

COMPILATION OF QURANIC VERSES (JUZ 1 -15) AND HADITHS OF SAHIH BUKHARI RELATED TO VISUAL FUNCTION

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ABSTRACT

The ability for us to see is actually due to the reflection of light that serves as a proof of the greatest creations of our Creator as stated in the Holy Quran, "Allah is the Light of the heavens and the Earth" (24:35). There are limited references specifically focusing on Revelations related to visual function. Thus, this study aims to provide a compilation of Quranic verses (Juz 1 to 15) and hadiths of Sahih Al-Bukhari related to visual function supported by scientifically proven facts. This may invite readers to reflect upon the wonders of creations by Allah mentioned in these Revelations that lead to the discovery of our modern science. A website named "Search Truth" on <http://www.searchtruth.com/> was used as a tool to ease the finding of the Quranic verses and hadiths that are related to visual function by searching for the keywords "eye/eyes", "see", "light", "sight" and "vision" in the search boxes provided in the website. The translations of Revelations containing those keywords were verified and related to visual function supported by scientifically proven facts from other reading materials. Twenty-eight Quranic verses and 57 hadiths of Sahih Al-Bukhari can be related to visual function supported by scientifically proven facts. Twelve Quranic verses that have the word "eye/eyes", 7 verses with the word "light", 2 verses with the word "see", 6 verses with the word "sight" and 1 verse with the word "vision" can be related to visual function. As for hadiths, 49 hadiths have the word "eye/eyes", 3 with the word "light", 1 with the word "see", 2 with the word "sight" and 2 with the word "vision" in their translations can also be related to visual function. Some of the Quranic verses and hadiths are related to anatomy, physiology and pathophysiology of the eyes, treatments for eye diseases, and other interesting findings.

KEYWORDS: Quran, Sahih Bukhari, visual function, eyes, Revelations and vision, optometry

INTRODUCTION

Allah reminds us to be thankful for all the senses that we have in Surah Al-Muminun, verse 78, "It is He, Who has created for you (the sense of) hearing (ears), sight (eyes), and hearts (understanding). Little thanks you give". We should be grateful for the perfect visual system which enables us to view our surrounding, as has been bestowed by Allah.

The objects we see emit light rays which enter our cornea and pass through the pupil. The coloured iris surrounding the pupil constricts and dilates to control the amount of light entering the eye. The light rays then pass through the crystalline lens which changes shape to enable the light to be refracted on to the

retina which is a thin layer of tissue that contains millions of tiny light-sensing nerve cells (Rajendra, Eddie & Jasjit, 2008). These nerve cells convert the light stimulus into electrical impulses which then be transmitted by the optic nerve to the brain that produces the images we see.

Revelations and knowledge

Prophet Muhammad (SAW) had mentioned about the obligation of seeking knowledge in the hadith of Sunan Ibn Majah as reported by Anas ibn Malik: The Messenger of Allah (peace and blessings be upon him) said, "Seeking knowledge is an obligation upon every Muslim" (Sunan Ibn Majah: 224).

Many writings by scholars had covered various aspects of science by referring to the Revelations but there are limited references specifically focusing on visual function. Some of them used the Revelations as the sources of their researches especially in relating them to modern science, while, some of them used the scientific data to get a better understanding of the Revelations (Bucaille, 2000). Thus, this paper aims to provide a compilation of Quranic verses and hadiths related to visual function supported by scientifically proven facts. This involves the identification of Quranic verses (Juz 1-15) and hadiths of Sahih Bukhari that are related to visual function by referring to the words "light", "eye/eyes", "sight", "vision" and "see" and determining their frequencies. This study may invite readers to reflect upon the wonders of creations of Allah mentioned in these Revelations.

MATERIALS AND METHODS

This study is a qualitative descriptive analysis which involves the analysis of various documents and reading materials to obtain data. The main reading materials used as references were the Holy Quran translation (Arabic-English) and the translation of the meanings of Sahih Al-Bukhari (Arabic-English). Other reading materials that were related to scientific facts were also being used as references.

1. "Search Truth" website on <http://www.searchtruth.com/>
 - Acted as a tool to ease the finding of the related Quranic verses and hadiths by referring to chosen keywords. The Quranic verses and hadiths listed in the website were then being checked manually for their authenticity in the book of Holy Quran and Sahih Al-Bukhari English translation.
2. The Holy Quran translation (Arabic-English) by Yusuf Ali
 - To verify the presence and the authenticity of Quranic verses listed in the Search Truth website.
3. The translation of the meaning of Sahih Al-Bukhari (Arabic-English) by Dr. Muhammad Muhsin Khan.
 - To verify the presence and the authenticity of hadiths of Sahih Bukhari listed in the Search Truth website.

A website named 'Search Truth' was used to ease the findings of related Quranic verses and hadiths of Sahih Al-Bukhari. There are two search boxes provided in the website which are the search box for Quranic verses and the other one is for hadith Sahih Al-Bukhari (Figure 2). The keywords chosen to be typed in the search boxes were "light", "eye/eyes", "sight", "vision" and "see". The website then listed the related Quranic verses and hadiths that containing those keywords in their English translations (Figure 3).

The verses and hadiths listed in the website that may be related to visual function were checked manually for their authenticity and presence in the book of Holy Quran English translation by Yusuf Ali and in the book of Sahih Al-Bukhari English translation by Dr. Muhammad Muhsin Khan. All verses and hadiths that could be related to visual function were found to be authentic. After they were verified to be authentic, they were matched with the relevant support from the scientifically proven facts which involved

many reading materials such as journals, ophthalmology and optometry books, case reports, non-fiction books and other relevant reading materials.

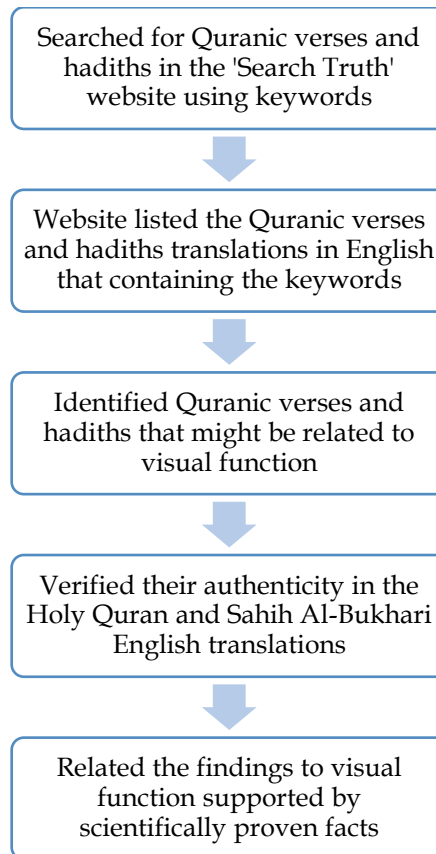


Figure 1 Flow chart of the process in the compilation of Quranic verses and hadiths of Sahih Al-Bukhari related to visual function

Quran Search

Search in Quran:

Quran Arabic ([Simple Script](#), [Uthmani Style1](#), [Uthmani Style2](#), [Images](#))
[List](#), [Words](#), [Tafsir English](#), [Tafsir Arabic \(Jalal ad-Din, King Fahad Quran Complex \)](#) [Quran Topics](#), [Quran Recitation](#), [All Translations](#), [Urdu \(Ahmad, Jalandhry\)](#), [Farsi](#), [French](#), [Transliteration](#), [English \(Yusuf Ali, Mohsin Khan, Shakir, Saheeh International, Pickthal\)](#), [Spanish](#), [Indonesian](#), [Russian](#), [Portuguese](#), [Dutch](#), [Italian](#), [Malay](#), & [German](#)

Hadith Search

Search in Hadith:

[All](#), [Sahih Bukhari](#), [Sahih Muslim](#), [Sunan Abudawud](#), [Malik's Muwatta](#)

Figure 2 Search boxes provided in the 'Search Truth' website

SearchTruth is especially designed to search any word in the [Quran](#) and the [Hadith](#).

Search in Quran: in in

Display: results per page. Any Word All Words Exact Phrase

Apply a 'sounds like' (phonetic) search ([find out more](#))

The word(s) "**eye**" appears 16 time(s) in 14 verse(s) in Quran in Abdullah Yusuf Ali translation.

(1) We ordained therein for them: "Life for life, **eye** for **eye**, nose for nose, ear for ear, tooth for tooth, and wounds equal for equal." But if any one remits the retaliation by way of charity, it is an act of atonement for himself. And if any fail to judge by (the light of) what Allah hath revealed, they are (No better than) wrong-doers.

(سورة المائدة, Al-Maaida, Chapter #5, Verse #45)
 (Arabic, Transliteration, Urdu (Ahmed Ali) , Urdu (Jalandhry) , Yusuf Ali, Shakir, Picthal, Mohsin Khan, French, Spanish, Indonesian, Malay, German, Bosnian, Russian, Tafsir - Jalal ad-Din, Tafsir - King Fahad Quran Complex)

(2) To those who reject Our signs and treat them with arrogance, no opening will there be of the gates of heaven, nor will they enter the garden, until the camel can pass through the **eye** of the needle: Such is Our reward for those in sin.

(سورة الأعراف, Al-A'raaf, Chapter #7, Verse #40)
 (Arabic, Transliteration, Urdu (Ahmed Ali) , Urdu (Jalandhry) , Yusuf Ali, Shakir, Picthal, Mohsin Khan, French, Spanish, Indonesian, Malay, German, Bosnian, Russian, Tafsir - Jalal ad-Din, Tafsir - King Fahad Quran Complex)

(3) "And squat not on every road, breathing threats, hindering from the path of Allah those who believe in Him, and seeking in it something crooked; But remember how ye were little, and He gave you increase. And hold in your mind's **eye** what was the end of those who did mischief.

(سورة الأعراف, Al-A'raaf, Chapter #7, Verse #86)
 (Arabic, Transliteration, Urdu (Ahmed Ali) , Urdu (Jalandhry) , Yusuf Ali, Shakir, Picthal, Mohsin Khan, French, Spanish, Indonesian, Malay, German, Bosnian, Russian, Tafsir - Jalal ad-Din, Tafsir - King Fahad Quran Complex)

Figure 3 List of the English translations of Quranic verses that have the word ‘eye’

Inclusion and Exclusion Criteria

The Quranic verses and hadiths of Sahih Bukhari English translations that are straightforward and clear in giving transparent meanings related to visual function are included in this compilation. This compilation also includes Quranic verses and hadiths English translations that are not straightforward but can still be related to visual function according to the writer’s interpretation supported by scientifically proven facts. However, verses and hadiths which have the chosen keywords but are identified as a form of figure of speech, very vague meaning, not scientifically proven yet or an exclamatory sentence are omitted in this compilation.

RESULTS

It was found that 12 out of 68 Quranic verses containing the word ‘eye/eyes’; 7 out of 65 Quranic verses containing the word ‘light’; 6 out of 69 Quranic verses that have the word ‘sight’; and 1 out of 24 with the word ‘vision’ in the English translations can be related to visual function supported by scientifically proven facts. In addition, Quranic verses with the word ‘see’ in the English translations yielded the highest frequency but only 2 were found to be related to visual function.

Table 1 Frequency of Quranic verses based on keywords that can and cannot be related to visual function

Keywords	Visual function	Non-visual function	Frequency
Eye/Eyes	12	56	68
Light	7	58	65
See	2	170	172
Sight	6	63	69
Vision	1	24	25
TOTAL	28	371	399

As for hadiths, 49 out of 162 hadiths with the word ‘eye/eyes’; 3 out of 45 hadiths with the word ‘light’; 2 out of 56 hadiths with the word ‘sight’; 2 out of 6 with the word ‘vision’ in their English translations can be related to visual function supported by scientifically proven facts.. In addition, hadiths with the word ‘see’ yielded the highest number. Nevertheless only 1 is visual function related.

Table 2 Frequency of hadiths of Sahih Al-Bukhari based on keywords that can and cannot be related to visual function

Keywords	Visual function	Non-visual function	Frequency
Eye/Eyes	49	113	162
Light	3	42	45
See	1	431	432
Sight	2	54	56
Vision	2	4	6
TOTAL	57	644	701

DISCUSSION

Some of the verses and hadiths that may be related to visual function share the same scientifically proven facts. If they are categorised according to the chosen keywords (eye/eyes, light, sight, see, vision), there will be redundancy of the scientifically proven facts. Thus, to avoid this, they are categorised under the same scientifically proven facts. Listed in the table 3 are some of the examples. However, not all of the findings are in the list.

Table 3 Quranic verses and hadiths with their scientifically proven facts

No.	Quranic verses & hadiths of Sahih Bukhari related to visual function	Scientifically proven facts from other reading materials
1.	<p>Eyes dilation</p> <ol style="list-style-type: none"> 1. Surah Ibrahim: 42 2. Surah Al-Anbiya': 97 	<p>The Quranic verses clearly mentions the "stare" which is interpreted as the pupils dilating and eyes widening in fear or shock. This happens when the sympathetic division plays its role during physical or emotional stress. Hormones are released by the adrenal medullae when sympathetic division is activated (Tortora & Derrickson, 2012). This sets the fight-or-flight response which will cause the effects of eyes dilation, increase in heart rate and blood pressure and other body responses (Tortora & Derrickson, 2012).</p>
2.	<p>'Kohl' for the eyes</p> <ol style="list-style-type: none"> 1. Book 6, Hadith no. 310 2. Book 63, Hadith no. 251 3. Book 63, Hadith no. 252 4. Book 63, Hadith no. 254 5. Book 63, Hadith no. 255 6. Book 71, Hadith no. 607 	<p>The hadiths are about the usage of kohl. During ancient years, kohl was used as cosmetics (Pasha & Nallusamy, 2016). 'Kohl' powder in the eyelid skin pores helps to kill germs. 'Kohl' is safe and will not cause lead poisoning (Bassal & Mahmoud, 2013).</p>
3.	<p>Lightning causes blindness</p> <ol style="list-style-type: none"> 1. Surah An-Nur: 43 	<p>The Quranic verse mentions that lightning almost cause blindness. Lightning injury is dangerous as it can cause death or several damages to the victim's body. This is possible because the lightning power is 10,000 to 200,000 amperes with voltage of 20 million to 1 billion volts (Cohen & Veal, 2011). A female was indirectly struck by lightning which caused her vision to reduce. She was diagnosed with uveitis, anisocoria, subcapsular cataract on both eyes, macula cyst on the right eye and macular hole on the left eye (Chakraborti, 2014).</p>
4.	<p>Binocular vision</p> <ol style="list-style-type: none"> 1. Surah Al-Balad: 8 2. Surah Al-Ahzab: 19 	<p>In Surah Al-Balad, Allah mentions about the perfect creation of two eyes. Simultaneous use of the two eyes yields a single mental perception which is known as binocular single vision that allows us to perceive depth and distance accurately such as to pour a jug of water into a cup.</p> <p>In addition, it is mentioned in the Surah Al-Ahzaab that our eyes revolve around, under the</p>

control six extraocular muscles which are superior rectus, inferior rectus, medial rectus, lateral rectus, superior oblique and inferior oblique muscles (Remington, 2012). The rotation of the eye is around three axes in which these axes intersect at the non-moving point located at the centre of the eye (Remington, 2012).

5. **Light separation**

1. Book 58, Hadith no. 149

Light has the property of dispersion. Lights of different colours have different wavelengths (Vandergriff, 2008). However, when they are mixed together, a white light can be formed (Vandergriff, 2008). A transparent prism is able to separate a white light into its component colours which are violet, blue, green, yellow, orange and red (Vandergriff, 2008). This dispersion of light is the reason for the different colours seen in a rainbow after raining in which the individual raindrops resemble a prism (Pedrotti, 2008).

6. **Chronology of organs developments**

1. Surah An-Nahl: 108
2. Surah Yunus: 31
3. Surah An-Nahl: 78
4. Surah Al-Ahqaf: 26
5. Surah Al-Insan: 2

In the 108th verses of Surah An-Nahl, the word 'ears' comes before the 'eyes'. While in other Quranic verses, the word 'hearing' is mentioned prior to 'sight'. These Quranic verses translations do not give transparent meaning. Thus, the writer suggests that these Quranic verses may be related to the fundamentals development of human organs according to sequence in which the eye begins to form after the inner ear has assumed its first form (Yahya, 2005; Rajabnejad, 2011).

7. **Sleep with lights off**

1. Book 58, Hadith no, 142
2. Book 60, Hadith no. 411

The hadiths mention about putting off light during sleep. Light affects our physical and mental whether visually or non-visually (Gomes & Preto, 2015).

Intrinsically photosensitive retinal ganglion cells (iprgc) are important in the circadian rhythm (Good, 2014). The presence of blue-coloured light stimulates these cells which inhibits one's sleep and increases alertness (Good, 2014). Exposure to blue light before bedtime is harmful as this causes sleep deprivation. On the other hand, retinal pigmented epithelium (RPE) cells that are exposed to short wavelength (blue) can increase the level of reactive oxygen species (ROS) in RPE. This can cause degenerative eye diseases such as age-related macular degeneration (AMD) (Gomes & Preto, 2015).

8. **Truffles for treating trachoma**

1. Book 60, Hadith no. 5
2. Book 60, Hadith no. 163
3. Book 71, Hadith no. 609

The hadiths refer to the usage of truffles for treating trachoma. Different groups of desert truffles showed high antioxidant activities. As an example, the white desert truffle, *T. nivea* which has ascorbic acid, carotenoids, esterified phenolics, free and nonflavonoid phenolics and flavonoids (Enshasy, Elsayed, Aziz, & Wadaan, 2013).

Terfezia claveryi, which is one of the desert truffles species showed good antimicrobial activities against trachoma which is caused by the *Chlamydia trachomatis* (Enshasy, Elsayed, Aziz, & Wadaan, 2013; Potroz & Cho, 2015). Another research also proved that truffles stunted the growth of *Staphylococcus aureus* and *Pseudomonas aeruginosa* (Enshasy, Elsayed, Aziz, & Wadaan, 2013).

CONCLUSION

It can be concluded that 399 Quranic verses and 701 hadiths of Sahih Al-Bukhari were found in the 'Search Truth' website using the selected keywords (eye/eyes, light, sight, see and vision). However, only 28 out of 399 Quranic verses and 57 out of 701 hadiths can be related to visual function.

All the Quranic verses and hadiths that can be related to visual function are elaborated further and supported by scientifically proven facts in this compilation. Some of them may be related to the anatomy, physiology and pathophysiology of the eyes, treatment of certain eye diseases and properties of light.

This compilation may able to invite readers to reflect upon the wonders of creations and phenomena mentioned in the Quran and hadiths that lead to the discovery of our modern science. On the other hand, the scientifically proven facts compiled in this compilation may also help readers to get a better understanding of the Quranic verses and hadiths. However, Quran and hadiths still remain as the book and guidance of Islam and not a book of science.

Research limitations

This study only involves one website to search for the Quranic verses and hadiths which might not be sufficient to validate the findings. The Quranic verses and hadiths of Sahih Bukhari found in the 'Search Truth' website are limited because of the usage of certain keywords which do not represent all the verses and hadiths. Only the verses and hadiths that have the keywords in their English translations are listed by the website. In addition, some of the translations are not straightforward and may not be related directly to visual function. Thus, they are given an insight based on the writer's interpretation in relation to visual function, supported by scientifically proven facts. This somehow may raise a disagreement among readers.

Recommendations

For future study, it is suggested to use more than one websites in searching for the Quranic verses and hadiths to further validate the findings. However, it is thought that it is much better to read each verses one by one with their translations instead of using keywords in websites. With this, all the verses and hadiths will not be overlooked during the searching procedure.

On the other hand, it is highly suggested that more literature review in the works of previous scholars of tafsir should be done as they might have better a understanding about revelations. As an example mentioned about the chronology of organs development based on the sequences of organs mentioned in the Quranic verses.

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