

## A Critical Appraisal of Health Seeking Behaviour Models in Nigeria

<sup>1</sup>GBADEN, Esther Anenge, <sup>2</sup>WAZIRI, Ahmed Gazali and <sup>3</sup>TORMUSA, Daniel Orngu <sup>1</sup>

<sup>1,2</sup>Department of Sociology, Federal University Lafia

<sup>2</sup>Department of Sociology and Anthropology, Faculty of Social Sciences, University of Maiduguri

### Abstract

*This paper is an appraisal of various models that explains the health seeking behaviour of individuals in Nigeria. The paper makes a desk review of three health seeking behaviour models by making a critique of the assumptions and the suitability of these models in explaining health seeking behaviour in the Nigerian society. An assessment of the stages of health seeking behaviour identified by Igun (1979) indicates that significant others and availability of health services are the major determinants of health seeking behaviour in most communities in Nigeria. A review of the Health Belief model shows how the beliefs individuals have toward a perceived ill health influences their determination to seek for healthcare services. The paper also assessed Andersen-Newman's behavioural model, which hypothesized that individuals' demographic characteristics and healthcare delivery systems exert major influence on how they access and utilize health care services. The choice-making model proposed by Young (1981) on the other hand asserts that individual's choice of health services is dependent upon the four variables of perception of gravity, knowledge of home treatment, faith in remedy and the accessibility to treatment. Despite the criticism of the various models discussed in the paper, their propositions are found complementary and suitable in explaining health seeking behaviour in the Nigerian context. The however adopted the Health Belief Model as more suitable in explaining health seeking behaviour among Nigerians.*

**Keywords:** Model, Health Seeking Behaviour, Utilization.

### Introduction

A theory is a set of interrelated concepts that gives a systematic view of events or situations; it specifies the relationship among variables to explain and predict events (Kerlinger, 1986). In other words, a theory is a set of interrelated propositions or principles designed to answer a question or explain a particular phenomenon. The views of Schaefer and Lamn (1998) regarding a sociological theory are quite illuminating. According to them, a theory is a set of statements that seeks to explain problems, actions or behaviour. They state further that a theory has both explanatory and predictive power in that it can help us see the relationships among seemingly isolated phenomena as well as understand how one type of change in an environment leads to other changes.

According to Wallace and Wolf (2006), models, also known as middle range theories transcend sheer description of social phenomena. Models are pictorial or diagrammatical representation of social reality. Models are tools of cognition that allow to present many complex features, phenomena, or process in a simple, transparent way. They are convenient means of description and explanation by using the diagrams and symbols. They deal with phenomena that impinge directly or indirectly on transformation of society. The above source argues that models are theories with limited set of assumptions, from which specific hypotheses can be derived and tested empirically. Models have their origin in the work of Merton (1968) who declared that our major task (as sociologists)

today is to develop special models, applicable to limited range of data; models for example of deviant behaviour. In Merton's (1968) view, middle range models would gradually consolidate into theory that is more general. Models draw on several numbers of theories to help understand a specific problem in a setting. According to Earp and Ennett (1991), models are informed by more than one theory as well as by empirical finding. The major difference between theory and model is that theory seeks to provide explanation to a wide range of social phenomena while models are more specific and typically explain social events related to specific aspects. The relationship between the duo is such that models are derived from theories and applied to specific aspects of society.

Health seeking behaviour is described as the sequence of remedial actions taken by individuals to rectify perceived ill health for themselves or for persons whom they care for (Asakitikpi, 2008; Ward, Mertens & Thomas, 1996). Health seeking behaviour models therefore to provide explanations to perceived ill health which help in predicting health seeking behaviour of individuals.

Models of health seeking behaviour, among other things, function to guide or explain why people will seek care or not, where they would seek care and why they would do so. Health seeking behaviour provides the avenue for the testing of these theories as well as models, as the interplay between socio-economic, cultural, structural and geographical variables as identified in models come to bear on the

way people seek healthcare.

This interplay indicates some level of convergence, more so, the application of well defined and carefully tested theories and, again models, become very much of an advantage as this provides a platform for coherent and effective intervention. In applying this to the subject matter, a good application of models of health seeking behaviour in the long run will make for effective interventions that will improve people's health seeking behaviour and indicatively their health status.

Drawing from the works of Glanz, Lewis and Rimer (1996), and Glanz and Rimer (1995), models of health seeking behaviour discussed in this work have been used to guide the search for why people seek or do not seek healthcare in the way they should. This becomes necessary as medical sociology, unlike medicine, has gone beyond the germ theory of disease causation that traditionally indicates that an individual is diseased or ill because he/she is invaded by a bacteria or virus, in which case once the requisite anti bacterial or antivirus is taken the situation could be remedied to include cultural, social and socio-psychological definitions of health and responses to illness.

Cultural patterns for example, as indicated by Gazali (2009) actually give substance to the manner in which illness is perceived, expressed and reacted to. The socio-psychological and social aspects do not only dwell on the cultural life styles but also draw insights from individuals' interactions, communication, and the social environment that indicates conditions under which one can seek care or otherwise.

Therefore, apart from helping to identify what should be measured or monitored, the models used here also provide insights on how to shape facilities and services that would be at the reach of everyone. This is an indication that for any meaningful research to be carried out, the need for a sound theoretical base or understanding cannot be over emphasized as this makes for a meaningful result.

This paper makes use of the decision model of health seeking behaviour as it provides an explanation on factors that determine the decision to seek medical help or not to, and from what source(s) to seek the said care. Relevant models such as Igun's (1979) stages in health seeking model, Health Belief Model by Rosenstock (1960), Andersen-Newman's behavioural model (1973) and the choice making model by Young (1981) are used here to clearly create a nexus between health care seeking behaviour and theoretical models of health seeking.

### Health Seeking Behaviour Models

Igun (1979) in his study of health seeking in

Nigeria formulated a model that is bound by key decision-making events in health seeking. The model views illness as being subjective thus not requiring biomedical verifications and it is predicated on the following assumptions: -

- i. Illness is undesirable
- ii. Illnesses are understood as consisting of distinct elements that are bound by culture and may vary from society to society
- iii. Illness has both personal and social significance
- iv. The perception of a need for medical treatment is subjective rather than objective
- v. That patients have ideas about what they want from medical treatment as opposed to those held by the professionals they consult
- vi. That patients are rational, since they evaluate the occurrence of illness based on economic or utility consideration before reaching a decision.

The model also comprises of ten (10) stages in which an individual seeking healthcare passes through as thus: symptoms experience, self-treatment, communication to significant others, assessment of symptoms, assumption of the status sick, expression of concern (by kin, close friends and even neighbours), assessment of appropriateness of sources of treatment, selection of treatment plan, treatment and assessment of the effect of treatment on symptoms.

The above presents decision points that a Nigerian healthcare seeker is likely to go through in the course of utilising healthcare services. This can be seen where the choice of treatment plan and by implication the services to be utilised are not necessarily an individual enterprise but rather a collective one and not made necessarily by the one needing the services but by significant others whose decisions may be influenced by factors outside of the recipient. Whatever the situation may be, the implication of this model for this work is that healthcare seeking in most instances is a collective effort that comprises of the person needing healthcare, the kin, close friends and neighbours. In the same vein, treatment plan also varies among several choices, i.e. lay herbal recipes, available traditional healers, medicine stores, government mission, private or teaching hospitals. The above scenario though considering the severity of the illness situation may not necessarily answer the question of choice on an individual level. This is therefore understood from the point of view that though a pregnant woman may need antenatal services and also have knowledge of such services, at the point of need the choice may not solely rest with her. This is in line with other aspects of African social life where most social interactions such as marriage, child upbringing,

socialisation and burial are all a collective right of one's kin and family.

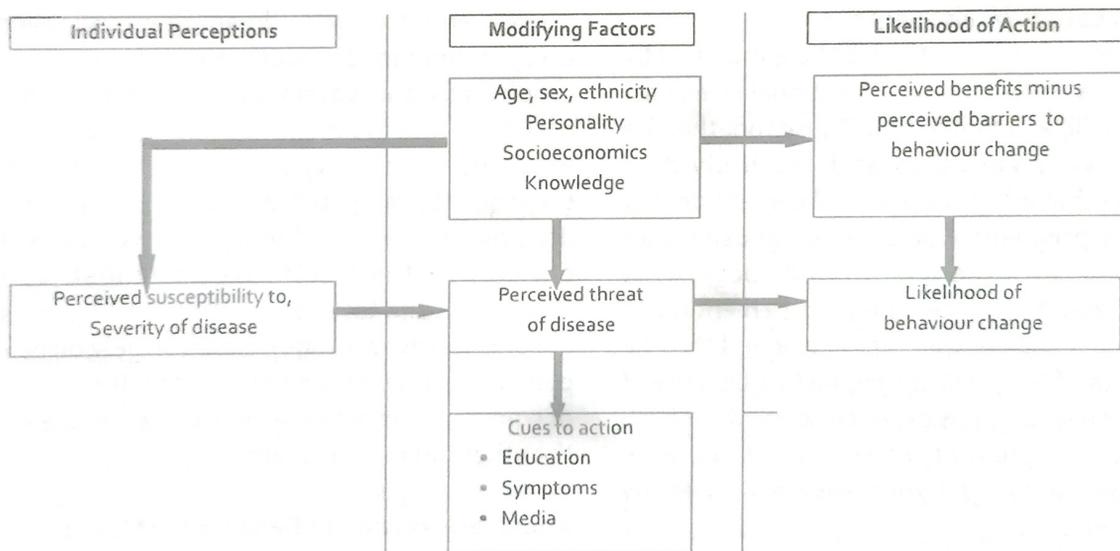
### Health Belief Model (HBM)

Though initiated by Rosenstock (1960) in order to explain peoples' participation in programmes to prevent and detect diseases (Hochbaum, 1958; Rosenstock, 1960; 1974), Health Belief Model (HBM) has grown to seek an understanding of people's responses to symptoms and their behaviours in response to diagnosed illness concerning adherence to medical regimens (Kirscht, 1974; Becker 1974).

The Health Belief Model is a value-expectancy theory based on the desire to avoid illness or to get well (value) and the belief that a specific health action available to a person would prevent illness (expectation). The model postulates that health seeking behaviour is influenced by a person's perception of a threat indicated by a health problem and the value associated with actions aimed at reducing the threat. In recent years, the model has developed to include preventive health actions, clinic use, illness behaviour and sick role behaviour (Sheeran and Abraham, 1996; Janz & Becker, 1984; Becker, 1974; Rosenstock, 1974; and Kirscht 1974).

explanation of the constructs of the model as captured in perceived susceptibility, perceived severity, perceived benefits and perceived barriers and recently, modifying variables, cues to action and self-efficacy or one's confidence in the ability to undertake an action (Rosenstock & Becker, 1988).

Applying this to the subject matter, people are more likely to engage in a health seeking behaviour to improve the utilisation of health facilities and use appropriate health services if they perceive the likelihood of being negatively affected if they did otherwise. This is influenced by past experiences. The greater the perceived risk of susceptibility (vulnerability, predisposition) is, the greater the likelihood of engaging to decrease the risk in behaviour. If from previous experience a woman noticed that her first pregnancy predisposed her to pregnancy induced diabetes and that nearly cost her life. In a second pregnancy that knowledge and experience will enhance her decision of visiting the antenatal clinic earlier in pregnancy and as well she is more likely to take precautionary measures knowing she has a susceptibility to diabetes that can cost her the life of her child and hers as well. On the other hand, a woman who has never experienced any



Health Belief Model Components and Linkages (Glanz, Rimer and Lewis, 2002)

Overall, the model is built on the premise that people will take actions to prevent or control ill-health conditions if they believe it would have serious consequences, if a course of action would be beneficial in reducing either their susceptibility to or the severity of the condition, and if they believe that the anticipated barriers to or cost of taking action are outweighed by its benefits. The above gives a concise

complications in pregnancy is less likely to engage early in antenatal visits.

Perceived severity bothers on a person's belief of the seriousness of the effect of the condition. For instance, a pregnant woman or a mother whose child is down with diarrhoea is most likely to immediately engage in the usage of a health facility if she perceives danger in her condition or that of the ill

child; on the other hand, if she does not perceive any eminent danger she is likely not to engage any healthcare services.

Perceived barriers in this situation could refer to all those factors that influence a person's health care seeking behaviour and they could be in the form of cost, gender, distance, availability of services and personnel, education; these dictate what is to be done. Health seeking behaviour or utilisation increases if the perceived benefits of an action are seen to outweigh the barriers. Of all the constructs, perceived barriers are the most significant in determining behaviour change (Janz & Becker, 1984).

For a new behaviour to be adopted, a person needs to believe that the benefit of the new behaviour outweighs the consequences of continuing the old behaviour (The Centre for Disease Control and Prevention, 2004). This enables barriers to be overcome and new behaviour to be adopted. A diabetic patient for instance weighs the cost in terms of resources plus all other exigencies of seeking care for the illness, of what benefit the care will be before engaging in any action. If seeking for care, though expensive, yet considered more beneficial instead of getting blind through diabetes, then the diabetic is more likely to seek care than otherwise. If, however seeking care will be expensive and of little or no benefit the action is mostly to be also negative.

The four major constructs of the HBM are modified by other variables such as culture, educational level, past experiences, skill, and motivation. These together are called Modifying Variables and are individual characteristics that influence personal perception. For example, if a pregnant woman is diagnosed with pregnancy induced hypertension and successfully treated, she may have a heightening perception of susceptibility because of this experience and thus be more conscious of the predisposing factors because of experience. Conversely, this experience could diminish the woman's perception of the seriousness because the pregnancy induced hypertension was easily treated and cured.

In addition to the above, the Cues to Actions according to the Health Belief Model prompt what behaviour is to be engaged. These could be found in newspaper articles, advice from others, and illness of family members or friends that could move people to change their behaviour. These function in the provision of information on how to act or behave, and as awareness while also serving as a reminder system.

### Critique of the Health Belief Model

The Health Belief Model has been faulted on

many fronts. Janz and Becker (1984) criticised it for considering only individuals' belief and attitude in the prediction of health-related behaviour to the neglect of non-health factors such as fear, aesthetics, reward or even compulsion. Becker (1974) also argued that the model has failed to quantify the amount of the belief necessary for the occurrence of behaviour change. It does not also take cognisance of the role played by healthcare providers but rather consideration is on the individual thus making it appear the issue of utilization and thus health seeking behaviour is the sole prerogative of individuals which in reality is not.

Igun (1988) also sees a shortfall in this model where he argues that it fails to consider the multiplicity of systems of healthcare as is obtained in most developing African nations as this presents the consumers not only with the conflict of whether to seek care but also which systems to consult. The above notwithstanding, the Health Belief Model is of great importance despite its shortfalls as can be seen in the next section.

### Applicability of the Health Belief Model

The Health Belief Model has been useful where people explain their past behaviour. It has been proven useful in studies of preventive health behaviour as it concerns vaccination, drug intake for heart disease, and HIV. Heinzelman (1962) and Leventhal *et al* (1960) both made cases with the taking of penicillin prophylaxis and vaccination for and against heart diseases and Asian influenza respectively. The voluntary counselling and testing for HIV and the subsequent "religious" intake of the anti retroviral drug by persons found to be positive falls within the purview of the Health Belief Model. Voluntary counselling and testing as well as availing one's self to the anti-retroviral drugs is based largely on how much people feel they may be affected by the consequence of coming down with the virus as well as the impact of the other variables on them.

### Andersen-Newman's Behavioural Model

Andersen-Newman's Behavioural Model was developed in 1973 to explain factors that facilitate or impede utilization of healthcare services and facilities. It examines the influence of individuals' demographic characteristics and health delivery system variables on utilization patterns. The aim is to develop a behavioural model that provides measures of access to medical care. It hypothesizes that the decision to seek medical help is a function of three sets of variables of

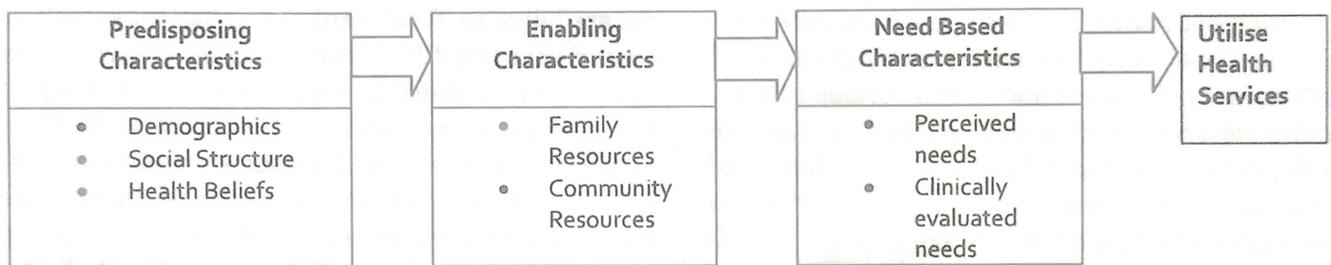
i. **Predisposing factors:** consist of the socio-cultural

characteristics of individuals that exist prior to their illness such as age, gender, marital status, family size, occupation, social networks, social status, education and ethnicity, attitudes, values as well as the knowledge that people have about the healthcare system.

- ii. **Enabling factors:** these refer to the logistical aspects of obtaining care such as personal and or family income which directly or indirectly translates to the ability or know how of access healthcare services, health insurance, service availability and waiting time and perceived sickness.
- iii. **The need factors:** this tells of the immediate cause of healthcare service use. Andersen (1995) looked at perceived and evaluated needs where he related perceived needs on one hand to individuals' view of their general health and functional levels and their experiences of illness symptoms, pain and whether they see their health needs as being significant enough to consult professional help. Evaluated

care (Andersen & Newman, 1973). These factors would, therefore, by their presence or absence, enable or hinder utilization to an individual that has predisposition to utilization.

The need for service factor is perhaps the most powerful predictor of utilization. Even with the existence of predisposing and enabling factors, the individual seeking care must still perceive the need for healthcare before seeking care. In simple terms therefore, utilization of services and facilities only becomes practicable when an individual despite being predisposed and having available enabling conditions, also genuinely feels the need for utilization by way of consulting with the healthcare providers or by visiting an antenatal clinic if we go back to the example of the woman within child bearing age. It should be noted too that need alone does not influence service utilization as an individual has to be predisposed and also have enabling conditions. A perception of illness is necessary for use of a health service (Andersen &



Andersen's Behavioural Model of Health Services Utilisation (Adapted from Wolinsky, 1988)

need on the other hand is the professional judgement of individuals' health status and the need for medical care. This is made possible only after a person has presented before a medical care provider while perceived need makes for the presentation and explains healthcare seeking.

The model posits that certain factors predispose people towards healthcare services utilization, while others would enable the utilization of such services. Even though an individual may be predisposed to using a health service given the person's age or educational status for instance, some means must be available for him or her to do so (Andersen & Newman, 1973). Take for example, a woman in her child bearing age is automatically predisposed to service utilisation due to the fact of her exposure to the risk of pregnancy but she can only actually utilise the services if she has the enabling conditions in her favour. Enabling conditions make health service resources available to the individual and they include among other factors family and personal income, health insurance, and access to a source of

Newman, 1973).

#### Critique of Andersen-Newman's Behavioural Model

This model has failed to out rightly indicate the place of distance, transport availability and mobility as these bother on utilization pattern. This shortcoming has however been corrected by Andersen's expanded and refined version of the model, which provides a framework for the inclusion of the healthcare system clause that considers health policy, resources, and organization. Also, Buor (2002) incorporated distance and provider characteristics. He indicated that utilization is based on provider characteristics, user characteristics, and restrictive factors, such as distance, location of facilities, and service cost. Baker (2005) also noted the influence of distance factor on utilization pattern. The model is also faulted to be less useful in predicting behaviour in prospective studies and studies where attempts have been made to change the belief to obtain behaviour. The above listed criticisms levelled against the model

do not however leave it without merit as can be seen in the ensuing section of this paper.

### Applicability of Andersen-Newman's Behavioural Model

This model has had varying success in predicting actual community service use. Krout (1983) has found that the predisposing characteristics of being older, female, unmarried, and more highly educated, and the enabling characteristic of income, are associated with increased likelihood of service use. Also very important is its usefulness in explaining people's past behaviour where utilization is concerned.

### Choice-Making Model

The Choice-Making Model was proposed by Young (1981) based on his health services utilization study in Mexico. According to the model, an individual's choice of health services is dependent upon the four variables of perception of gravity, knowledge of home treatment, faith in remedy and the accessibility to treatment.

**Perception of Gravity:** Emphasis here is on individuals and their social network's perceptual impression of illness severity. The assertion is that various cultures classify illness by level of severity and by extension one can argue that this also rubs off on the definition of illness. So an individual's perception as well as an individual's social network which connotes one's social relationship especially as it bothers on the sharing of knowledge/views on healthcare determines utilization to a large extent (Cockerham, 1982).

**Knowledge of Home Treatment:** This refers to home, kin, lineage or village therapies that may be found in some regions. The argument is that utilization of health services is based on individual's knowledge of efficacious services. In this case, therefore where a person is aware of efficacious home remedies, he or she is more likely to utilise this before going out to seek other remedies (professional healthcare services inclusive).

According to Young (1981) therefore, utilization may be based not only on knowledge of services and facilities but as well on the efficacy of the

home remedy or treatment. Important in the understanding of this variable is the role of lay referrals. Cockerham (1982) refers to this as a "system of non-professional persons" that functions in the treatment of symptoms and identification of treatment options. These play an important role in the utilization of facilities and services not only because at the point of need ill persons may be unable to make choices for themselves and so be dependent upon the choices of others, but also on the fact that no single individual can at any point in time have an exhaustive knowledge of treatment options.

**Faith in Remedy:** Faith in remedy bothers on an individual's belief in the ability of a treatment option to produce the desired result; in other words it considers the effectiveness of treatment for any episode of illness. Indicatively, individuals are bound to utilise the treatment options they have confidence in or believe in for cure of their illness situation. This means that they may not utilise treatment options that they rate as not being effective in the treatment of certain illness situations.

**Accessibility to Treatment:** This encompasses the cost of using health services/facilities as well as the availability of these services/facilities. Talking of availability one considers the situation of the facilities as well as proximity to the user as these together inform the decision one would take so long as utilization of services and facilities in treatment options is concerned. And as emphasised by Wolinsky (1988), Young refers to access as the most important influencing factor on healthcare utilization and agreeably too one would discover that perception of gravity, and having faith in a particular remedy may not really enhance utilization if accessibility especially in terms of cost is not placed into consideration.

For a woman who is pregnant or has an under five child, utilization of services be they ante-natal and child care for her will be based on the four variables mentioned earlier; thus where she will seek care will be determined by the merger of the four variables where she feels her situation as being very severe, has information of home treatment that she particularly has faith in its efficacy and where she can access the



Young's Choice Making Model (Designed by Esther Gbaden, 2017)

said home treatment then she is most likely to act in the affirmative, thus increasing utilization if otherwise however her behaviour would also be in line with the prevailing situation. This perhaps can be used to explain why most women give birth at home even where the ideal needed healthcare facilities and services are within reach.

### Critique of Young's Choice Making Model

Young's choice making model has not adequately explained the effect of an individual's prior experiences of illness. Past experiences are however important as they influences perception of severity, but from the view point of the Individual. For instance, Young in considering perception of gravity bases it on preconceived severity as experienced by the individual's network groups and not the individual's prior experiences (Wolinsky 1988). If an individual's prior experience of an illness is severe he or she is likely to perceive it as such and so respond quickly by making a move to prevent a repeat or future occurrence of the situation and this does not play out in the same way if the said individual's experience differs from that of his/her social network. This model has also failed to make a case for the utilization of healthcare services for maintenance of healthy lifestyle forgetting that it is also possible for people to access healthcare for the purpose of maintaining their health and not necessarily because they are at risk.

### Conclusion

Igun's 1988 stages in health seeking model agrees to a very large extent with Young's 1981 choice making model. Though situated in different geographical milieu, Africa and America respectively, the models can be used interchangeably in the Nigerian setting as they both have similar constructs. On the other hand, Rosenstock's 1960's Health Belief Model captures utilisation of services in similar ways as Andersen-Newman's 1973 behavioural model with a strict departure point based on the latter's emphasis on the importance of "the need factor".

Together the three models as used in the work can well be used to explain the exigencies of health care service utilisation in Nigeria. However, Igun's 1988 stages in health seeking model and Rosenstock's 1960's Health belief model best explains these exigencies and are therefore the preferred models for the researcher. The researcher views health care services utilisation in Nigeria from the view point of Igun's 1988 stages in health seeking model and Rosenstock's 1960 Health Belief Model. This draws from the fact that while Igun's model explains

utilisation from the point of view of "communal responsibility" that is true of a mechanical community as practiced in Nigeria and very importantly too, Rosenstock's model has effectively complimented it by incorporating in details factors such as perceived severity, perceived benefits and perceived cost as these go a long way in determining whether healthcare services will be utilised or not.

### References

- Andersen R.M., Newman J.F. (1973). Societal and individual determinants of medical care utilization in the United States. *Milbank Memorial Fund Quarterly-Health and Society* 51(1):95-124.
- Andersen, R.M. (1995). Revisiting the behavioral model and access to medical care: does it matter? *J Health Soc Behav.* 36(March):1-10.
- Asakitikpi, A. E. (2008). Born to Die: the Ogbanje phenomenon and its implication on childhood mortality in southern Nigeria. *Anthropologist.* (10)59-63.
- Becker, M.H. (Ed.). (1974). The health belief model and personal health behaviour. *Health Education Monograph*, 2.
- Buor, D. (2003). Analysing the primacy of distance in the utilization of health services in the Ahafo-Ano South district, Ghana. *International Journal of Health Planning & Management.* 18(4), 293-311.
- The Center for Disease Control. (2004). *Epi Info* (Version 3.2.2, April 4). Atlanta: The Center for Disease Control/National Institutes of Health.
- Cockerham, W. C. (1982). The Process of Seeking Medical Care. In *Medical Sociology* (2<sup>nd</sup> Ed). 68-100. Englewood Cliffs, NJ: Prentice Hall.
- Earp, J. A. and Ennett, S. T. (1991). "Conceptual Models for Health Education Research and Practice" *Health Education Research* 6(2), 163-171
- Frankenberg, R. (1969). "Man, Society and Health in the development of Zambian Medicine". *African Social Research* 8
- Freidson, E. (1960). Client Control and Medical Practice. *American Journal of Sociology*, Vol. 65.
- Gazali, W.A. (2009). *Factors Affecting Awareness and Utilization of Maternal Health Services in Maiduguri Metropolitan Area*. Unpublished PhD Thesis Submitted to the Dept. of Sociology, Bayero University Kano.
- Glanz, K., Lewis, F.M. and Rimer, B.K. (Ed.). (1996). *Health Behaviour and Health Education: Theory, Research and Practice*. San Francisco: Jossey-Bass.
- Glanz, k., and Rimer, B.K. (1995). *Theory at a Glance: A Guide for Health Promotion Practice*. (monograph) Bethesda, md: National Cancer Institute, NH publication No.95-3896
- Heinzelman, F. (1962). "Determinants of Prophylaxis

- Behaviour with Respect to Rheumatic Fever".  
*Journal of Health and Human Behaviour*, 3:73-81
- Hochbaum, G.M. (1958). *Public Participation in Medical Screening Programs: A Sociopsychological Study*. P.H. Publication. 572. Washington D.C.: Government Printing Office.
- Igun, U.A. (1988). *Medical Sociology: An Introduction*. Ibadan: Shaneson C.I. Limited.
- Janz, N.K., & Becker, M.H. (1984). The Health Belief Model: a decade later. *Health Educational Quarterly*, 11(1), 1-47.
- Kerlinger, F.N. (1986). *Foundations of Behavioural Research*. New York. Holt, Rinehart & Winston
- Kirscht, J.P. (1974). The Health Belief Model and Illness Behaviour. *Health Education Monograph*, 2.
- Krout, J. A. (1983). Correlates of service utilization among the rural elderly. *The Gerontologist*, 23, 500-504.
- Leventhal, H., G. Hochman, and I. Rosenstock. (1960). Epidemic Impact on the General population in Two Cities. Pp.14-23 in *The Impact of Asian Influenza on Community Life*. Washington, D.C.: U.S. Department of Health, Education, and Welfare.
- Parsons, T. (1951). *The Social System*. Glencoe, Il.: Free Press.
- Rebhan, D.P. (2007). *Health Care Utilisation: Understanding and Applying Models of Health Care Seeking Behaviour*. Online available @ [www.cwru.edu/med/epidbio/mphp439/healthcareutil.pdf](http://www.cwru.edu/med/epidbio/mphp439/healthcareutil.pdf) 10/22/2014
- Rosenstock, I.M. (1960). What Research in Motivation Suggests for public Health. *American Journal of Public Health*, 5, 295-301.
- Rosenstock, I.M. (1974). Historical Origins of the Health Belief Model. *Health Education Monograph*, 2, 328-335.
- Rosenstock, I.M., & Becker, M.H. (1988). Health Belief Model. Retrieved: 09/06/2014. [www.thecommunityguide.org](http://www.thecommunityguide.org)
- Sheeran, P. and Abraham, C. (1996). *The Health Belief Model*. Mackian, S. (2003).
- Ward, H., Mertens, T.E., & Thomas C. (1996). Health seeking behaviour and the control of sexually transmitted disease. *Health Policy Planning*. 12: 19-28.
- Wolinsky, F. (1988). Seeking and Using Health Services. *The Sociology of Health*, 2<sup>nd</sup> Ed., 117-144. Belmont, C.A.: Wadsworth
- Young, J. C. (1981). *Medical Choice in a Mexican Village*. New Brunswick, NJ: Rutgers University Press.