



THE IMMUNE SYSTEM DURING COVID-19 PANDEMIC: AN ISLAMIC AND SCIENTIFIC PERSPECTIVE

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Abstract

This article aims to determine the relationship between science and the Islamic perspective on the immunity concept during the Covid-19 pandemic and to determine the relationship with the proposition contained in the Qur'an and hadith. This research is a literature study method using data sources from journals and library reviews. The results of this study indicate that maintaining the immunity during the Covid-19 pandemic is in accordance with Islamic advice that had been implemented for a long time before the pandemic. It shows that Islam and Science have a balanced interrelation that complements each other. From an Islamic perspective, increasing immunity must be supported through the scientific way by maintaining health, cleanliness, environment, food, exercise, and vaccination. Even commands that are worth worship, such as listening, reading, and implementing the Qur'an, ablution, prayer movements, and maintaining social relationships, have been proven to increase body immunity during the Covid-19 pandemic. This result demonstrates that the Islamic perspective it is more complex than scientific discovery; this is the wisdom of studying science to prove the truth of the Qur'an and hadith.

Keywords: Covid-19, Immunity, Islamic Perspective, Al Qur'an, Hadith

Abstrak

Artikel ini bertujuan untuk mengetahui hubungan sains dengan ajaran Islam terhadap konsep imunitas tubuh di masa pandemi Covid-19, dan untuk mengetahui keterkaitan dengan dalil yang ada dalam Al Qur'an dan hadits. Jenis penelitian ini adalah metode studi kepustakaan dengan menggunakan sumber data yang berasal dari jurnal-jurnal dan buku-buku perpustakaan. Hasil dari penelitian ini menunjukkan bahwa menjaga imunitas pada masa pandemi Covid-19 sesuai dengan anjuran agama Islam yang sudah diterapkan sejak lama, sebelum adanya pandemi covid-19. Hal ini menunjukkan bahwa Islam dan Sains memiliki interelasi seimbang yang saling melengkapi. Dalam perspektif Islam meningkatkan imunitas harus ditunjang dengan cara ilmiah, yaitu dengan cara menjaga kesehatan, kebersihan, lingkungan, makanan, olahraga, dan melakukan vaksinasi. Bahkan perintah yang bernilai ibadah mulai dari mendengar, membaca dan mengamalkan Al Qur'an, berwudhu, gerakan shalat, sampai dengan menjaga hubungan sosial, terbukti dapat meningkatkan imunitas tubuh pada masa pandemi Covid-19. Penjelasan ini membuktikan dalam perspektif Islam, hal tersebut lebih kompleks dibanding dengan penemuan ilmiah saja, inilah hikmah mempelajari ilmu pengetahuan (sains) untuk membuktikan kebenaran Al Qur'an dan hadits.

Kata kunci: Covid-19, Imunitas, Perspektif Islam, Al Qur'an, Hadits

INTRODUCTION

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV2) cause Coronavirus Disease-19 or known as COVID-19.¹ SARS-CoV2 is a virus that infects the respiratory system causes digestive disorders and weakens immunity. The transmission process of the SARS-CoV2 virus attacks the respiratory tract, where the ACE-2 virus receptor (angiotensin-converting enzyme) sticks to cells lining the nose, then affects respiratory performance which results in shortness of breath in infected people. When associated with receptors, the virus will multiply, infect the immune cells and cause clinical symptoms, such as fever, anosmia, and decreased appetite which affect the immune system.² The government urges the community to always maintain health protocols and body immunity in an effort to prevent the spread of COVID-19. The pandemic condition has made us realize how vital immunity is in the human body.

Strengthening the immunity during the COVID-19 pandemic can be conducted through exercising regularly and maintaining the nutritional intake,³ as well as diet and sleep habits.⁴ While according to⁵ concluding that the immune system can affect the healing process of COVID-19 infection. In essence, humans have an immune system that will counter when a cell or harmful microorganism infects the body, just as when SARS-CoV2 attacks the body, the immune system immediately activates the innate immune response to resist the virus through the immune system.⁶ The immune system in the human body is dynamic and balanced since it can be strong or weak.

Several studies conducted by medical experts prove that listening, reading, and implementing the Qur'an plays a role in increasing the body's immunity during the pandemic. The religiopsychoneuroimmunology of the Qur'an is able to control stress,⁷ and increase the body's immune system perfectly,⁸ and mental health in quarantined COVID-19 patients.⁹ Meanwhile¹⁰ proving the integration of Science-Islam in biology learning, one of which is in the

¹ Kementerian Kesehatan RI, "Pertanyaan Dan Jawaban Terkait Coronavirus," *Pertanyaan Dan Jawaban Terkait Coronavirus* 2019 (2020): 1, <https://www.who.int/indonesia/news/novel-coronavirus/qa-for-public>.

² Tanjung Subrata et al., *Berlayar Melintasi Badai Covid-19: Jaga Kondisi Tanpa Mengabaikan Proteksi, Fakultas Kedokteran & Ilmu Kesehatan*, 2020, <http://repository.warmadewa.ac.id/id/eprint/1163/>.

³ Okta Adijaya and Ananda Perwira Bakti, "Peningkatan Sistem Imunitas Tubuh Dalam Menghadapi Pandemi COVID-19," *Jurnal Kesehatan Olahraga*, 2021, 51–60, <https://ejournal.unesa.ac.id/index.php/jurnal-kesehatan-olahraga/article/view/40767>.

⁴ Yahya Eko Nopiyanto et al., "Pola Hidup Sehat Dengan Olahraga Dan Asupan Gizi Untuk Meningkatkan Imun Tubuh Menghadapi Covid-19," *Dharma Raflesia : Jurnal Ilmiah Pengembangan Dan Penerapan IPTEKS* 18, no. 2 (2020): 90–100, <https://doi.org/10.33369/dr.v18i2.13008>.

⁵ Istyanto & Maghfiroh, (2021)

⁶ Akhmad Mustofa and Nanik Suhartatik, "Meningkatkan Imunitas Tubuh Dalam Menghadapi Pandemi Covid-19 Di Karangtaruna Kedunggipit, Sidoharjo, Wonogiri, Jawa Tengah," *SELAPARANG Jurnal Pengabdian Masyarakat Berkemajuan* 4, no. 1 (2020): 317, <https://doi.org/10.31764/jpmb.v4i1.3100>.

⁷ Siti Nur Khalifah, "RELIGIOPSIKONEUROIMUNOLOGI AL QUR'AN (Studi Kolaborasi Terapi Al Qur'an Dan Fungsi Otak Dalam Menghadapi Stres)," *Buletin Psikologi* 18, no. 1 (2016): 19–28, <https://doi.org/10.22146/bpsi.11533>.

⁸ Rosyidina Robi'aqalbi, "Kebenaran Dan Peranan Al-Qur'an Dalam Kesempurnaan Sistem Imun Tubuh Manusia," *Al-I'jaz: Jurnal Studi Al-Qur'an, Falsafah Dan Keislaman* 1, no. 2 (2019): 40–55, <https://doi.org/10.53563/ai.v1i2.22>.

⁹ Samad Umarella, Muhammad Farid, and Z. Ab Rahman, "Medicine and Al-Quran Recital Approaches Used on Covid 19 Patients: A Systematic Review," *Systematic Reviews in Pharmacy* 11, no. 12 (2020): 1163–70, <https://doi.org/10.31838/srp.2020.12.170>.

¹⁰ Minarno, (2017)

body's immune system, can be implemented by studying the Qur'an as a source of inspiration and confirmation.¹¹ explained that medicinal plants found in Qur'an are able to increase the immunity system during the COVID-19 outbreak. Some of these studies prove that Islam rule and science are related, especially in maintaining health. With a healthy body, we are able to do our daily activities optimally and most importantly, the virus will not affect the immunity system. Unfortunately, some people still pay less attention to awareness of maintaining a healthy immune system. This study aims to determine the relationship between science and Islamic teachings on the concept of body immunity during the Covid-19 pandemic and to determine the relationship with the proposition contained in Qur'an and hadith. The previous research only explained the immune system and Islamic and scientific perspectives implicitly, while the novelty in this research is to complement existing research as well as explain the concept of the immunity system during the Covid-19 pandemic from the Islamic and scientific perspective in a complex way.

RESEARCH METHOD

This research is entitled 'The Immune System during Covid-19 Pandemic: An Islamic and Scientific Perspectives', this type of research uses a literature study approach by finding sources about the body's immunity to covid-19 scientifically through various relevant references, then connecting it with the verses in Qur'an and hadith. The researchers did not make observations directly but dealt with book sources that were already available in the library.¹²

The sources of data are from reference books and journals indexed by Sinta and Scopus that were obtained through Publish or Series 8 software. Researchers then analyze the data by reading the literature and writing the sources relating to the studied subject and providing the ideas for previous research for the new discoveries. After obtaining the data, researchers examine the evidence of truth in Qur'an and hadith. The results of this research are presented in an argumentative description that collaborates with several studies in resulting latest and more complex data.

RESULT AND DISCUSSION

The World Health Organization (WHO) states that COVID-19 is a type of dangerous disease since its high mortality rate. Transmission of COVID-19 is through contact with infected people the COVID-19 when accidentally inhaling droplets (splashes of saliva) from coughing/sneezing, also through commonly touched objects like doorknobs or money. The common symptoms that occur after being infected with COVID-19 are fever above 38°C, dry cough, shortness of breath, headache, anosmia, and taste loss. These symptoms will appear after 14 days of infection. The virus outbreak is so fast that it has a significant impact on all human activities. The whole society has experienced a reduction in various fields, such as social, educational, economic, and health.¹³ The high death rate has caused the government to implement various regulations to overcome the coronavirus infection, these policies are

¹¹ Mehmood et al.,(2021)

¹² Candra Rizki Dwi Safitri and Budi Haryanto, "Nyai Walida As a National Education Figure," *Islamic and Muhammadiyah Studies* 1, no. 1 (2020): 1–6.

¹³ Nurul Aeni, "Pandemi COVID-19: Dampak Kesehatan, Ekonomi, & Sosial," *Jurnal Litbang: Media Informasi Penelitian, Pengembangan Dan IPTEK* 17, no. 1 (2021): 17–34, <https://doi.org/10.33658/jl.v17i1.249>.

impossible to execute when society is still ignoring how the mechanism of immunity against the coronavirus is. Here's a picture that explains the body's immunity to the coronavirus:

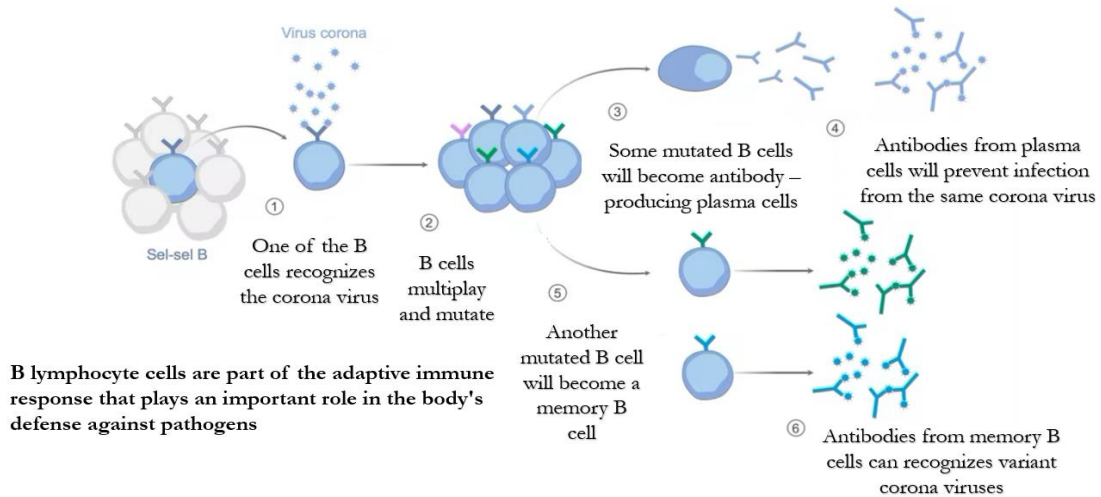


Figure 1. Immunity system against the Corona virus

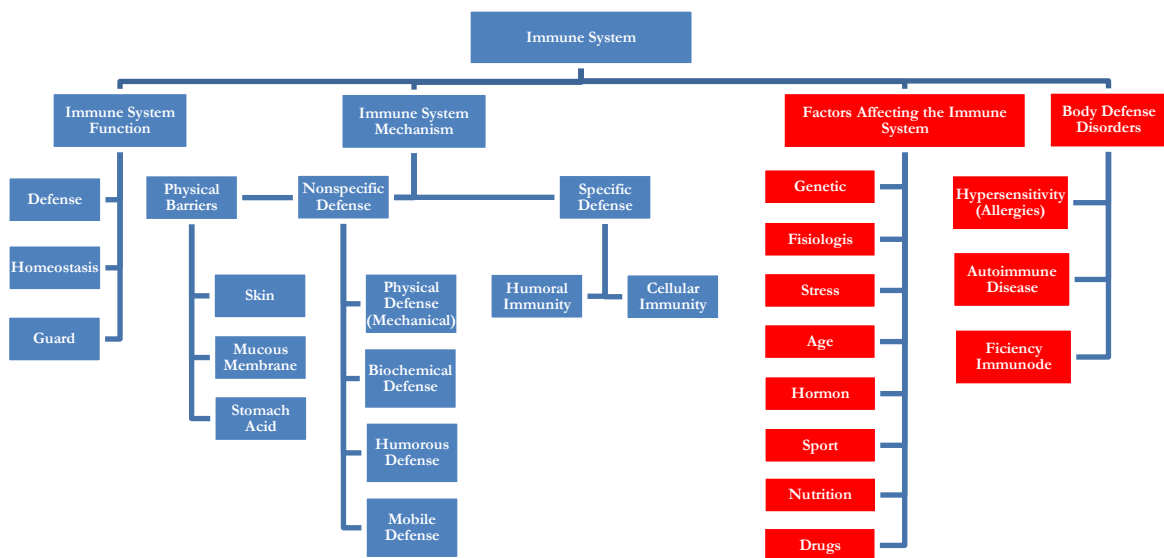


Figure 2. Immunity system concept in human's body

The function of the immune system is to maintain the balance of the body's components and against viruses. White blood cells that produce antibodies have a role in eradicating harmful

substances that invade the body, one of which is the SARS-COV2 virus.¹⁴ There are three kinds of body defenses in a healthy body called physical and chemical barriers, natural immune responses (innate/non-specific), and adaptive immune responses (specific).¹⁵ Physical (skin and mucous membranes) and chemical (stomach acid) barriers are the first level of defense to stop the microorganisms and other substances from invasion, while the non-specific defense system is the body's defense system that occurs when physical and chemical barriers cannot resist the infectious substances that come into the skin or mucous membranes, the occurrence of a non-specific defense system is phagocytic cells (monocytes, macrophages, neutrophils) which have several antimicrobial peptides and proteins for killing various pathogens. When the pathogenic material cannot be removed by a non-specific system, the body will be attacked by disease then the particular defense system will respond. The specific defense system occurs by activation, proliferation, and differentiation of various lymphocyte cells through AMI (antibody-mediated immune response) or CMI (cell-mediated immune response) that produce invading pathogens' destruction. The lymphocyte cells (25-30% of the white blood cell population) mediate specific body defense systems to recognize the particular oligomeric structure of a pathogenic material and prepare the immune system able to identify effectively when the pathogenic infected once more; it consists of 2 types, called: T lymphocytes and B lymphocytes. Humoral immunity produces antibodies from B lymphocytes (plasma cells), while cellular immunity is the production of activated T lymphocytes.

Several factors affecting the body's immunity include genetic factors such as hereditary diseases. Physiologically, obesity also affects the performance of other body organs, as well as stress, can have a negative impact on the body's defense system. A human who has anxiety will release neuroendocrine, glucocorticoids, and catecholamine hormones, which will reduce the white blood cells and have a terrible impact on antibody production. Longevity also affects immunity; there is a decrease in producing immunoglobulins, then when humans get older, they are susceptible to disease.¹⁶ The hormone estrogen can also influence the immune system, such as in autoimmune diseases. Cytokinin levels which depend on sleep habits can also have an impact on the body's immune system since the immune system will increase during sleep time.¹⁷ Lack of physical activity (undertraining) and excessive physical activity (overtraining),¹⁸ therefore regular exercise can increase the blood circulation for the solid body's immunity system. Unhealthy nutrition influences the immune system too, for example, foods with high calories, and lacking in fiber, as well as foods that contain chemicals (preservatives, flavors, dyes, and toxic substances). In contrast, good nutrition such as vitamins and minerals has been proven to help strengthen the body's immune system. Maintaining a healthy diet, not cooking at high temperatures, and avoiding harmful substances such as radioactive materials, pesticides, cigarettes, alcohol, and chemical cleaning agents can interfere with the body's immunity. The

¹⁴ Bayu Kusumah, "Anatomi Tubuh Manusia," 2015, <http://dosen.stikesdhh.ac.id/bayu/wp-content/uploads/sites/6/2015/04/ANATOMI-TUBUH-MANUSIA-Copy.pdf>.

¹⁵ Sudiono Janti, "Sistem Kekebalan Tubuh," *Penerbit Buku Kedokteran EGC*, no. June (2014).

¹⁶ Fatmah, "Respons Imunitas Yang Rendah Pada Tubuh Manusia Usia Lanjut," *Makara Kesehatan* 10, no. 1 (2006): 47–53.

¹⁷ Rini Ambarwati, "Tidur, Irama Sirkadian Dan Metabolisme Tubuh," *Jurnal Keperawatan X*, no. 1 (2017): 42–46, <http://www.litbang.kemkes.go.id:8080/handle/123456789/33428>.

¹⁸ Subrata et al., *Berlayar Melintasi Badai Covid-19: Jaga Kondisi Tanpa Mengabaikan Proteksi*.

body toxins are metabolic wastes that cannot be thrown away by the body and disturb the body's immune system, including drugs in overusing antibiotics that cause resistant bacteria and cannot be cleared by the immune system.

Meanwhile, the body's defense disorders include; Hypersensitivity or allergies; Autoimmunity is the failure of immune cells to differentiate between body cells and host cells; Immunodeficiency is a decrease in immune system effectiveness that is unable to respond to antigens. These three types of diseases can negatively impact the mechanism of the body's immune system, thus making the immune system weak.

Maintaining Body Immunity during the Covid-19 Pandemic in Islamic Perspective

With the greatness of Allah that has created humans perfectly, the body's immune scientifically is a defense system to recognize, destroy and neutralize abnormal cells that are potentially harmful to the body.¹⁹ Millions of cells in the body conduct their duties according to their functions with the command of Allah Azza wa Jalla.²⁰ The molecules in the body's immunity are so small, need to be seen through a microscope, able to work as well as a machine driven by a program. This indicates that the body's immune mechanism is the evidence of Allah Azza wa Jalla. We, as humans with brain and technological assistance, are only limited in studying and observing the body's immunity; the rest to run and command is based on the power of Allah Almighty. Many kinds of medical departments will create faith and belief in Allah Azza wa Jalla, as described in QS. Adz-Dzariyat verse 20-21 reads:

وَفِي الْأَرْضِ آيَاتٌ لِلْمُؤْمِنِينَ ۚ ۱ وَفِي أَنْفُسِكُمْ ۚ ۲ أَفَلَا تُبْصِرُونَ ۚ

“There are many Signs on earth for those of sure of faith, and also in your selves. Do you not see?”²¹

In Qur'an, no verse that specifically explains the body's immunity. Still, the wisdom of every command in it is beneficial for health, including all forms of health protocols regulated by the government nowadays. This shows the Islamic concern for health because one kind of test from Allah Azza wa Jalla is the disease. By studying health sciences to maintain a healthy body, we indirectly prove the truth of Allah Azza wa Jalla through Qur'an and hadith.²² Some efforts to maintain body immunity in an Islamic perspective can be implemented by:

Maintain the Cleanliness

Islam pays attention to cleanliness in all aspects, from physical to spiritual, because purification is clean from the presence of dirt. This dirt is a standard used by Islam to maintain physical cleanliness, including body parts, food, clothing, and the environment, while spiritual cleanliness is for the soul, heart, and mind. Everything dirty will make a person closer to a disease that will weaken the body's immune system. This can be seen during the COVID-19 pandemic, where cleanliness is one of the keys to preventing the virus outbreak.²³ A person who is infected with Covid-19 must isolate themselves and need a calm atmosphere, fresh air, and a

¹⁹ Riko Pandu Wijaya, “Sistem Imunitas,” *Pustekkom Kemdikbud*, 2019.

²⁰ Sindi Rahmawati et al., “Sistem Kekebalan Tubuh Ditinjau Dari Pandangan Islam Dan Sains,” *Prosiding Integrasi Interkoneksi Islam Dan Sains* 1, no. September (2018): 189–92.

²¹ RI. Kementerian Agama, “Terjemahan Al Qur'an,” 2021, 10, <https://quran.kemenag.go.id/>.

²² Muadz et al., *Islam Dan Ilmu Pengetahuan: Buku Ajar Al-Islam Dan Kemuhmadiyah* (AIK) 4.

²³ Fitri Sulastri, “Upaya Peningkatan Kesadaran Masyarakat Akan Pentingnya Kebersihan Di Lingkungan Desa Pisangsambo Kecamatan Tirtajaya Kabupaten Karawang,” no. 2798–2580 (2021): 1826–29.

clean environment to keep the body's immunity stable. This is one of the wisdom of the truth that Allah Almighty commanded about maintaining cleanliness. "From Rasulullah SAW: Verily Allah Azza wa Jalla is moral who loves pure things, He is Clean who likes cleanliness, He is Most Noble who loves glory, He is Most Beautiful who loves beauty, so clean your places." (HR. Tirmizi). A clean environment will create a safe and comfortable atmosphere and will actualize its healthy residents.²⁴

Clean (taharah) is an obligation for every Muslim, and even the condition for the acceptance of prayer is based on purification.²⁵ The purpose of cleansing here is ablution through wetting specific body parts with water and must be accompanied by an intention in the heart. Setiawan explained that in Chinese medical science, the practice of ablution could drain the skin's energy to smooth blood circulation and maintain the sensitivity of the skin's nerves.²⁶ It is proven that after doing ablution, the body that feels tired will be refreshed after the ablution process. Covid-19 is an example of a disease that can prove the correlation between the immune system and cleanliness. The command to keep the 5M, one of which is to wash both hands, can be analogous to the power in performing the ablution, which is to wash both hands by interjecting between the fingers. QS. Al Maidah verse 6 confirmed this case:

يَا أَيُّهَا الَّذِينَ آمَنُوا إِذَا قُمْتُمْ إِلَى الصَّلَاةِ فَاغْسِلُوا وُجُوهَكُمْ وَأَيْدِيَكُمْ إِلَى الْمَرَافِقِ وَامْسَحُوا بِرُءُوسِكُمْ وَأَرْجُلَكُمْ إِلَى الْكَعْبَيْنِ
"Believers! When you stand up for prayer wash your faces and your hands up to the elbow, and wipe your heads, and wash your feet up to the ankles."

Maintaining Eating Habit

Food in the Islamic perspective is divided into two types, halal (permissible to eat) and haram (prohibited to eat). Halal food is good food (thoyibah), does not contain harmful substances for the body, and also brings significant benefits to the body's health, especially in producing perfect body immunity. The cause of the disease can be from transmission (virus) or food. The covid-19 disease is a type of infectious disease that has nothing to do with dietary errors. Still, the diet is closely related to the body's immunity when it is infected by the coronavirus which result in death. One example of a food that can cause disease is fast food (Junk Food); these foods contain refined carbohydrates, fats, sugars, and added salt which is scientifically proven to cause insulin resistance and hyperglycemia. The command to eat halal and good food is in the QS. Al-Maidah verse 88 reads:

وَكُلُوا مِمَّا رَزَقَكُمُ اللَّهُ حَلَالًا طَيِّبًا ۗ

"Eat of the good, lawful things provided to you by Allah. And be mindful of Allah in Whom you believe."

In addition, Islam also forbids Muslims to overeat even though the food is halal. This injunction is in line with scientific findings that all kinds of nutrients have their dose to form a perfect immune system.²⁷ The verse that recommends not to overeat is QS. Al-A'raf verse 31:

²⁴ Afanda Ghinaya Aulia, "Kebersihan Dan Kesehatan Lingkungan Menurut Hadis," *Jurnal Riset Agama* 1, no. April (2016): 1–23, <https://journal.uinsgd.ac.id/index.php/jra/article/view/14367/6156>.

²⁵ Aldona Maria Piwko, "Islam and the COVID-19 Pandemic: Between Religious Practice and Health Protection," *Jurnal Agama Dan Kesehatan* (2021) 60: 3291–3308 (2021), <https://doi.org/https://doi.org/10.1007/s10943-021-01346-y>.

²⁶ Yulinar and Erizal Kurniawan, "Sports in Islamic Views," *Muslim Sehat* 1, no. 1 (2011): 9–11.

²⁷ Sri Sumarmi, "Kerja Harmoni Zat Gizi Dalam Meningkatkan Imunitas Tubuh Terhadap Covid-19: Mini Review," *Amerta Nutrition* 4, no. 3 (2020): 250, <https://doi.org/10.20473/amnt.v4i3.2020.250-256>.

وَكُلُوا وَاشْرَبُوا وَلَا تُسْرِفُوا إِنَّهُ لَا يُحِبُّ الْمُسْرِفِينَ

“..., eat and drink without going to excesses. For Allah does not like those who go to excess.”

Meanwhile, the prohibition of Allah Azza wa Jalla regarding what is haram food such as blood, carrion, pigs, wild animals, animals that die of suffocation/beatings, wild animals stabbed, and khamr are proven to have a bad effect on health. A carcass is an animal that has died, it could be diseased or poisoned, and dangerous for the human consumed. In comparison, fanged animals are carrion-eating animals. Pork is also forbidden since it is dirty and eats feces; besides that, this animal contains many types of worms and germs that are harmful to the human body.²⁸ Undoubtedly, all things that can harm the body will affect the body's immune system. The verse that explains the haram food is QS. Al-Maidah verse 4:

سَأَلْتَهُ مَاذَا آجَلَ لَهُمْ قُلْ أَجَلٌ لَكُمْ الطَّيِّبَاتُ وَمَا عَلَّمْتُم مِّنَ الْجَوَارِحِ مُكَلِّبِينَ تُعَلِّمُونَهُنَّ مِمَّا عَلَّمَكُمُ اللَّهُ فَكُلُوا مِمَّا أَمْسَكْنَ عَلَيْكُمْ وَادْكُرُوا اسْمَ اللَّهِ عَلَيْهِ ۗ

“They ask you what has been made lawful to them. Say: ‘All clean things have been made lawful to you, and such hunting animals as you teach, training them to hunt, teaching them the knowledge Allah has given you- you may eat what they catch for you but invoke the name of Allah on it. Have fear of Allah (in violating His Law). Allah swift in His reckoning.’”

Khamr is proven to contain alcohol and can be intoxicating; a drunk person will lose his mind and be able to harm himself and others. Scientifically, it has been investigated the alcohol content (ethanol) contained in khamr can damage the organs and weaken the immune system. The verse that explains the prohibition of khamr is QS. An-Nisa verse 43:

أَيُّهَا الَّذِينَ آمَنُوا لَا تَقْرَبُوا الصَّلَاةَ وَأَنْتُمْ سُكَرَىٰ حَتَّىٰ تَعْلَمُوا مَا تَقُولُونَ وَلَا جُنُبًا إِلَّا عَابِرِي سَبِيلٍ حَتَّىٰ تَغْتَسِلُوا ۗ

“O you who have believed, do not approach prayer while you are intoxicated until you know what you are saying.”

Doing Exercise

Exercise and adequate rest can strengthen immunity. It is proven that someone who does regular exercise is more robust and healthier than people who rarely do exercise. When doing sports, the performance of white blood cells will increase. It turns out that this can keep the body's immunity stronger and more potent against viruses.²⁹ A strong physique/body is one of human nature, even the Prophet SAW said in his hadith: "A strong Muslim is better and more loved by Allah than a weak Muslim" (HR. Muslim), Rasulullah SAW said: "Teach your children for swimming, archery, and horseback riding" (H.R Bukhari Muslim). Nowadays, modern Islamic schools practice these three sports; this proves that there is no conflict between religion and sport.³⁰ To maintain body immunity during the pandemic, students are allowed to do some sports activities for fun and to stay happy.³¹ When swimming, the body's gravity in water is lighter and makes all the limbs move, and will makes the lungs and heart rate stronger. The benefit of arrows is as a weapon for ancient warfare, besides that arrows are used as a type of sport since they can improve the coordination between eyes and hands, balance training,

²⁸ RI Kemenag, *Makanan Dan Minuman Dalam Perspektif Al-Quran Dan Sains, Pengantar Kesehatan Lingkungan*, 2013.

²⁹ Sri Nabawiyati, Nurul Makiyah, and Nurvita Risdiana, “Peningkatan Sistem Imun Keluarga Di Era Pandemi Covid-19” 2, no. 2 (2021): 81–88.

³⁰ Salahudin Salahudin and Rusdin Rusdin, “Olahraga Meneurut Pandangan Agama Islam,” *JISIP (Jurnal Ilmu Sosial Dan Pendidikan)* 4, no. 3 (2020): 457–64, <https://doi.org/10.36312/jisip.v4i3.1236>.

³¹ Ahmad Baidowi et al., “Theology of Health of Quranic Pesantren in the Time of COVID-19,” *HTS Theologiese Studies / Theological Studies* 77, no. 4 (2021): 1–11, <https://doi.org/10.4102/hts.v77i4.6452>.

increase the concentration, body relaxing, and growing the patience. Equestrian is a sport that requires agility and skill, while the benefits are increasing muscle strength, preventing cramps, increasing tolerance, discipline, responsibility, self-confidence, and body balance.³² These three types of sports are not like sports in general which can make people bored, in fact doing these sports is kind of playing then they can make people feel happy and not bored in doing it. In addition to being healthy, the feeling of pleasure experienced by a person will increase the body's immune system.

Vaccination

Vaccines are substances that are used to stimulate the production of anti-substances that are used into the body by injection, and by mouth.³³ The given vaccines are to maintain immunity, especially during the Covid-19 pandemic. These various vaccines have different brands and ingredients. Vaccines help the body have an adaptive immune system; one of their functions is to increase the immune system in the body. It is the manifestation of the great love of Allah Azza wa Jalla to Muslims, which is strengthened by the hadith of the Prophet Muhammad: "Indeed Allah does not send down disease but sends down a medicine. When the medicine is found, he will be cured by Allah's permission." (HR. Ahmad, Sahih)

During the pandemic era, the pros and cons are always there since everything has advantages and disadvantages. The cause of controversy among Muslims is that a small number of vaccines contain pork. It doesn't mean since pork is haram, then vaccines are also haram.³⁴ Indeed, Allah Azza wa Jalla has absolute authority in rejecting harm, including in terms of avoiding the disease outbreak. On the other hand, Allah also has full control in giving benefits and healing. Still, Muslims must know that there are verses in Qur'an that tolerance in consuming or injecting something haram during an emergency, it stated at QS. Al Baqarah verse 173:

إِنَّمَا حَرَّمَ عَلَيْكُمُ الْمَيْتَةَ وَالدَّمَ وَالْخِنْزِيرَ وَمَا أُهْلَ بِهِ لِغَيْرِ اللَّهِ ۖ فَمَنْ اضْطُرَّ غَيْرَ بَاغٍ وَلَا عَادٍ فَلَا إِثْمَ عَلَيْهِ ۗ إِنَّ اللَّهَ غَفُورٌ رَّحِيمٌ

"He has only forbidden you 'to eat' carrion, blood, swine, and what is slaughtered in the name of any other than Allah. But if someone is compelled by necessity-neither driven by desire nor exceeding immediate need-they will not be sinful. Surely Allah is All-forgiving, Most Merciful."

Listening, Reading, and Implementing the Qur'an

The Qur'an is a miracle that was sent to the Prophet Muhammad through Gabriel. In general, this definition turns out to have multiple functions that are closely related to goodness, and the benefits like rewards and health. People who read the Qur'an will be given peace of mind; when the heart and mind are calm, a healthy body will be created and maintain the immunity system, especially during the covid-19 outbreak.³⁵ Even just listening to the recitation

³² Yulinar and Kurniawan, "Sports in Islamic Views."

³³ Perspektif Islam and Muhammad Mahmud Nasution, "Vaksinasi Dalam Perspektif Islam (Muhammad Mahmud Nasution 61)," *Forum Pedagogik* 10, no. 2 (2018): 61–70.

³⁴ Saifudin Hakim, *Imunisasi: Lumpuhkan Generasi? Menjawab Tuduhan Ummu Salamah SH., Hajjam* (Yogyakarta: Pustaka Muslim, 2016).

³⁵ Suhadi Suhadi, "Analisis Torsi Mengikuti Pola Gerakan Shalat Ketika Takbiratul Ihram Dan Setelah Takbiratul Ihram," *Jurnal Penelitian Fisika Dan Terapannya (JUPITER)* 2, no. 1 (2020): 1, <https://doi.org/10.31851/jupiter.v2i1.4239>.

of the Qur'an has a calming effect and reduces stress during the COVID-19 pandemic.³⁶ Rasulullah SAW once taught the prayer to whom feel anxiety or sadness; "I ask you, Allah, by all the names that You have, which You give yourself a name or which You teach one of Your servants or You send down in Your Book or You keep it secret in the knowledge of the unseen by Your side, make the Qur'an a healer. my heart, the light of my soul, and make it the comforter of my sorrows and the remover of my restlessness." (HR. Ahmad)

Apart from comforting the heart, the Qur'an also has another name, called *As-Syifa'* which means a healer. When Rasulullah SAW was sick, he read the Qur'an. The entire surah in the Qur'an both in meaning and its letters were believed to have a very powerful healing potential as a medicine. The positive effect when we read the Qur'an is the sound waves are at the same resonance then they can increase and improve the potential of the entire system in the body cell. Al-Qur'an-based immunity must be implemented based on strong beliefs, it is hoped that reading Qur'an as a habit, will be producing natural immunity for the body.³⁷ Allah Azza wa Jalla says in QS. Yunus verse 57 reads:

يَا أَيُّهَا النَّاسُ قَدْ جَاءَكُمْ مَوْعِظَةٌ مِنْ رَبِّكُمْ وَشِفَاءٌ لِمَا فِي الصُّدُورِ وَهُدًى وَرَحْمَةٌ لِّلْمُؤْمِنِينَ

"O mankind, there has to come to you instruction from your Lord and healer for what is in the heart and guidance and mercy for the believers."

After understanding the benefits of reading the Qur'an for mental and physical health, Muslims need to know implement the Qur'an philosophy, because, behind the commandments of Islam and Sunnah, there must be good wisdom. One example of the commandment of the Qur'an for the mother in providing the breast milk (ASI) for her child, it is scientifically proven that the immune system in breast milk contains high immunoglobulins, then the children who are breastfed exclusively for up to 2 years will get a better immune system than children who are not exclusively breastfed.³⁸ This is explained in QS. Al-Baqarah verse 233 reads:

وَالْوَالِدَاتُ يُرْضِعْنَ أَوْلَادَهُنَّ حَوْلَيْنِ كَامِلَيْنِ لِمَنْ أَرَادَ أَنْ يُتِمَّ الرَّضَاعَةَ

"Mothers will breastfeed their offspring for two whole years, for those who wish to complete the nursing of their child."

Prayer Activity

Prayer is the second pillar of Islam, which means that a Muslim is obliged to pray. Performing prayer means believing in Allah Azza wa Jalla and maintaining the pillars of Islam. The wisdom of the command to pray, apart from being a ritual of worship, it can also provide the great benefits for health. The prayer movement related to health according to³⁹ will provide important stimuli to various systems of human body that work synergistically and harmoniously, while⁴⁰ stated that apart from spiritual balance, it can also improve physical fitness, mental health and even reduce anxiety, depression and emotion. Even autoimmune diseases can be

³⁶ Umarella, Farid, and Ab Rahman, "Medicine and Al-Quran Recital Approaches Used on Covid 19 Patients: A Systematic Review."

³⁷ Hammad, "Peran Terapi Al-Qur'an Terhadap Kecemasan Dan Imunitas Pasien Hospitalisasi," *Jurnal NERS* 4, no. 2 (2011): 110–15.

³⁸ Robi'aqalbi, "Kebenaran Dan Peranan Al-Qur'an Dalam Kesempurnaan Sistem Imun Tubuh Manusia."

³⁹ Halimang, (2016)

⁴⁰ Zaini, (2018)

recover rapidly, according to ⁴¹ Prayer is the most proportional movement for the anatomy of human body and also be a therapy for various diseases. There are calories that are burned regularly in the body during praying, then the body's metabolism increases and maintains the immunity system. The correlation between prayer movements and prayer du'a will cleanse our souls, while full concentration will create the positive energy. After praying, the hearts and minds will feel calm,⁴² as promised by Allah Azza wa Jalla in QS. Ar-Ra'ad verse 28:

الَّذِينَ ءَامَنُوا وَتَطْمَئِنُّ قُلُوبُهُمْ بِذِكْرِ اللَّهِ ۗ أَلَا بِذِكْرِ اللَّهِ تَطْمَئِنُّ الْقُلُوبُ

"Those who believe, and whose hearts find satisfaction in the remembrance of Allah: for without doubt in the remembrance of Allah do heart find satisfaction."

In this verse what is meant by remembering (dhikr) is praying. This is also reinforced in QS. Thaha verse 14:

إِنِّي أَنَا اللَّهُ لَا إِلَهَ إِلَّا أَنَا فَاعْبُدْنِي وَأَقِمِ الصَّلَاةَ لِذِكْرِي

"It is truly. I am Allah, there is no god 'worthy of worship' except Me. So worship Me 'alone', and establish prayer for My remembrance."

Each movement of praying has different benefits according to its function, here are the benefits of the prayer movement in increasing body immunity:

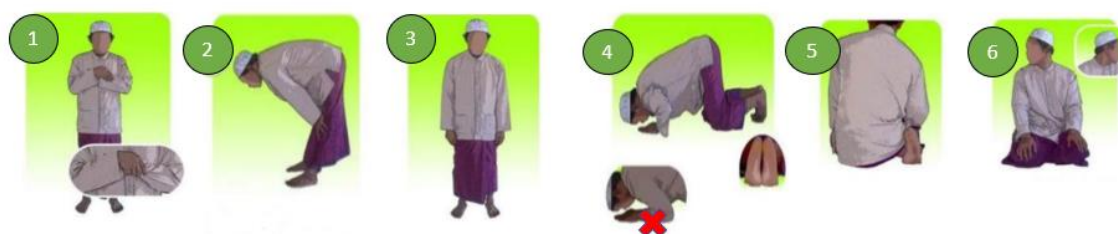


Figure 3. Description of the Prayer Movement: 1. Takbiratul ihram 2. Ruku'; 3. Iktidal; 4. Sujud/prostration; 5. Sitting between two prostrations; 6. Greetings.

Figure 3, No. 1

Takbiratul Ihram begins with an intention from heart. From medical perspective, the word Allahu Akbar has an amazing effect, especially on dejection and tension sufferers..⁴³ Takbiratul ihram process is able to maintain the energy balance in body, relaxes the joint muscles and preventing joint disorders, improving blood circulation, lymph, and arm muscle strength in upper body.

Figure 3, No. 2

The perfect ruku' movement is by placing a glass of water on the back and the water is not spilled, since the head and spine are in parallel.⁴⁴ Ruku' can also prevent humans from slouching, maintain the perfection of the back as a support for the body and the nerve center

⁴¹ Kosim and Hadi, (2019)

⁴² Sazali, "Signifikansi Ibadah Sholat Dalam Pembentukan Kesehatan Jasmani Dan Rohani," *Jurnal Ilmu Dan Budaya* 40, no. 52 (2016).

⁴³ Joko Tri Haryanto, Yuwinda Ginung Pradina, and Estuningsih Estuningsih, "Pengaruh Terapi Akupunktur Jin's 3 Needle Terhadap Penurunan Skala Nyeri Pada Pasien Nyeri Lutut Di Dusun Sidorejo Desa Ngargorejo Kecamatan Ngemplak Boyolali," *Jurnal Keterampilan Fisik* 2, no. 1 (2017): 54–61, <https://doi.org/10.37341/jkf.v2i1.83>.

⁴⁴ Danis Adithio Pratama, *Implementasi Ibadah Shalat Dalam Membangun Kesehatan, (Skripsi)*. Lampung: Institut Agama Islam Negeri Metro, 2018.

and the heart position is parallel to the brain than the blood able to flow through the middle part of the body, as well as flow the respiratory system increase the body's immunity.

Figure 3, No. 3

The i'tidal position causes a stimulus to the large nerve branches in armpit shoulder, the blood flow that was previously concentrated in the head during ruku', will descend to body through the gravity when getting up from ruku', then these organs are able to work optimally to conduct the daily activities. This movement can also stimulate the digestion to become smoother for maintaining the metabolism and increasing the immunity system.

Figure 3, No. 4

Prostration is respect which means worship, Islam only allows Muslim to prostrate to Allah Azza wa Jalla. A perfect prostration will cause lymph flow to be pumped into the neck and armpits, while the position of the heart above the brain causes oxygen-rich blood to flow maximum to the brain, it is proven when doing prostration, the headaches will disappear instantly. This movement can also boost the body's immune system.

Figure 3, No. 5

Sitting between the two prostrations, in terms of health, this movement requires hard work between the muscular system and the joints of the leg bones. This position can keep the hollow of the foot above the heel squeezed. This position can maintain the flexibility of the nerves in thighs, the insides, the hollows of the knees, calves, to the toes which can prevent diabetes, prostate disease and others, the lower the risk of disease, the body's immune mechanism will maintain well.

Figure 3, No. 6

Salam is the last movement in prayer. This movement has the benefit of strengthening the muscles and the entire structure of the neck as well as providing muscles relaxation around the neck and head to improve the blood flow in the head, as well as maintaining facial skin firmness. It is also able to prevent migraine attacks and other headaches. When the nerves are functioning properly, the body's immunity is maintained well.

Social Relationship

Social relations are keeping the good relations between human beings. This situation is a culture that exists in every region. Humans are called social creatures since they need each other. The implementation of social distancing and physical distancing, which aims to break the chain of covid-19, has a negative impact on most people's psychology.⁴⁵ Covid-19 is closely related to the body's immune system, where stress is the main factor that can reduce the body's immunity system. Islam as a perfect religion has reviewed social relations since the first creation of humans as "khalifah" on earth. Humans are not only required to maintain good relations with their God, but also need to manage the good relations with fellow humans, because one of the signs of perfect faith is glorifying his brother. Maintaining the good relationships among people will

⁴⁵ Tiara Putri Wiraini, Ririn Muthia Zuhra, and Yesi Hasneli, "Lansia Pada Masa COVID-19," *Keperawatan* 1 (2021): 44–53.

create peace and calm environment that affects to the body's immune system. This is evidenced in QS. Al Hujurat verse 13:

يَا أَيُّهَا النَّاسُ إِنَّا خَلَقْنَاكُمْ مِنْ ذَكَرٍ وَأُنْثَىٰ وَجَعَلْنَاكُمْ شُعُوبًا وَقَبَائِلَ لِتَعَارَفُوا ۗ

“O mankind, We have created you from a male and a female, and made you into nations and tribes, that you may know one another.”

The verse is strengthened by a hadith which stated: From Abu Hurairah r.a. Rasulullah SAW said, "Whoever believes in Allah and the Last Day, let him say good things or be silent. Whoever believes in Allah and the Last Day, let him honor his neighbor. And whoever believes in Allah and the Last Day, let him honor his guest." (H.R. Al-Bukhari and Muslim)

Interelasi Islam dan Sains dalam Meninjau Imunitas di Masa Pandemi Covid-19

According to Astutik⁴⁶ the synergistic integration between Islamic teachings and science will consistently create humans who are balanced in science and spirituality. The existence of an interrelation between Islamic teachings and science proves that there is no dichotomy between them. The proof that Islam is comprehensive religion and it always describes the scientific substance that can be scientifically proven.⁴⁷ As in QS. Al-Baqarah verse 2:

ذَٰلِكَ الْكِتَابُ لَا رَيْبَ ۚ فِيهِ ۚ هُدًى لِّلْمُتَّقِينَ

“This is the Book; in it is guidance sure, without doubt, to those who fear Allah,”

This verse is one proof that Qur'an is a perfect book in which it describes everything in such detail and can be used as a guide. The scientific discussion of body immunity as well as a study of verses from Qur'an and Hadith related to maintaining health, shows that managing the immunity in accordance with Islamic recommendations has been implemented long time ago before the COVID-19 pandemic. The magnitude of the immunity influence against COVID-19 can be seen from the healing experienced by Covid-19 sufferers who have a good immune system, especially by implementing the health philosophy by religion.⁴⁸

CONCLUSION

The molecules in the body's immunity are so small that need to be seen through a microscope are able to work as well as a machine driven by a program. This indicates that the body's immune mechanism is one form of the existence of Allah Azza wa Jalla. The results of this research indicate that maintaining immunity during the COVID-19 pandemic is in accordance with Islamic religious advices that have been implemented for a long time before the COVID-19 pandemic. This shows that Islam and Science have a balanced interrelation that complements each other, thus proving that there is no dichotomy between the two. In Islamic perspective, increasing the immunity must be supported in a scientific way, by maintaining health, cleanliness, environment, food, exercise, and vaccination. All of these methods have its own explanation in Qur'an and hadith, an explanation of body immunity is found in QS. Adz-Dzariyat verses 20-21. Even the commands that have the value of worship from listening,

⁴⁶ Astutik, (2018)

⁴⁷ Nabeel Iqbal, “COVID-19 Pandemic: Perspective of the Holy Quran,” *SSRN Electronic Journal*, no. January (2021), <https://doi.org/10.2139/ssrn.3907435>.

⁴⁸ Baidowi et al., “Theology of Health of Quranic Pesantren in the Time of COVID-19.”

reading and practicing the Qur'an, performing ablution, prayer movements, maintaining social relationships have been proven to increase the body immunity during Covid-19 pandemic. This explanation proves in an Islamic perspective is more complex than the scientific discovery, this is the wisdom of studying science to prove the truth of the Qur'an and hadith.

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