OCCURRENCE OF MEDICINAL PLANTS IN THE HOLY QUR'AN AND THEIR THERAPEUTIC USES

BY

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Abstract

In view of the adverse side effects of orthodox drugs, there is a <u>global resurgence</u> to the use of herbs (medicinal plants) for treatment of various diseases. This study identified plants mentioned in the holy Qur'an for different economic and therapeutic uses. Some of the mentioned plants include lote tree, fig, date palm, corn etc. A review of their pharmacological constituents revealed the fact that these plants have therapeutic uses. This study provides information on their tropical species synonyms that are readily available in Nigeria with a view to creating awareness on the plausible therapeutic uses for the management of metabolic and age related diseases such as diabetes, hypertension, atherosclerosis, augine, cancer. Irrespective of religion and belief, plants are naturally endowed with therapeutic effects and economic values and are readily available.

KEYWORDS: Global resurgence, Medicinal plants, Therapeutic uses,

Introduction

An important challenge of development and good governance is health, albeit, good health. Over half a century ago, the World Health Organization (WHO) formalized a definition for health as "a complete state of physical, mental and social well-being and not merely the absence of disease or infirmity". This definition has been subjected to a lot of criticism and calls made to the world health body to change this definition (Ustun &

Jakob 2015). It is believed that it is highly unlikely that anyone would be considered healthy by this definition within any period of time. It is therefore seen as unrealistic.

The word 'health' was derived from the old English word 'hoelth' which meant a state of being sound. This was accepted to refer to soundness of the body (Dolfman 1973).

In ancient times before the time of Hippocrates, health was considered a divine gift. Hippocrates encouraged environmental sanitation, personal hygiene and balanced diets as focus for maintaining good health. This is epitomized by his belief that 'let food be thy medicine and let thy medicine be food.' (Ustun & Jakob 2005).

The belief that health is a divine gift is still being held by many people in the present times. (Ustin & Jakob 2005). This is in line with the view of the Holy Prophet Mohammed (PBUH) which many practicing Muslims follow about health, sickness and death. This belief is inferred from the Holy Qur'an which states. "The Lord of the worlds; it is He who heals me when I am sick, and He who would cause me to die and live again". (Q 26 vs. 80).

Resurgence to the use of Herbs

The attainment and maintenance of good health is of paramount importance to people worldwide. In recent times, there has been a resurgence to the use of herbs in treating illnesses and maintaining good health. (Sofowora 1982, Abdulrahman 1992, UNESCO 1996, Pan et al 2010; Humber 2002; Ekor 2014). According to WHO (2004) use of herbal medicines and phytonutrients o nutraceuticals continues to expand rapidly across

the world with many people now resorting to these products for treatment of various health challenges in different national healthcare settings. Various reasons adduced to this phenomenon are;

- i. Various claims on the efficacy or effectiveness of plant medicines.
- ii. Preference of consumers for natural therapies and a greater interest in alternative medicines.
- iii. Belief that herbal products are superior to manufactured products.
- iv. Dissatisfaction with the results from orthodox pharmaceuticals and the belief that herbal medicines might be effective in the treatment of certain diseases where conventional therapies and medicines have proven to be ineffective or inadequate.
- v. High cost and side effects of most modern drugs
- vi. Improvements in the quality, efficacy and safety of herbal medicines with the development of science and technology.
- vii. Patients' belief that their physicians have not properly identified the problem and the resort to herbal remedies (Bandaranayake 2006).

In agreement with the above view, Pan et al (2010) reported increased interest in and use of herbs by people to; side effects of chemical drugs, lack of curative modern therapies for several chronic diseases as well as microbial resistance.

From reports, it is estimated that up to four billion people (representing 80% of the world's population) living in the developing world (of which Nigeria is part) rely on

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herbal medicinal products as a primary source of healthcare and traditional medicinal practice which involves the use of herbs is viewed as an integral part of the culture in these communities (Mukherjee, 2002; Bodeker et al 2005; Bandaranayake 2006). The committee on the use of complementary and alternative medicine USA and others reported that the use of herbal remedies has also been widely embraced in many developed counties with complementary and alternative medicines (CAMs) now becoming mainstream in the UK and the rest of Europe, as well as in North America and Australia (American public Board on Health promotions and Disease Prevention, Institute of Medicine 2005; Calapai, 2008; Braun et al 2010; Anquez-Traxler 2011).

Medicinal Plants

The use of plants as medicines predates written human history. Any plant with the properties to prevent, lessen symptoms from or cure illness is a medicinal plant (Munks 2015). A plant with health promoting characteristics, that offers relief from symptomatic problems or with curative properties. Plant life international (2013) states that plants are used in medicine to maintain and augment health – physically, mentally and spiritually - as well as the treat specific conditions and ailments. Medicinal herbs are plants or parts of plant used for therapeutic or medical benefit (Nahata 2013). Medicinal plant can be wild or cultivated (Tamboli 2013).

Medicinal plants have been identified and used throughout human history. Plants have the ability to synthesize a wide variety of chemical compounds that are used to perform important biological functions. At least 12,000 of such compounds have been isolated so far. (Lai & Roy 2004; Tapsell, Hemphill, Cobiac 2006). In continuation, they stated that chemical compounds in plants mediate their effect on the human body through processes identical to those already well understood for the chemical compounds in conventional drugs. They believe that herbal medicines do not differ greatly from conventional drugs in terms of how they work. They are thus taken to be as effective as conventional (orthodox) medicines without the side effects of orthodox medicines. Roughly 50,000 species of higher plants (about 1 in 6 of all species) have been used medicinally. Typically, pharmaceutical drugs are made from or modelled after compounds found in medicinal plants.

Medicinal plants such as herbs like peppermint, basil, oregano, thyme and rosemary have essential oils in their tissues or seeds that prevent bacteria, moulds or other microbes from growing. Other compounds in medicinal plants, like carotenoids, found in carrots and primrose have been suggested to prolong life and lessen the effects of chronic illness. The bark of Willow trees contain large amounts of salicylic acid which is the active metabolite of aspirin. Willow bark has been used for long as an effective pain reliever and fever reducer (Lichterman 2004).

Herbal medicines are often viewed as a balanced and moderate approach to healing and individuals use them as home remedies and over- the- counter drugs. (Roberts & Tyler, 1997; Blumenthal et al 1998; WHO, 2002a; Kong et al; 2003; Pal and Shukla, 2003; WHO, 2005a; Bandaranayake, 2006).

Due to the influence of religion and greater level of spiritual consciousness, many tend to be increasingly disposed to accepting therapeutic value of a treatment based on faith or intuition rather than scientific reasoning (Astin, 1998; Zeil 1999).

Plants in the Holy Qur'an

As an all-encompassing book, plants are not devoid of mention in the Holy Quran.

Table 1: Occurrence of plants in the Holy Qur'an

S/N	Plants as mentioned	SurahS & verses where mentioned	Use as stated in
	in the Holy Qur'an		the Holy Qur'an
1.	Corn	a. Q ₂ : Baqara: the Heifer Vs. 261	Food
		b. Q13: Ra'd: Thunder Vs. 4	Food
		c. Q16: Nahl: The Bee Vs.11	Food
		d. Q18: Kahf: The Cave Vs. 32	Food
		e. Q55:Rahman:God,Most Gracious Vs. 12	Fodder

2.	Date Palms/Palm	a. Q ₂ ; Baqara: the Heifer Vs. 266	Food
	trees	b. Q13: Ra'd: Thunder Vs. 4	Food
		c. Q18: Kahf: The Cave Vs. 32	Food
		d. Q19; Maryam: Mary Vs. 25	Food
		e. Q20; Ta-Ha Vs. 71	Crucification
		f. Q23; Mu-minun: The Believers vs19	Food
		g. Q36: Ya Sin vs. 34	food
		h. Q55; Rahman: God most Gracious vs.11	Container
		i. Q59; Hashir: The Gathering Vs.5	food
3.	Vines	a. Q ₂ : Baqara: the Heifer Vs. 266	Food
		b. Q13: Ra'd: Thunder Vs. 4	Food
		c. Q16: Nahl: The Bee Vs.67	Drink & food
		d. Q23; Mu-minun: The Believers vs19	Fruits
		e. Q36: Ya Sin vs. 34	Food
4.	Dates	a. Q6; An'am: The Cattle Vs. 141	Food
		b. Q19; Maryam: Mary Vs. 25	Food
		c. Q55; Rahman: God, Most Gracious Vs.	Food
		68	
5.	Olives	a. Q6; An'am: The Cattle Vs. 141	Food
		b. Q16: Nahl: The Bee Vs.11	Food
		c. Q24; Nur: The Light Vs. 35	Oil/illuminant

		d. Q95; Tin: The Fig vs.1	Sacred symbol
6. Pomegranates		a. Q6; An'am: The Cattle Vs. 141	Food
		b. Q55; Rahman: God, Most Gracious Vs.	Food
		68	
7.	Goodly Tree	a. Q14; Ibrahim Vs. 24	Symbolic of
			God's word
8.	Evil Tree	a. Q14; Ibrahim Vs.26	Symbolic of bad
			deeds
9.	Grapes	a. Q16: Nahl: The Bee Vs.11	Fruit
		b. Q18; Kahf: The Cave Vs.32	Food
10.	Tree of Eternity	a. Q20; Ta- Ha Vs. 120	Symbolic
11.	Bitter fruit	a. Q34; Saba; The City of Saba vs. 16	Symbolic
12.	Tamarisks	a. Q34; Saba; The City of Saba vs. 16	Symbolic
13.	Lote trees	a. Q34; Saba; The City of Saba vs. 16	Symbolic
		b. Q53; Najm: The Star vs. 14 & vs. 16	Symbolic
		c. Q56; Wa qi 'a: The inevitable Event vs.	Symbolic
		28	
14.	Spreading plant of	a. Q37; As saffat: Those ranged in ranks vs.	Symbolic
	the gourd kind	146	
15.	Plantain (Talh)	a. Q56; Wa qi 'a: The inevitable Event vs.	Shade
	Trees	29	
16.	Fig	a. Q95; Tin: the fig vs. 1	Sacred symbol

Medicinal Plants in the Holy Qur'an and their therapeutic uses.

Of all the plants identified as mentioned in the above table, the following were singled out as being medicinal and their therapeutic uses investigated.

S/N	Plant	Family	Botanical names	Therapeutic uses
1.	Corn	Poaceae	Zea mays	a. Treatment of hormonal
				problems.
				b. Enhance fertility in both
				sexes.
				c. Treatment of diabetes
				(antidiabetic)
				d. Anti viral
				(Olapade 2002)
				e. Diuretic
				f. Poultice for treating bruises,
				swellings, sores, boils (anti
				inflammatory) and
				headaches (analgesic)
				g. Antiseptic and anti-microbial
2.	Date palms	Are caceae	Phoenix	a. Antioxidants

 TABLE 2: Medicinal plants, their details and therapeutic uses

		or Palmae	dactylifera .L.	b. Antitumour
				c. Anti inflammatory
				d. Antidiabetic
				e. Antibacterial
3.	Vine	Vitaceae	Vitis vinifera	
	(Grapevine)		(European)	
			Vitis amurensis	
			(Asian)	
			Vitis labrusca	
			(N. American)	

References

- Abdulrahman. F. (1992); Studies in natural product chemistry of Moracea in African Traditional Medicine and Management of Psychiatry in Borno State. M.Sc Thesis, University of Maiduguri, Maiduguri, Nigeria.
- Anquez Traxler C. 2011. The Legal and regulatory framework of herbal medicinal products in the European Union: a focus on the traditional herbal medicnes category. *Drug inf. J.* 45 15-23.
- Astin J. (1998): Why patients use alternative medicines: results of national study.
 J. Am. Med. Assoz. 279. 1548 1553.
- Bandaranayake W.M (2006). "Quality control, screening toxicity and regulation of herbal drugs" in Modern phytomedicine. <u>Turning medicinal plants into drugs.</u> Eds Ahmad I,, Aqil F., Owais M. editors. (Weinheim: Wiley – VCH GmbH & co. KG A;) 25-57.
- Blumenthal M., Brusse W.R., Goldberg, A., Gruenwald, J., Hall, T., Riggins C.W., (1998). *The complete German Commission. E. Monographs Therapeutic Guide to Herbal Medicines*. Austin, TX: American Botanical Cainal.
- Bodeker C., Bodeker G., Ong C.K, Grundy C.K., Burford G., Shein K. (2005).
 WHO Global Atlas of traditional Complementary and Alternative Medicine.
 Geneva, Switzerland: World Health Organization.

- Braun L.A., Tiralongo E., Wilkinson J.M., Spitzer O., Bailey M., Poole S., (2010).
 Perceptions, use and attitudes of pharmacy customers on complementary medicines and pharmacy practice. *BMC complement* <u>Altern</u>. Med. 10: 38.
- Calapai G. (2008); European Legislation on herbal medicines: a look into the future. *Drug* Saf. 31 428-431.
- Committee on the use of Complementary and |Alternative Medicine by the American Public Board on health promotion, Disease prevention Institute of Medicine (2005). <u>Complementary and Alternative medicine in the United States</u>. Washington D.C. The National Academics Press.
- Dolfman M (1973); The Concept of health; an historic and analytic examination.
 <u>Journal of school health 43</u>: 491-7
- Ekor M. (2014); The growing use of herbal medicines: Issues relating to adverse reactions and challenges in monitoring safety. <u>Ethnopharmacology section of</u> <u>Journal Frontiers in Pharmacology.</u>
- Holy Qur'an
- Humber J.M. (2002); "The role of complementary and alternative medicine: accommodating pluralism". *Journal of the American Medical Association* 288(13) 1655-1656.
- Kong J.M., Goh N.K., Chia L.S., Chia T.F. (2003). Recent Advances in traditional plant drugs and Orchids. *Acta pharm. Sin.* 24:7-21.

- Lai. P.K., Roy J. 2004. "Antimicrobial and chemo-preventive properties of herbs and spices" *Curr. Med. Chan.* 11(11): 145-60.
- Lichterman, B.L. 2004. "Aspirin: The story of a wonder drug". British Medical Journal 329 (7479): 1408.
- Mukherjee P.W. (2002); Quality control of herbal drugs: An Approach to Evaluation of Botanicals. New Delhi, India: Business Horizons Publishers.
- Nahata. A (2013). Dr. Harisingh Gour University, Study. Com.
- Olapade E.O. 2002. The herbs for good health; The 50th Anniversary lecture of the University of Ibadan. Natural cure Series vol.3. Toyin Okebunmi printers Mokola Ibadan, Nigeria.
- Pal S.K. Shukla Y. (2003). Herbal medicines: current status and the future. *Asian*.
 J. Cancer Prov. 4 281-288.
- Pan S.Y., Pan, S., Yu, Z.L., (2010) "New perspectives on innovative drug discovery: an overview". *Journal of pharmacy and pharmaceutical sciences*. 13(3) 450-471.
- Plant life international 2013
- Roberts, J.E., Tyler, V.E., (1997). Tylers's Herbs of choice. The therapeutic use of phytomedicinals. New York: The Haworth press.
- Sofowora, A 1982 Medicinal plants and traditional medicine in Africa. John Wilde and Sons Limited Chichester.
- Tamboli E.T 2013 Satara College of Pharmacy. Study. Com.

- Tapsell L.C., Hemphill. I. Cobiac L. 2006. "Health benefits of herbs and spices: the past, the present and the future" *Med. J. Anst.* 185 (4):54.
- UNESCO (1996) Culture and Health Orientation Texts World Decade for Cultural Development 1988 – 1997.
- Ustun B; & Jakob, R. (2005). Calling a spade a spade: meaningful definition of health conditions. Re-defining Health. Bulletin of the World Health organization 83; 802
- WHO (1946). Preamble to the constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June 1946 and entered into force on 7 April 1948.
- WHO (2004); WHO guidelines on Safety monitoring of Herbal medicines in pharmacovigilance systems. Geneva, Switzerland.
- WHO. (2002a). WHO Monographs on selected Medicinal plants. Vol.2 Geneva, Switzerland: World Health Organization.
- WHO. (2005a). "WHO global atlas of traditional, complementary and alternative medicine," in *Map* volume eds. Ong. C.K., Bodeker G, Grundy C., Burford G., Shein K., editors. Geneva, Switzerland: World Health Organization.
- Zeil H. (1999). Complementary alternative medicine boon or boon doggle. *Skeptic* 786-90.