

A NITBIT CITATION OF THE CONTRIBUTIONS OF SHEIKH ABDULLAHI FODIYO IN THE PUBLIC HEALTH OF THE 19TH CENTURY WEST AFRICA AND BEYOND: A CASE STUDY OF "KITAABU NIYYATI FIL' A'AMALIDDUNYAWIYYATI WAL'DDINIYYATI" (A BOOK OF INTENTIONS IN THE ISSUES OF WORLD AND RELIGION)

Fatima Abubakar Gidadawa¹, Tambari Abbas Bashar², Yusuf Sarkingobir³

^{1,3}Shehu Shagari University of Education Sokoto, Nigeria

²Usmanu Danfodiyo University Sokoto, Nigeria

superoxidedismutase594@gmail.com

Abstract

Nowadays, invariably health improvement, health education, health benefits are attached to religiosity as confirmed by inexhaustible literatures. This paper reviewed some of the contributions of Sheikh Abdullahi Fodiyo in the public health of 19th century West African Sokoto Caliphate and afterwards in his famous book called "KITAABU NIYYATI FIL' A'AMALIDDUNYAWIYYATI WAL'DDINIYYATI" (A book of intentions in the issues of world and religion). In the examined book, he stressed the importance of cleanliness, ablution, prayer, work/ employment/ wealth, agriculture, and meat production in the development and sustainability of society, let alone the Muslim ummah. He warned against unemployment, lack of personal hygiene, poor production and handling of food/ meat among others. Certainly, the book exhorts benefits to public health especially in Islamic societies. There is need to use religion as health education, and health promotion tool especially in religious societies for better health and interventions.

Keywords: Exercise, Prayer, Public Health, Religiosity, Health, Sokoto Caliphate, Fodiyo

INTRODUCTION

Islam is the world's fastest growing religion and second largest on earth. People adhering to Islamic religion are majority in 48 countries and serve as minorities in 9 other countries. The adherents to Islam most adhere to five pillars viz, *Shahadah* (profession of faith) that there is no God but Allah, the Salah (five daily prayers), Zakat, fasting, and Hajj (Al-Krenawi and Graham, 2000). Prayer is a principle that is carried out at least five times daily (Al-Krenawi and Graham, 2000). Forsooth, multidisciplinary and several studies reveals a range of health benefits through participation in religion. Religiosity has been associated with health promoting behaviours, such as improved diet, exercise, shunning drinking etc (Salgado, 2014; Pfeiffer *et al.*, 2018). A number of studies have been published showing various aspects of health promotion in religion.

However, the 19th century Sokoto Caliphate came into being due to the jihad movement orchestrated by Usman Danfodiyo and his allies haply in 1804-1808 A.D. The scholars of this movement made great impact in all aspects of the region, by discussing issues in politics, economy, education, medicine, female's right, community health, and hygiene to mentioned but a few, through their writings and teachings of Islam (Gwandu, 2016, Bashar, 2019). Allah Almighty said" Read in the name of your Lord Who created, Created man out of clot of congealed blood, who Taught by the pen, taught man that which he knows not" Quran:96:1-5.

Sheikh Abdullahi Fodiyo (ca. 1766–1828), Amir of Gwandu (1819–1828), was a scholar and brother of Usman dan Fodio (1754–1817). Usman, being more of a scholar than politician, delegated the practical regency of the western part of his empire to Abdullahi, who later became the Emir of Gwandu. Sheikh Abdullahi Fodiyo was among the proponent scholars of the 19th century Sokoto movement. He and his colleagues wrote in medical sciences in order to meet the needs and request of the people in the caliphate or other places of the world. Some of his works in health or medicine include: " *Masalih al-insan al-muta' alliq.....*" Translated as " A guidance and teaching on faith and body"; *Diyaul'ummah Fi adilati al-imma* (Light and guidance on the rulers and kings; and many more.

METHODS

An adapted review known as scholarly review with a purpose to inform the public, fellow scholars, about the quality, purposes and elucidate it fits to the current public health usage

(Snyder, 2019; Alex, 2021). Additionally, a review and correlational analysis are formed through the utilization of other related literatures; to describe insights, and possible research directions of Sheikh Abdullahi Fodiyo's work in improving public health of the Muslim ummah in Sokoto Caliphate and the upcoming generations after 19th century. Knowledge production is accelerating at a tremendous speed while at the same time remaining fragmented and interdisciplinary. This is why the literature review as a research method is more relevant than ever. An effective and well-conducted review as a research method creates a firm foundation for advancing knowledge and facilitating theory development. By integrating findings and perspectives from many empirical findings, a literature review can address research questions with a power that no single study has. It can also help to provide an overview of areas in which the research is disparate and interdisciplinary. In addition, a literature review is an excellent way of synthesizing research findings to show evidence on a meta-level and to uncover areas in which more research is needed, which is a critical component of creating theoretical frameworks and building conceptual models (Palmatier *et al.*, 2018; Snyder, 2019).

RESULTS AND DISCUSSION

Contributions in cleanliness and personal hygiene

The author stressed the needs for cleaning the private parts of a Muslim through bathing or pureness whenever he wake up or wishing to go to Salah. This action happened usually every morning as the pioneer activity in day struggles. Sheikh Abdullahi Fodiyo said " *When he wore his garment, there is need for absolute cleanliness and it is mandatory, because Prophet Muhammad (peace be upon him) said: No one among you shall pray while he battle with stool and urine/ the two filths.*"

Ablution cleanliness

When an individual finished cleaning his excreta, he was enjoined by the book to perform an ablution, a form of cleaning of eyes, nose, head, legs, hands, face, and mouth. Water is essential for life. Biological system takes in water, excretes water and need water for external cleanliness. Allah Almighty said " *He it is who sends down water from the sky. With it, We bring forth plants of every kind* " Quran:6:99. This water is essential for ablution and other forms of cleanliness for Muslim. Ablution protects skin of humans which is very vital in hemoestasis. Skin plays a role in protection and safety of the internal organs and other functions regarding wellness, and proper functioning, excretion, temperature regulation,

insulation, storage of fats etc. Skin transmits stimulus such as touch, pain, heat etc to the central nervous system for proper intervention; this shows the need for conditions and proper care of the skin, therefore Islam make cleanliness as a frequent daily activity to all it's citizens (WHO, 2000; Irmak, 2014; Adriyin *et al.*, 2021). God Almighty says " *God loves those who turn to Him in repentance, and He loves those who keep themselves clean*" Quran: 2: 222. In properly performed ablution there are several benefits to health including:

- Wudu help to reduce germs from the body hence promotes health.
- It also helps to relax nervous system
- Reduce stress and tension/anxiety
- The daily washing keeps germs away from the body
- Gargling reduces bad breath
- Nose cleansing reduces dust, allergens, etc and decongests the nasal cavity
- Face washing reduces pimples, acne, wrinkles
- Ear cleaning removes wax, germs, and dust,
- Cleaning help in removing chemicals that affect the skin (including cancerous) (Bajirova, 2018; Adriyani *et al.*, 2021).
- Miswak (brushing of teeth) is enjoined in Wudu or before Salah. It is good in the sense that it enhances memory, eliminates slime, improve aroma of mouth, strengthen the gums, clears voice, trigger appetite, improve eye-sight, improve intelligence, block tooth decay, and decongest mouth (Irmak, 2014; Bajirova, 2018; Sabra, 2018).

Prayer

After ablution, the next event to happened is prayer (Salah). An individual is exhorted to perform two raka'at prayer or relations which is a moderate intensity exercise with recognized health benefits consisting of external and internal practice, a set of physical exercises involving reading Quran and other forms of supplications. Sheikh Abdullahi Fodiyo reiterated that among the compulsory schedules of every Muslim is prayer. After finishing the supplementary prayer at home, the believer walks (as the best option because every step called for reward) to a distance to meet the mosque to perform the daily prayers

(five compulsory prayers are performed at mosque at different time intervals of the day for instance, morning, mid-afternoon, evening prayers).

There is no doubt about the importance of exercise to human body, likewise the prayer which is a form of physical activity. Exercise is a powerful tool which is a form of physical activity. Exercise is a powerful tool in the fight to prevent and treat numerous chronic diseases (Rurgsegger & Booth, 2018). Worsening of 40 conditions causes by lack of physical activity with growth, maturation, and aging throughout life length. These conditions are: premature death, aerobic fitness, balance, arterial dyslipidemia, cognitive function, colon cancer, congestive heart failure, constipation, depression, anxiety, endometrial cancer, endothelial dysfunction, gestational diabetes, hemostasis, hypertension, gall bladder diseases, insulin resistance, metabolic syndrome, fatty liver diseases, immunity, osteoporosis, osteoarthritis, preeclampsia, prediabetes, type 2 diabetes, rheumatoid arthritis, stroke, peripheral artery disease, polycystic ovary syndrome (Reiner *et al.*, 2013).

Like the spiritual benefits of salah, there are wide range of recognised physical benefits of Salah. Each position requires movement of parts of the body, which in turn encourage health and wellbeing and every Muslim must perform Salah (Mahboob, 2018). Salat increase basal metabolic rate, reduced body fat, and give healthy body composition (Doufesh *et al.*, 2013). The process of Salah is a low to moderate intensity form of regular exercise spanning 10-20 minutes up to five times daily (excluding nawafil). This raises the heartbeat, increasing blood flow around the body and give strength and stamina to the heart muscles. The walking from house or place of work to the mosque for salah earn a weekly 30 minutes' requirement of exercise per day, at least five times per week (WHO, 2000; Umar *et al.*, 2008; Umar *et al.*, 2010; Doufesh *et al.*, 2013; Umar *et al.*, 2016; Kamran, 2018; Dikko *et al.*, 2020). Prayer also help to bring about relaxation, reducing the stress level (Routledge, 2014). Some of the identified benefits of various positions of Salah are as follows:

- Standing (Takbir)
- Elbows bent, shoulder joint gently stretched. The shoulder blades and lower back are brought into good neutral position with core muscles active. These muscles help maintain good posture.
- Standing (Qiyam)

- Lowering of the hands to the waist, shoulders relaxed, encouraging calm breathing. Equal weight through both feet, with core muscles active.
- Boeing (Rukuu)
- Muscles of the back and back of thighs and calves are fully stretched when the waist bent. Control of bending the lower and lowed muscles, both in forward positions and returning to standing positions (Nazish and Kalra, 2018)
- Sitting
- Muscles at the front of the ankle and foot become stretched, toes become extended, knee and hip become flexed. Lower back in good position will help in strenthening core muscles (Nazish and Kalra, 2018).
- Halting (Taslim)
- Turning head to each sides improve the range of motion of the neck, stretching muscles with gentle repeated motions (Bradford Teaching Hospital NHS Foundation Trust, 2017).

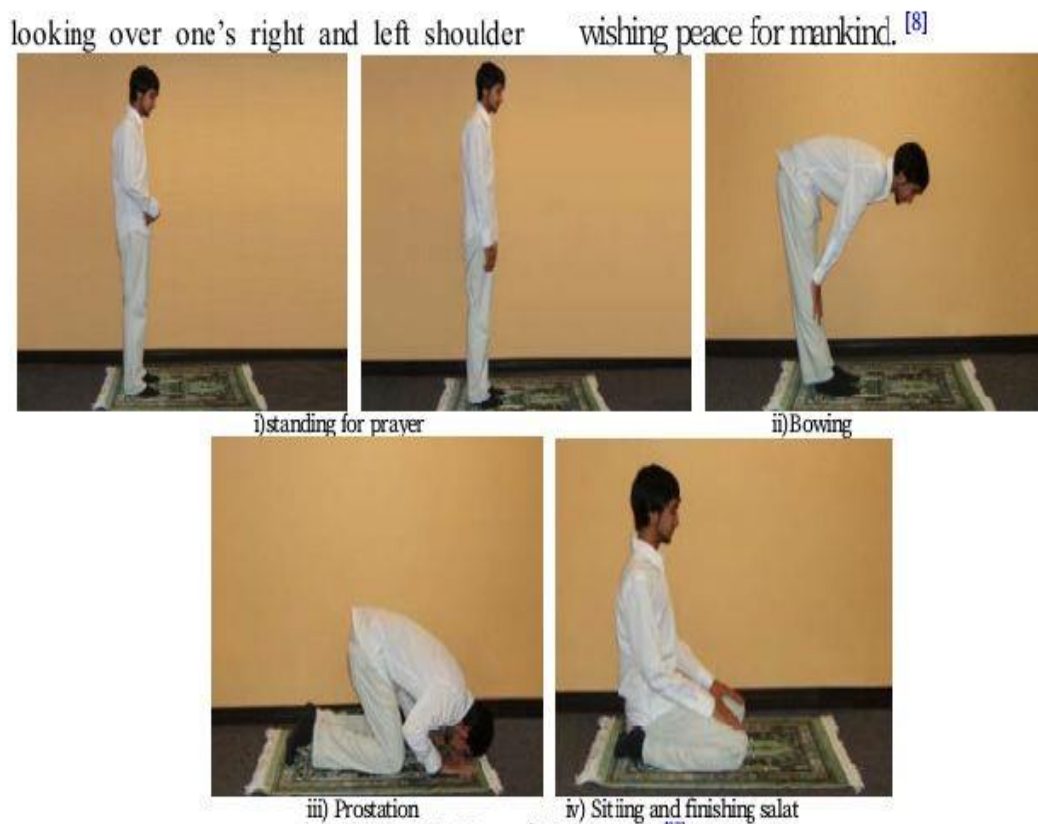


Figure 1: Positions in Salah, Source: Nazish and Kalra, 2018

Benefits of Qura'nic music on mental health improvement

Religion is inevitable in so many people. It involved the spiritual facet which is responsible in mental health. Therefore, there is need to broached about the connection and interrelationships of Muslims population and their religion, prayer, and Quranic music. For example, a Pakistani study done out at the University of Egbak Lahoori revealed that 78% of the treated group with Quran was effective. In the same vein, Boalhry and Ferrand (1995), depicted that Quran prevents mental pressures. Hassanpour and Loya (1997), indicates that, students who recites Quran regularly have less depression, anxiety, and stress than the comparison group. Galedar and Saki (2001), shows that people who listen to Quran have few degrees of stress than the contrasting group. Drabinia et al., (2017), has revealed in an interventional study that, there exists positive effect of participants. Thus, hearing the Quranic music improves the mental health of people.

The use of sound in the field of medicine is well-known. Parable, it can be use in detecting, locating, characterizing and monitoring of abnormalities in pregnancy. Human cells have responded well to sounds. That is why in recent years' sound have been widely utilized in therapy and healing. Sound have been used in management of pain, depression, brain injury, stroke, psychology, anxiety, fear etc. The Quran recitation might have direct healing effect. This study suggested that listening to Quran has better impact on brain wave balancing compared to classic music. (Tumiran *et al.*, 2013), shows that Quranic healing yield better in contrast to the classical music healing. Therein, human brain produces higher alpha waves when listening to the holy Quran and stabilize psychological behaviour. Akhlaqi (2014), posits that Quranic recitation reduces pain after surgery. The mechanism of how Quranic music performed its positive effects was suggested by Hashim *et al.*, (2017), vibrations produced during recitation by the reciters. The Quran has a powerful fluent style of expression and captivating sound that impacts audience with inner harmony and rhythm. It provides a deep spiritual energy to the reciter and listener even if they cannot percept the meanings (Haque and Ghosh, 2013; Hashim *et al.*, 2017; Saquib *et al.*, 2017). In the overall sense, the spiritual and religious inclination, that is been a devine book of is the main reason behind the effectiveness of Quranic recitation healing properties (Yusuff *et al.*, 2019). Listening to Quran influences vital signs of unconscious patient admitted to the Intensive Care Unit as concluded by Mansouri *et al.*, (2017).

The terminal/ subsections: Commerce, industry, trade, and manufacturing

In this section Sheikh Abdullahi Fodiyo outlined the obligations on the Islamic society to have some of its members to indulge in commerce, industry, trade, and manufacturing. This is a compulsory command that all Muslim societies should have people who engaged in trade or relations to boost the economy, failure to have that quota descend. Therewith, every all and sundry shall engage in doing something to support his life and contribute to the overall development of Islamic society, no member shall not be gainfully employed. He stressed the need for creating employment, by equating it with prayers and other acts of worships provided the intentions are purely for God Almighty. There is no variability in the emphasis of work/ employment in the life of humans. People who work or are employed have more socioeconomic status, more health, more capacity to handle healthcare expenses, more education, and other benefits to health including food security for individuals and household. Therefore, this book has encouraged the West African people to seek for wealth to earn living and consequently promote their health.

The author said "*Agriculture, is the most emphatic, and most rewarding in side of God because of its countless benefits to animals, and other smaller animals.*" In this section several traditions were quoted to explore the need for agriculture to individual and communities of Islam. Nowadays, to achieve sustainable Development Goal of zero hunger; multisectoral strategies are eminent (Duncan et al., 2022).

"....and he intend to protect his food... the forefathers never rescinded from preserving their food, the one who get into their stomach, the entire protection. It was with disciple Umar (may Almighty Allah be please with him) a bag of his food, preserved with metallic cover.... this is their condition in trying to preserve what they eat". Sheikh Abdullahi went further to castigate those who play with food (source of food) by saying "We cannot surrender the issue of our food into the hands of women, slaves, unbelievers; *we eat whatever they provide to us without analysis whether it is lawful or unlawful, this is foolishness.*" He restated the mandatory call for agriculture, and identified issues which have to be managed with caveat. Another issue of significance to public health is the abattoir dealings. Sheikh Abdullahi Fodiyo said "the slaughtering is a trust, no one shall handle it except the trusted" The author divulged all the issues surrounding provision of pure slaughtered animal for public consumption such as.....Once said " *It is ought on a patriotic Muslim to not cook purchased meat without proper washing because it mostly come with impurities in this century....And the gastrointestinal tract must be purified (by washing)...It is compulsory upon meat provider to avoid adulteration because it is a sheer*

betrayal, and incites/ transmits diseases." He cited several forms of adulterations which had to be avoided for good quality of meat food. Meat is a source of proteins, fats, vitamins, and minerals which are essential for body growth and development (Zulkurnaini *et al.*, 2012).

CONCLUSION

Islamic literatures of 19th century Sokoto Caliphate are versatile and contain diverse aspects of knowledge. Therewith, writings of Sheikh Abdullahi are beneficial on public health and other sciences. The reviewed book is tremendous in health education and health promotion among religious people. Prayer/Salah is a form of motion in form of worship, characterized with many physical and physiological benefits. The body goes through a unique exercise routinely during the Salah; therefore these postures help to maintain fitness leading to improved flexibility, muscle strength and endurance. Public health awareness is important in order to gain maximum physical health benefit associated with Prayer postures among the Muslim population.

REFERENCES

- Adriyini, Permatasan, T.A.E., Purnamawati, D., Putri, A., and Mandudi, A(2021). Applying clean and health behaviors by Wudhu for health benefits. *Indonesian Journal of Islam and Public Health*,1(1):1-7.
- Akhlaqi, E. (2014). Scientific remarks of the Quran to health and medical teachings. *Journal of Applied Science and Agriculture*, 9, 960-964. doi: <http://www.aensiweb.com/old/jasa/rjfh/2014/960964.pdf>.
- Alex, Z.B.(2021). How to write an academic book review. San Jose State University Writing Center. www.sjsu.edu/writingcenter.
- Al-Krenawi, A. and Graham, J.R.(2000). Islamic theology and prayer. *International Social Work*,43(3):289-304.
- Bajirova, M. (2018). Hygiene and health in Quran and Science. *EC Gynecology*,SPI.1:44-55.
- Bashar, T.A., and Malami, H.U. (2019). Contribution of Sir Abubakar Saddiq 111 in the economic development of Sokoto Province. *Saudi Journal of Humanities and Social Sciences*, 4(8):567-572.
- Bradford Teaching Hospitals NHS Foundation Trust (2017). Take care of your health: Physiotherapy and prayer(Salah). Information leaflet for Muslim patients.
- Boalhry, R. J. and Ferrand, A. (1995). Koran and the ways to deal with mental stress. Tehran: Proceedings of the third national Symposium on Stress,p.70.

- Darabinia, M., Gorji, H.A., and Afzali, A.M. (2017). The effect of the Quran recitation on mental health of the Iranian Medical staff. *Journal of Nursing Education and Practice*, 4(5):1-16.
- Dikko, M., Bello, S.O., Chika, A. Mungadi, I.A., Sarkingobir, Y., and Umar, A.I. (2020). Effect of Tamsulosin Use on Plasma Insulin Status in Benign Prostatic Hyperplasia Patients in Sokoto, Nigeria. *Journal of Applied Science and Environmental Management*, 24 (4) 543- 548 .
- Doufesh, H., Ibrahim, F., Isamail, A.N., and Ahman, W.A., (2013). Assessment of heart rates and blood pressure in different Salat positions. *Journal of Physiotherapy Science*, 25:211-14.
- Duncan, E., Ashton, L., and Robertson, T. (2022). Connecting the food and Agriculture sector to nutrition interventions for improved health outcomes. *Food Security*, 14:657-675.
- Ernawati, R., Feriyani, P., and Tianingrum N.A.(2020). The effectiveness of Quran recitation therapy and aroma therapy on cancer patients stress level in. Abdul Wahab Sjahrarie Hospital Samarinda, Indonesia. *Malaysian Journal of Medicine and Health Sciences* 16(3):47-51.
- Galedar N, and Saki M. (2001). Avaye effect on reducing anxiety before theKoran students test. The First International Conference on Religion and Mental Health; Tehran. p. 194-230.
- Gwandu, H.A. (2016). West African Islamic civilization: Sokoto Caliphate and Science education. *International Journal of Educational and Pedagogical Sciences*, 10(9):325-3255.
- Imamoglu, O. (2016). Benefits of prayer as a physical activity. *International Journal of Science Culture and Sport*, 4(1):306-318.
- Haque, A. and Ghosh, S.S.(2013). Namaz is a very good exercise for wholesome development. *GRA Global Research Analysis*, 2(11):220-221.
- Hashim, R , Sha'aban, M., and Zainuddin, Z.I (2017). Healing with sound: Exploring applications of Quranic cell culture. *Revelation and Science*, 7(2):32-41.
- Hassanpour, F., and Joseph Loya, M. (1997). Quran recitation effect on reducing anxiety and depression. Tehran: Proceedings of the Conference on Religion and Mental Health.
- Imamoglu, O. (2016). Benefits of prayer as a physical activity. *International Journal of Science Culture and Sport*, 4(1):306-318.
- Irmak, K.(2014). Medical aspects of ablution and prayer. *Journal of Experimental Integrated Medicine*, 4(2):147-149.
- Kamran, G. (2018). Physical benefits of (Salah) prayers strengthening the faith and fitness. *Journal of Novel Physiotherapy and Rehabilitation*, 2: 043-053.
- Mahbosh,U.R.(2018). The effectiveness of prayer in maintenance of physical health in context of " stand, pray, there is shifa /healing in prayers ". *Research and Investigations in Sports Medicine*, 3(5):1-3.
- Malami, A. and Liman, A.(2016). Role of Fodio family in developing Arabic syntax and morphology studies on West Africa. *Scholars of Arts, Humanities, and Social Sciences*, 4(10):1223-1225.

- Meirison, Insani, F., and Andini, Z.(2021). Epistemology of basic concepts of spiritual and physical Taharah: Analysis of the benefits of ablution spiritually and physically. *Al-Insyirob: Jurnal Studi Keislaman*, 7(1):26-42.
- Mostafa, S., and Sabra, M. (2018). Ablution (wudu) health benefits (HBs) thorough comparison nase-cavity (NC) bacterial-content (BC) with gold-standard (GS) at high-altitude (HA) area, Taif, KSA. *Journal of Applied Biotechnology and Bioengineering*,5(6):334-336.
- Nazish, N. and Kalra, N.(2018). Muslim prayer: A new form of physical activity; A narrative review. *International Journal of Health and Research*,8(7):337-344.
- Tumiran, M. A., Mohamad, S. P., Saat, R. M., Yusoff, M. Y. Z. M., Rahman, N. N. A., and Adli, D. S. H. (2013). Addressing sleep disorder of autistic children with Qur'anic sound therapy. *Health*,5(08), 73-79.
- Palmatier, R.W., Houston, M.B. and Hullard, J.(2018). Review articles: purposes, process, and structure. *Journal of the Academic Marketing Science*,46:1-5.
- Pfeiffer, J., Li, H., Martez, M., and Gillespie, T. (2018). The role of religious behavior in health self-management: A community-based participatory research studies. *Religions*,9(357):1-15.
- Reiner, M., Niermann, C., and Wall, A.(2013). Long-term health benefits of physical activity- a systematic review of longitudinal studies. *BMC Public Health*,813:1-15.
- Routledge (2014). 5 scientifically supported benefits of prayer: what science can tell us about the personal and social value of prayer. www.psychology.today.com/blog/more-mortal/20/406/5-scientifically-supported-benefits-prayer.
- Rurgsegger, G.N., and Booth, F.W. (2018). Health benefits of exercise. *Cold Spring Harbor Perspectives in Medicine*,8:1-15.
- Sabra, M.M. (2018). Ablution (Wudu) health benefits (HBs) through nasal-cavity (NC) bacterial count (BC) with gold-standard (GS) at high altitude area, Taif, KSA. *Journal of Applied Biotechnology and bioengineering*,5(6):334-336.
- Salgado, A. (2014). Review of empirical studies on impact of religion, religiosity and spirituality as protective factors. *Propositos Y Representaciones*,2(1):121-159.
- Sheriff, V.F.(2016). Transformation of Sokoto Caliphate by Sheikh Usman Danfodiyo: A social thought perspective. *International Journal of Humanities and Social Science Invention*, 5(8):41-47.
- Saquib, N., Saquib, J., Alhadlag, A. etal (2017). Health benefits of Quran memorization for older men. *SAGE Open Medicines*, 5:1-7.
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*,104:333-339.
- Umar., A. I, Said, Y., and Lawal. M. (2008). Comparative study of the nutrient composition of millet and Maize-Based complimentary weaning foods. *Nigerian Journal of Basic and Applied Science*,16 (2): 282 – 287.
- Umar.,A.I., Said., Y., M, Lawal., and S, A, Maigandi.(2010) Biochemical and Haematological indices of weanly albino rats fed millet and maize-Based complimentary weaning foods. *Nigerian Journal of Basic and Applied Science*, 18 (1): 44 – 49.

- Umar A, I., Garba,I., Iduh M, U., Umar ,A,I., and Owoicho,O. (2016). Invitro Antibacterial activity of aqueous and methanol extracts of Garcinia kola Seeds *Gashua journal of science and humanity*, 1 (2): 1 – 8.
- WHO (2000). The right path to health: Health Education through religion. Water and Sanitation in Islam. WHO Regional Office for the Eastern Mediterranean Alexandria, Egypt.
- Yusuff, W.N.S.B.W.M., Mokhtar, W.K.A.W., Amiruddin, E., Rashid, R.A., Idris, M.F.A.W. and Sallah, A.Z.(2019). The healer of all diseases in Quran: A review. *International Journal of Academic Research in Business and Social Sciences*, 9(11):565-571.
- Zainudin, Z.N., Mahayyudin, A.A., Azahari, R., Yusop, Y.M., and Othman W.N.W.(2019). Complacency of Solah and its ramification on mental health. *International Journal of Academic Research in Business and Social Sciences*, 9(9):833-845.
- Zainuddin, Z. I., and Halimatussa'diah, A. R. (2013). Examining Islamic Perspectives in Medical Imaging Literature: A Study Involving Scopus Indexed Journals. *Revelation and Science*, 3(2):1-10.
- Zulkurnaini, N. A., Kadir, R. S. S. A., Murat, Z. H., and Isa, R. M. (2012, February). The comparison between listening to al-Quran and listening to classical music on the brainwave signal for the alpha band. Paper presented at the Third International Conference on Intelligent Systems, Modelling and Simulation (ISMS), Malaysia: Kota Kinabalu.
- Sarkingobir, Y., Tambari, U., Imam, A.I., Abubakar, M., Sahabi, M., and Aliyu, S. (2023). Solid waste disposal and extent of selected heavy metals in Fadama area of Sokoto city, Nigeria. *Journal of Bioresources and Environmental Sciences*, 2(3): 39-49. doi:10.14710/jbes.2022.17343.