Health Information and Users' Beliefs: A Study of Herbal Medicine Users' Attitudes to Efficacy of Herbal Medicine

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Abstract

The study examined the correlation between herbal users' beliefs and the efficacy of herbal medicine based on health information. The study was anchored on the Health Belief Model which predicts health behaviours by focusing on the attitudes and beliefs of individuals. Using survey design, the study was carried out in select towns of Awka, Onitsha and Nnewi which represent three senatorial zones in Anambra State, Nigeria. The sample size of 400 respondents was randomly selected. The questionnaire was the instrument for data collection. Major findings revealed that users' beliefs do not necessarily add to the potency of herbal drugs. It also revealed that interpersonal communication is most effective through testimonials/referrals by users. Social media is equally effective for an online audience but there is minimal use of mainstream media. Based on the findings, it is recommended that health education and health information should be emphasised. Equally, regulatory bodies in Nigeria

such as the National Agency for Food and Drug Administration (NAFDAC) should ensure strict adherence to standards on herbal products and the nature of information and claims.

Keywords: Attitude, Efficacy, Health information, Herbal medicine, Users' belief, NAFDAC.

Introduction
The use of herbs for the treatment of ailments has continued to elicit medical and scholarly discourses. This is because herbs are derived from nature and possess medicinal values. World Health Organisation (2004) defines herb to include crude plant materials, such as leaves, flowers, fruits, seeds, stems, wood, bark, roots, rhizomes or other plant parts, which may be entire, fragmented or powdered. As an alternative medicine, herbal medicine consists of plant materials such as fruits, seeds, roots, rhizomes, leaves, bark and flower commonly employed as raw materials for self-administered pharmaceutical remedies and as supplementary products in the general population (Ehrlich, 2013). Current discourses focus on the global integration of alternative medicine (herbal medicine) in medical practice. This is true, as a large proportion of the population relies on traditional practitioners and their armamentarium of medicinal plants to meet health care needs. Although modern medicine may exist side-by-side with such traditional practices, herbal drugs have often maintained their popularity for historical and cultural reasons (Shaw, 1998; Omoera, Awosola, Okhakhu & Eregare, 2011).

As an alternative medicine, it is often, surrounded by some therapeutic concerns in terms of dosage, composition and efficacy claims. People take herbal medicine, perhaps due to the efficacy claims of herbal medicine in contrast to orthodox medicine which many see as synthetic and easily adulterated (Tamuno, Omole-Ohonsi & Fadare, 2010; Omoera et al., 2011), however, there are major concerns over the efficacy claims especially when herbal medicine does not pass through clinical processing to ascertain its ability to cure a particular ailment. Some herbal medicines remain untested and may be harmful to the body. Health information refers to all media and interpersonal messages on health-related matters such as studies on herb use and health beliefs. It means all messages on herbal drugs in various forms to collect and disseminate information on herbal use. Health is the state of complete physical, mental and social well-being (Omoera & Adegoriola, 2021). Sources of health information include

(a) interpersonal communication through face-to-face interactions in health-related discussions, (b) television news programmes (c) radio (d) newspapers (e) magazines (f) Internet websites and (g) scientific journals on health and medical-related articles.

Lack of adequate information has affected the way people use herbal products. For instance, a sick person feels satisfied with a herbal mixture prepared by a native doctor but feels dissatisfied if asked to follow the same procedure to prepare the mixture. Little information is available for users of indigenous herbal products. The lack of substantial information has increased misconceptions about herbs. There is unsubstantiated health information on whether a correlation exists between users' belief and efficacy of herbs based on religious or cultural attributes or a natural healing potency of herbal products. The concern is whether the efficacy claims of herbal medicine are due to its natural healing powers or the users' superstitious beliefs. Apart from herbal supplements, there is a growing concern among Africans that some herbs need some form of spiritual aid to be efficacious. This raises the issue of what exactly affects users' acceptability of herbal medicine. In societies where such beliefs exist, it becomes important to know how much belief affects their use of herbal medicine vis-à-vis available health information on herbal medicine. The study, therefore, examines whether beliefs affect users' preference for herbal medicine based on available health information.

The following objectives guided the study to a. determine the correlation between users' beliefs and efficacy of herbal medicine; b. ascertain whether beliefs affect users' attitudes to the use of herbal medicine, and c. determine the correlation between health information and users' attitudes due to health beliefs. Consequently, the following questions were formulated to strengthen the study: A. What is the correlation between users' beliefs and the efficacy of herbal medicine? B. To what extent do beliefs affect users' attitudes to the use of herbal medicine? C. What is the correlation between health information and users' attitudes due to health beliefs?

Understanding Herbal Medicine: Nigerian Perspective
The use of herbal medicine (otherwise known as traditional medicine) has continued to generate mixed reactions. First, the integration of herbal medicine in Nigerian orthodox medical practice is still ongoing amidst regulations in relevant areas of practice. The readily integrated herbal

products in orthodox fall under Categories 2, 3 and 4 of the World Health Organisation (2004) categories of herbal products (medicine). Category 2 consists of herbal drugs (medicines) in systems which have been used for a long time and are documented with their special theories and concepts and accepted by countries. Category 3 consists of modified herbal drugs (medicines) that have met the national regulatory safety and efficacy requirements. They can be modified in some way either shape or form with information on dosage form, mode of administration, herbal medicinal ingredients, methods of preparation and medical indications. Category 4 consists of imported products with herbal drugs (medicine) based on regulatory approval and registered in the countries of origin.

There is a slow pace of integration of Category 1 herbal products. This is because herbal products under Category 1 consist of indigenous herbal drugs (medicine) which are historically used in a local community and are well known through long usage by the local population in terms of their composition, treatment and dosage (WHO, 2004). Indigenous herbal medicine is often adjudged to be unsafe and easily abused in terms of dosage administration or hygienic considerations in the production and administration of herbal medicine. In Nigeria, the National Agency for Food and Drug Administration (NAFDAC) regulates the production, advertising and sale of herbal products to ensure such medicines are not harmful for consumption. Herbal Medicines and Related Products (Labelling) Regulation 2005 specifies various guidelines for the production, advertising and sale of herbal medicine. It equally specifies guidelines for efficacy claims of herbal medicines (NAFDAC, 2015).

Discussing Users' Beliefs vis-à-vis Efficacy Claims of Herbal Medicine
The crux of this study is to examine the core claims of indigenous herbal medicine against clinically refined herbal supplements. Among Africans, especially residents of Anambra State, Nigeria, there is an apparent belief that the efficacy of herbal medicine is derived from certain superstitions associated with herbs and herbal doctors. This belief underscores the preexisting belief in the efficacy claims of herbal medicine based on the natural and healing powers of herbs and not on the premise of users' beliefs. In the buildup of scholarly exposé, Nwoko (2009) agrees that there is a touch between efficacy of herbal medicine and belief among Igbo-speaking people of eastern Nigeria. The bond is tied to the belief that herbal medicine seems to get more potency when prepared and administered by a native doctor called *Dibia* (native doctor in Igbo). In the

same vein, Iroegbu (2011) and Okonkwo (2015) share similar views on efficacy of herbal medicine based on users' belief systems. Both scholars agree that ritual is part of the healing process and traditional healers (*Dibia*) often, rely almost on magic and natural arts/spiritism to perfect healing in bone settings, traditional psychiatric cases, traditional childbirth and other life-threatening ailments. Shehu and Sheshi (2007) equally agree with the involvement of fetish ceremonies in the use of herbal drugs.

Countering Users' Belief Claims

There are apparent counterclaims to users' belief claims of the efficacy of herbal medicine. The dominant argument supports the positive impacts of herbal medicine. The majority of herbal drugs used in Africa are obtained from natural herbs by practitioners who live within the communities. There are increased demands and easy access to practitioners and herbs with minimal cost. Users believe that the efficacy is derived from nature and not from beliefs associated with herbal medicine. Shehu and Sheshi (2007) argue that herbal medicines are potent due to their natural source/endowment and available health information equally accounts for the preference of herbal medicine over orthodox medicine. It should be noted that herbal medicine has continued to supplement orthodox medicine. It provides an important healthcare service whether people have physical or financial access to allopathic medicines. In this case, the major use of herbal medicine is for health promotion and therapy for chronic, as opposed to life-threatening conditions (Engebretson, 2002).

Revisiting Available Health Information

Information is fundamental for studies on the use of herbal medicine. This is true because effective health information shapes the nature of interaction among individuals in a communication situation. Health information denotes health-related messages through mainstream media and online platforms. Information is the live wire of society thus mass media collect, store, process and disseminate news and messages to bring about attitudinal change and make the audience to take appropriate decisions (Kenechukwu, 2014). Regrettably, most indigenous herbal medicine dealers prefer interpersonal communication through referral methods to disseminate information about herbal medicine. The effect is low reportage and documentation of health information on herbal claims. Batta (2013) argues that reluctance on the part of herbal medicine

practitioners to divulge secret information about the preparation of some herbal medicine has continued to jeopardise information sharing and dissemination on the positive and negative effects of herbal medicine use.

Theoretical Framework

The study was anchored on the health belief model (HBM). The model explains and predicts health behaviours by focusing on the attitudes and beliefs of individuals. Credited to Hochbaum, Rosenstock and Kegels in the 1950s, the model suggests a correlation between people's beliefs about health problems and perceived benefits of action and barriers to action, and self-efficacy to explain engagement (or lack of engagement) in health-promoting behaviour (Janz & Becker, 1984; Omoera & Adegoriola, 2021). The model is apt for the study because it examines individual attitudes of herbal users in line with their perceived perception and attitude towards efficacy claims based on preexisting or existing beliefs. Applying the basic constructs of the model, it shows that most herbal users possess good knowledge of medicinal herbs either by exposure to health information, interpersonal communication with other users or testimonials based on perceived evidence of cure. Under the varying constructs of the model, it is evident that belief is personal and acceptance to take herbal medicine based on certain beliefs are with due consequences.

Methodology

The study adopted a survey design. The population comprised 953,760 (2006 census) residents of Awka, Onitsha and Nnewi in Anambra State, Nigeria. A sample size of 400 respondents was randomly selected from Awka (133), Onitsha (133) and Nnewi (134). These respondents included native traditional medicine practitioners and users of herbal medicine. There was no coercion to be part of the study as respondents willingly accepted to be part of the study, however, the confidentiality of respondents was guaranteed. The questionnaire was the instrument for data collection.

Data Presentation and Discussions

Data analysis was done based on 400 respondents that willingly participated in the study.

Description of the Demographic Variables of Respondents

Description	Background Variables	Frequency	Percentage
Gender	Male	260	65%
	Female	140	35%
	Total	**400**	**100%**
Age	16 – 20 years	32	8%
	21 – 25 years	44	10%
	26 – 30 years	138	35%
	31 – 35 years	154	39%
	36 – 40 years	24	6%
	41years – above	8	2%
	Total	**400**	**100%**
Marital Status	Single	307	77%
	Married	93	23%
	Total	**400**	**100%**
Occupation	Farmers	106	27%
	Traders	242	61%
	Civil servants	36	9%
	Students	16	4%
	Total	**400**	**100%**

The demographic variables show even participation of respondents based on gender. The ages of respondents show that most respondents fall within the active ages of 26 to 35 years. This age bracket is perceived to be knowledgeable about herbal medicine. On marital status, most respondents are single which has the propensity of inducing the choice of herbal products. Data also show that most respondents, who participated in the study, are farmers and traders. The student population shows minimal statistical scores followed by civil servants that participated in the study.

Table 1: *Correlation between users' belief and efficacy of herbal medicine*

What is the source(s) of the potency of herbal medicine?			Is there correlation between users' beliefs and the efficacy of herbal medicine?		
Options	Frequency	Percentage (%)	Options	Frequency	Percentage (%)
Natural endowment	202	51%	No correlation	122	31%
Level of clinical preparation	54	13%	Partial correlation	212	35%
Health belief vis-à-vis divination	140	35%	High correlation	63	16%
Don't know	4	1%	Don't know	3	1%
Total	**400**	**100%**	**Total**	**400**	**100%**

Table 1 indicates that a significant number of respondents believed that the efficacy of herbal medicine is derived from its natural healing endowments as against the association of its efficacy to health beliefs among users of herbal medicine in Anambra State, Nigeria. Data also indicate a partial correlation between users' health beliefs and the efficacy of herbal medicine. The finding further proves that among the respondents, there is partial health belief vis-à-vis the efficacy of herbal medicine.

Table 2: *Effects of beliefs on users' attitudes to herbal medicine*

Do beliefs affect users' attitudes to the use of herbal medicine?			To what extent do beliefs affect users' attitudes to the use of herbal medicine?		
Options	Frequency	Percentage (%)	Options	Frequency	Percentage (%)
Yes	188	47%	Great extent	185	46%

No	200	50%	Low extent	205	51%
Don't know	12	30%	Don't know	10	3%
Total	**400**	**100%**	**Total**	**400**	**100%**

Table 2 shows that respondents believed that beliefs do not have significant effects on attitudes to the use of herbal medicine.

Table 3: *Correlation between available health information and users' attitudes due to health beliefs*

What is your source of health information on the use of herbal medicine?			What is the correlation between available health information and users' attitudes to the use of herbal medicine?		
Options	Frequency	Percentage (%)	Options	Frequency	Percentage (%)
Mainstream media	46	12%	No correlation	22	6%
Social media	108	27%	Partial correlation	134	33%
Testimonial/ referral by friends	246	611%	High correlation	244	61%
Total	**400**	**100%**	**Total**	**400**	**100%**

Table 3 shows that a significant number of respondents get information on the use of herbal medicine through testimonials/ referrals by friends. There is significant use of social media to get information about herbal medicine. Other respondents get information from mainstream media such as television, radio, newspapers and magazines. Data indicate a high correlation between available information and users' attitudes to the use of herbal medicine.

Conclusion
The study examined the correlation between users' belief systems and health information vis-à-vis the efficacy of herbal medicine. Using a

quantitative approach, data were analysed based on the research. Summarily, the following findings were made: There is significant use of herbal medicine in southeast, Nigeria particularly Anambra State. A predominant nature of herbal medicine in use falls within Category 1 of indigenous herbal medicine that is produced locally and regulated by an appropriate regulatory body. There is a growing belief among the populace that the efficacy of indigenous herbal medicine is attributable to the health belief of people. However, data suggest that effective health information helps to eradicate misconceptions surrounding the use of indigenous traditional medicine. The study also found that users' belief systems do not necessarily add to the potency of herbal drugs thus critiquing the absolute application of the Health Belief Model in all health-related studies. On the sources of information on herbal medicine, the study found that interpersonal communication is the most effective. This is expressed through testimonials/referrals by users. The majority of persons depend on native medicine practitioners and friends (referral method) for information on herbal drugs than the modern media of communication. Data show that social media is also effective as it offers online audiences information on the effective use and effects of herbal medicine. The study found that there is minimal use of mainstream media such as television, radio, newspaper and magazine to disseminate information on herbal medicine. This is attributed to factors such as audience exposure to mass media and the socioeconomic means of respondents.

Recommendations
Based on the findings of the study, the following recommendations are proffered: with greater re-awakening consciousness on the benefits of herbal medicine, users must be given adequate health education on the benefits, effects and proper use of herbal medicine. This will eradicate abuses and misconceptions associated with its use, especially among users in remote places with minimal access to health information through mass media. Regulatory bodies in Nigeria, such as the National Agency for Food and Drug Administration (NAFDAC) should ensure strict adherence to standards in the production, advertisement and use of herbal products. With proper regulations, both manufacturers and users of herbal products will use the products within safety measures. Adequate information on the use of herbal medicine should be made available to patients. Information leaflets should reflect only the information that has

been approved by the country's drug regulatory agency. The use of interpersonal communication (referral method) for health information on herbal medicine among locals is limited. Manufacturers, sales outlets and advertising agencies should embrace the use of mainstream media such as television, radio, newspaper and magazine for a wider reach of information. The use of social media is encouraged provided online messages are true representations of intended information about herbal medicines. There should be proper integration of health communication in the curriculum of communication studies to provide academic perspectives to the study of health-related issues. By extension, health journalism as a reportorial beat will provide veritable training grounds for future health reporters and news editors.

References

Batta, H. (2013). Health communication issues. In D. Wilson & H. Batta (Eds.), *Science, health and environmental communication: Global issues and local perspectives.* Ibadan: University Press.

Engebretson, J. (2002). Culture and complementary therapies. *Complement Nursing Midwifery,* 8, 177–84.

Ehrlich, S.D. (2013). Herbal medicine (University of Maryland Medical Center). Retrieved from https://www.umm.edu/health/medical/altmed/treatment/herbal-medicine.

Iroegbu, P. (2011). Igbo medicine and culture: The concept of dibia and dibia representations in igbo society of Nigeria. Retrieved from http://chatafrik.com/articles/health-and-welfare/igbo-medici ne-and-culture-the-concept-of-dibia-and-dibia-representations-in-igbo-society-of-nigeria#. WPSB-hImwTI.

Janz, N. & Becker, M. (1984). The health belief model: A decade later. *Health Education Behaviour,* 11(1), 1 – 47.

Kenechukwu, S. (2014). *Mass communication: An introduction to sociology of mass media.* Nnewi: CathCom Press.

NAFDAC (2015). Herbal guidelines. Retrieved from *www.nafdac. gov.ng/guidelines/herbal-guidelines.*

Nwoko, K. (2009). Traditional psychiatric healing in Igboland southeast Nigeria. *African Journal of History and Culture (AJHC), 1*(2), 36-43.

Okonkwo, E. (2015). Traditional healing systems among Nsukka Igbo. Retrieved from http://www.researchgate.net/publication/ 273951184.

Omoera, O.S. & Adegoriola, A.M. (2021). Bridging the information gap to keep educators healthy: Health insurance awareness and actions by private school employees in Nigeria. *Journal of Development Communication 32*(2),

1-14.   http://jdc.journals.unisel.edu.my/ojs/index.php/jdc/article/view/205

Omoera, O.S., Awosola, R.K., Okhakhu, M.A. & Eregare, E.A. (2011). Seeking solutions: Of radio/ television advertisement and patients/non-patients' perception of traditional medicine in Edo State, Nigeria. *The International Journal of Research and Review, 6* (1), 48-64.

Shehu, R.D. & Sheshi, B. (2007). Practice and efficacy of alternative medicine in Nigeria. *Journal of Health Education and Sports Science (JOHESS), 6*(1), 6-10.

Shaw, D. (1998). Risks or remedies? Safety aspects of herbal remedies. *Journal of Roy, Social and Medical*, 91, 294-296.

Tamuno, I. (2009). Traditional medicine for HIV infected patients in anti-retroviral therapy in a tertiary hospital in Kano, northwest Nigeria. *Asian Pac. Journal of Tropical Medicine*, 4(2) 152-155.

Tamuno, I., Omole-Ohonsi, A. & Fadare, J. (2010). Use of herbal medicine among pregnant women attending a tertiary hospital in northern Nigeria. *The Internet Journal of Gynecology and Obstetrics*, 5(2) 1-11.

World Health Organisation (2004). *WHO guidelines on safety monitoring of herbal medicine in pharmacovigilance system.* Geneva: World Health Organisation.

World Health Organisation (2004). *Guidelines for the regulation of herbal medicines in the southeast Asia region.* New Delhi: WHO Regional Office.