the units WT3: Emergency healthcare training support WT4: Development of software systems during the pandemic WT5: Starting studies on post-traumatic stress disorder WT6: Training of leaders on perception management WT7: Ensuring that the institution resources are included in the production of materials to be used, WT8: Development of governance and solution-focused approach skills



ed, and it is integrated in the processes and included functionally in the system.

**SO2: Management with a human-focused understanding;** The most important factor in all the stages in the process is undoubtedly the human being. In this context, training, informing, staff selection and assignment, knowing the staff and staff planning are very important. The resources for the development of the staff must be used effectively.

**SO3: Strengthening the training information systems/ modules and their integration in operation;** Training is the leading important activity in the pandemic process. For all professions in healthcare, the training must be performed at basic and unit-based advanced level training modules. Modules accessible at different levels to people must be developed and must be made functional in the system.

**SO4: Integration and upgrade of emergency health information system;** In healthcare, emergency information system must be strengthened, integrated and developed in pandemic periods. Monitoring of infectious diseases at national level and formulation of a central reporting system, and making the information system for new or unknown infectious diseases functional are necessary. The data must be transmitted and published in time and accurately. Negligence and erroneous reporting must not be allowed. Besides publishing full information on the epidemic, the development of information platforms and statistical analysis functions must be made available.

**SO5: Cooperation with universities and other institutions;** Cooperation planning must be made with other institutions within their potential for strengthening training, effective use of resources and the substitution process. Since the training institutions train the healthcare staff of the future, it is inevitable for them to be integrated into this process in the training system.

#### **Weakness - Opportunity (WO) Strategy**

**WO1: Creation of appropriate localized areas for pandemic/emergencies;** The buildings have to be evaluated in accordance with their properties and planning must be performed by reviewing the buildings in terms of technical infrastructure, mechanical situation and device capacity.

**WO2: Determination of normalization processes in**

**stages in the business plans;** In the pandemic process, the following normalization processes have to be clearly defined and the planning must be made in accordance with such definitions. This process must contain all service areas in stages. Plans must be made for informing the staff in this process.

**WO3: Cooperation with external shareholders for supply process;** External shareholders, non-governmental organizations and volunteers must be determined for equipment, material and device availability.

**WO4: Emergency in healthcare/creation of pandemic culture and establishment of an applicable system;** "Pandemic culture" must be created with the continuation of training, informing and awareness studies. This process must include updates.

**WO5: Revision of documents so as to involve all units for pandemic and emergencies;** All processes of the hospital must be updated in accordance with pandemic in line with the publications of R.T. Ministry of Health Scientific Committee and pandemic plans must be reviewed.

#### **Strength - Threat (ST) Strategy**

**ST1: Using effective communication ways, informing units in time through bulletins, messages etc;** The obscurities in the process, dissemination of rumors, and false information can be prevented with timely, complete and up-to-date information. Effective, and active communication must be provided for this process. Bulletins, short presentations, hospital information systems can be used for this purpose.

**ST2: Strengthening economic structure, planning local connections;** COVID-19 pandemic has spread rapidly throughout the entire world. The pandemic has adversely affected many areas, especially healthcare. Purchase processes and stock levels must be appropriately planned, international and local connections must be reinforced and substitution and repurchase conditions must be determined for this purpose.

**ST3: Strengthening inter-institutional and local connections;** Healthcare facilities must be locally connected for cooperation on sharing personnel, materials, equipment, devices, and information etc.

**ST4: Complete development of medical and healthcare system planning;** Development of medical and

healthcare system, ensuring the continuation of investments in healthcare, optimizing the assignment of medical and healthcare resources, bringing the capacities and area arrangements of emergencies to a level suitable for pandemic, increasing the capabilities of all staff employed in this area.

**ST5: Process-focused plain approach management;** It includes ensuring that the strategy is put into application in the entire institution. Through modeling of all processes and process interactions, it is ensured that the managers can easily see the big picture whenever they want to, with the desired details and make correct decisions. The job definitions and organization diagram must be created in compliance with the needs and dynamics of the institution, in an appropriate and complete manner. The processes allow for determining the real reason of problems in the institution and fast and correct solutions without boring excessive details.

**ST6: Training team establishment;** It includes the establishment of a training team consisting of experts for unit-, and person-based trainings in the pandemic process and reinforcement of practices through in situ visits and audits.

**ST7: Strengthening the scientific research and studies for major infectious diseases;** Performance of scientific research and studies and sharing the experiences on the process are very important. For this purpose, cooperation can be achieved with higher education institutions.

#### **Weakness - Threat (WT) Strategy**

**WT1: Strengthening the employees;** The empowering the employees on matters such as training, motivation, communication, management, planning, nutrition is very important. It is of critical importance that the employees pass the process healthily with minimum adverse effects both for the institution and for the staff and their families. The people in leading positions must also be supported in terms of administrative skills as well as basic matters during the process.

**WT2: Creating the arrangement for returning to the business plans for the units;** The “controlled social life - normalization” processes after the pandemic must be included in all plans. The units must have appropriate and effective information in this matter.

**WT3: Emergency healthcare training support;**

Emergency units are the basic service elements of the hospital and the process. The manpower, equipment and material support for the unit is necessary for the effectiveness of service. Physical structuring is the most important factor in the process. However, process-oriented training planning must be included for all profession groups.

**WT4: Development of software systems during the pandemic;** It is very important to develop software systems for data collection, sharing and notification of data, to ensure that the system is user-friendly and practical and that it serves for the institutional objectives.

**WT5: Starting Studies on Post-traumatic stress disorder;** The basic element in the pandemic process, which has a big obscurity, is the “human being”, therefore, its impact on both social and institutional scale is unavoidable. For this reason, the staff has to be psychologically supported during and after the process.

**WT6: Training of leaders on perception management;** Pandemic process requires some activities including fast decision-making and implementation. The changes in the process can be perceived differently by the employees. “Perception Management” is very important in relation with pandemic.

**WT7: Ensuring that the institutional resources are included in the production of the materials to be used;** Against the possibility of encountering problems in national and international supply of materials and products during a pandemic, it must be possible to use manpower and material resources of the institution in production and the institution must know which products and materials it can produce. Cooperation with other healthcare facilities must be possible during the process.

**WT8: Development of governance and solution-focused approach skills;** It is necessary for the management to have trainings for the development of communication and problem solving skills in the pandemic process in order to be able to make fast, appropriate and effective decisions.

#### **CONCLUSION AND IMPROVEMENT RECOMMENDATIONS**

Performance of SWOT analysis by the institutions is very important in order to ensure that their studies



during the pandemic process lead the processes thereafter.

In our study,

**Strength - opportunity (SO) strategy** is defined as inclusion of pandemic in all processes, human-focused approaches, strengthening of training, and cooperation.

**Weakness - opportunity (WO) strategy** is defined as determination of localized areas for emergencies, Cooperation with external shareholders, creation of pandemic culture, and revision of documentation process.

**Strength threat (ST) strategy:** It involves effective communication, planning and strengthening local connections, process-focused plain approach, training team, performing scientific research,

**Weakness threat (WT) strategy:** It involves strengthening the employees both in terms of pandemic and in terms of psychology, development of software systems, perception management, and determination of institutional resources and capabilities.

In our study, it was determined that the staff is sufficient while in the studies performed by Kördeveli<sup>(21)</sup> and Songur<sup>(9)</sup>, the low number of staff was indicated as a weakness.

Technology is intensely used in obtaining and using information in healthcare services<sup>(18)</sup>. Therefore, healthcare institutions must pay attention to following the technology and support their infrastructures in accordance with technology. The strategic decisions to be taken can convert the weaknesses into strengths and threats into opportunities<sup>(19)</sup>. Since studies on SWOT analysis do not exist in healthcare institutions in the pandemic process, it is recommended to expand the study.

Pandemics must be included in the plans in detail. Training halls/skill laboratories are important since they will provide contribution for the adaptation process of the newly recruited staff. All documents in the process must be included in the quality system. PPE must always be appropriately used. The studies must be in line with this. Occupational Health and Safety, Infection Control Nurses and Healthcare Services (nursing services) must always be available in the field. Appointment of the staff fit for the job is

important. Psychological support must be effectively included both in the preparation and in the continuation of the process.

---

**Ethics Committee Approval:** The study was conducted with the approval of TC Ministry of Health General Directorate of Health Services and the Bolu Abant İzzet Baysal University Clinical Studies Ethical Board (2020/169).

**Conflict of Interest:** The authors state that they have no conflict of interest.

**Funding:** There is no financial support.

**Informed Consent:** At this research, it was not studied with the patient.

---

**Etik Kurul Onayı:** Çalışma TC Sağlık Bakanlığı Sağlık Hizmetleri Genel Müdürlüğü ve Bolu Abant İzzet Baysal Üniversitesi Klinik Araştırmalar Etik Kurulu (2020/169) onayı ile yapılmıştır.

**Çıkar Çatışması:** Yoktur.

**Finansal Destek:** Yoktur.

**Hasta Onamı:** Hastalar üzerinde çalışma yapılmamıştır.

---

## REFERENCES

1. Özer H, Akan Y, Çalmaşur G. Atatürk Üniversitesi öğrencilerinin gelir-harcama ilişkisi. Cumhuriyet Üniversitesi İktisadi ve İdari Bilimler Dergisi. 2010;11(1):231-49.
2. Ji Y, Ma Z, Peppelenbosch MP, Pan O. Potential association between COVID-19 mortality and health care resource availability. Lancet Glob Health. 2020. [CrossRef] Erişim:file:///C:/Users/BU%20B%C4%B0LG%C4%B0SAYAR/Downloads/Potential\_association\_between\_COVID-19\_mortality\_a.pdf. Erişim Tarihi: 1.6.2020
3. T.C.Sağlık Bakanlığı HSGM, Genel Bilgiler, Epidemiyoloji ve Tanı, Haziran, 2020.https://covid19-bilgi.saglik.gov.tr). Erişim Tarihi: 6.6.2020
4. Masrom M, Rahimli A. Cloud computing adoption in the healthcare sector: A SWOT analysis. Asian Social Science. 2015;11(10):12-8. [CrossRef]
5. Yeşiltaş M, Çeken H, Öztürk İ. Karadeniz bölgesindeki turizm olanaklarının SWOT analizi ile değerlendirilmesi. Adıyaman Üniversitesi Sosyal Bilimler Enstitüsü Dergisi. 2009;2(3):250-69.
6. Kamilçelebi H. Türkiye'de sigorta sektörünün SWOT analizi ve bir araştırma. Ekonomi Bilimleri Dergisi. 2012;4(1):45-54.
7. Tao ZQ, Shi AM. Application of Boston matrix combined with SWOT analysis on operational development and evaluations of hospital development. European Review for Medical and Pharmacological Sciences. 2016;20(10):2131-9.
8. Önder S, Polat AT. Konya ili Karapınar ilçesi'nin ekoturizm yönünden görsel kalite değerlendirmesi ve SWOT analizi. Selçuk Tarım ve Gıda Bilimleri Dergisi.

- 2004;18(33):80-6.
9. Songur C, Top M, Tekingündüz S. Sağlık sektöründe GZFT (Güçlü-Zayıf Yönler-Fırsatlar-Tehditler) analizi. Sağlıkta Performans ve Kalite Dergisi. 2013;(5):69-100.
  10. Baraz B. "İç Çevre Analizi", Deniz, T. ve Ulukan, C. (Ed.) Stratejik Yönetimi, Anadolu Üniversitesi AÖF Eskişehir; 2012. s. 80-104.
  11. Daniels S, Ramey M. The Leader's Guide to Hospital Case Management', Jones and Publishers, Mississauga; 2005:65.
  12. Stahl MJ. Encyclopedia of Health Care Management, Sega Publication, London; 2004:546. [\[CrossRef\]](#)
  13. Alkhafaji AF. Strategic Management: Formulation, Implementation, and Control in a Dynamic Environment. The Haworth Press, Inc., New York; 2003.
  14. Pearce JA, Robinson RB. Strategic Management: Formulation, Implementation and Control, Irwin McGraw-Hill, Malaysia; 2000:203.
  15. Kavuncubaşı Ş, Yıldırım S. Hastane ve Sağlık Kurumları Yönetimi, 2. Baskı, Siyasal Kitabevi, Ankara; 2010:210.
  16. Torlak Ö. "Pazarlama Yönetimi", Erdoğan, B.Z. ve Eroğlu, E. (Ed.), Pazarlama Yönetimi, Anadolu Üniversitesi AÖF, Eskişehir, 2012; s.76-103.
  17. Aydın S. "Üretim Stratejisi ve Verimlilik", Kağnıcıoğlu, H. (Ed.), Üretim Yönetimi, Anadolu Üniversitesi AÖF, Eskişehir, 2012; s.30-53.
  18. Esatoğlu AE. Hastanelerde bilgisayar teknolojisi kullanımı. Ankara Üniversitesi Tıp Fakültesi Mecmuası. 2002;55(01):29-40. [\[CrossRef\]](#)
  19. Yumuk G, İnan İH. Trakya bölgesindeki imalat sanayi işletmelerinin kalite maliyetlerinin SWOT analizi ile değerlendirilmesi. Tekirdağ Ziraat Fakültesi Dergisi. 2005;2(2):177-88.
  20. Wang J, Wang Z. Strengths, weaknesses, opportunities and threats (SWOT) analysis of china's prevention and control strategy for the COVID-19 epidemic. Int. J. Environ. Res. Public Health. 2020;17:22-35. [\[CrossRef\]](#)
  21. Kördeve MK. Hastanelerde stratejik yönetim SWOT analizi: Özel bir hastane uygulaması. Sağlık Yönetim Dergisi. 2018;1(2):67-78.