Care Communication: Is Patients' Adherence to Treatment Dependent on Doctors' Communicative Interaction?

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Abstract

Adherence to treatment is a vital aspect of medical care as it determines the success or otherwise of any medical encounter. Studies have shown that the doctor-patient style of interaction encourages or discourages adherence. This study, therefore, investigated the style(s) of doctor-patient communication (paternalism, mutuality, consumerism and default) used at the University College Hospital (UCH), Ibadan as it bothers on patients' adherence to treatment.The study adopted the doctor-patient relationship framework anchored on paternalistic, informative, interpretive and deliberative models. Accidental sampling technique was used to select 420 patients. The respondents were sampled across three out-patient departments (surgical, medical, and obstetrics and gynaecology). Three doctors who are heads of departments and three patients from the three outpatient clinics for in-depth interviews. The instruments used were communication styles and patients' adherence to treatment (CSPATQ, r = 0. 77) questionnaire and in-depth interview guide. Data were subjected to frequency and percentage distributions, Pearson product moment correlation and multiple linear regression analyses at 0.05 level of significance. Qualitative data were analysed thematically.A positive correlation was established between mutuality and patients' adherence to treatment (r = 0.24). The following variables have relative effects on patients' adherence to treatment Paternalism (β = 0.06), mutuality (β = 0.10) and default (β = 0.33) had relative effects on patients' adherence to treatment. This was supported by the in-depth interviews with the heads of departments and patients from the out-patient clinics. Mutuality as a communication style is perceived to enhance patients' adherence to treatment and should be encouraged.

Keywords: Communication style, adherence to treatment, Doctors, Patients, communicative

Introduction

Adherence to treatment is an essential part of health care delivery. The term is used to describe the degree to which there is total and strict obedience to a recommended behaviour, prescription, time and dosage of treatment (Ogundoyin, 2016). According to Wong & Lee, (2006), it is the extent to which patients' behaviour, in terms of taking medications, following diets, or executing lifestyle changes and how it coincides with medical or health instructions or prescriptions. Patients' adherence has been seen as an important link between doctors' recommendations and the patients' health outcomes. However, the issue of non-adherence by a patient has been linked or associated with many factors some of which, according to Taylor (2003), is patient's understanding of the information given by the doctor. If patients do not have a proper understanding of important information concerning their health, then, it is believed that the level of adherence will be low. It is believed that adequate understanding of an individual's health status can improve adherence if information is adequately given about the importance of the drug, side effect, the duration of drug use, understanding the disease and the consequences of non-adherence. If all these are lacking, the individual's likelihood to adhere might be low (Taylor, 2003).

Basic communication skill is necessary for forging relationship between a doctor and a patient, this skill significantly aids patients' adherence to treatment. This is because communication contributes to patients' understanding about their illness and the risks and benefits of treatment. It also provides encouragement that the patient needs which enhances adherence. Improved doctor-patient communication is a strategy that enhances adherence to treatment (Copper, Roter, Carson, et al, 2011). Beck, Daughtridge, Sloane, (2002) suggested through critical reviews that doctor-patients communication behaviours either contribute or damage care relationship as well as the quality of information that transpires between them (Zolnierek, DiMatteo, 2009). Beck et al (2002) opined that with collaborative communication, patients are able to win the trust of their patients which allows the doctors to integrate patients' needs, preferences and engage them in decision making in terms of treatment options in order to increase patients' adherence to treatment.

To a certain extent, research about the degree of care given by doctors in doctor-patient communication has shown improved patients' adherence and subsequently, good health outcomes. In a report by Travaline, Ruchinskas and D'Alonzo (2005) patient-physician communication starts from the process of history-taking to management decisions. This relationship thrives more on effective communication which is strongly rooted in the quality of information flow about patient's emotional health, symptom resolution, pain control, physiological measures (Travaline, et al, 2005) and function of therapy from the doctor. The fundamental part of effective communication is entrenched in doctor's ability to encourage patients to ask questions as well as engage them in the treatment choice and also make them understand the disease state, treatment risks and benefits as proposed by the health belief model. This communicative interaction often enhances patient's education aimed at managing both benign and malignant illnesses.

Communication could be seen as the link between patient's adherence to treatment and doctor-patient relationship as it contributes in no small measure to patient's understanding of doctor's instruction about illness, risk factors and benefits of treatment. Other contributory factors which include, empathy, understanding, support, collaborative partnership and patient centred interviewing are based on effective communication which enhances adherence (Zolnierek and DiMatteo, 2009).

Over the years, there has been an increased search for the problem of low adherence to prescribed intervention. Many factors have been attributed to low adherence in patients, some of which are substantial medical cost, increased hospital admissions (Wong & Lee, 2006) and interpersonal interaction in terms of doctor-patient relations, among other factors. This, according to them, is creating an ongoing frustration among health care providers and the only way to reduce or forestall such a problem is to take a critical look at the doctor's attitude towards his patients. The doctor's ability to elicit diagnosis, appreciate and respect patients' concerns, the provision of appropriate information, the demonstration of empathy and the development of the patient's trust are the key determinants of good adherence to medical treatments in patients (Wong & Lee, 2006). This then forms the basis of this study.

Objective of the study

The objective of this study is to ascertain the relationship between doctor-patient communicative interactions and patients' adherence to treatment regimen at the University College Hospital (U.C.H.), Ibadan, Nigeria and how these interactions influence adherence to treatment.

Literature Review

Doctor-patient communication styles

Relationship building is a vital part of any interaction and this does not exclude medical interactions, in order for this to be done, the doctor employs different styles of communication to arrive at diagnosis and subsequently treatment. This interaction forms the bedrock of any medical communication because the style in which a doctor communicates information to a patient is as important as the information itself (Gechanowski, Katon, Russo, Walker, 2001 and Bull, Hu, Hunkeler, Lee, Ming, Markson, 2002), these communication styles come in different form they are: Paternalism, Mutuality, Consumerism and Default, depending on which communication pattern used, patients are either encouraged or discouraged to adhere to treatment regimen because there is alternative medicine to fall back on. The uniqueness of these communication styles lie in who controls the interaction at any point in time. In a given situation, the doctor approaches communication process by dominating the consultation by doing all the talking and asking all the questions without giving the patient any opportunity to expatiate on any area of concern. This approach relies on closed-ended questions designed to elicit Yes or No answers. In this case, a disease-centred model is used by the doctor which focuses more on diagnosis rather than allowing self-expression by patients or encouraging the patient to voice out the nature of his illness through his

experience (Paternalism) (Maguire, 2013). This approach is like a father-child relationship.

The second type has to do with the patient knowing exactly what he wants and compelling the doctor into adopting the patient-centred approach. Here, the patient takes on a leading role in the conversation, thereby; he expresses himself to the doctor on all areas of concern about his health (Consumerism).

Another approach is Default where the doctor lessens his control of the consultation process and the patient refuses to accept it by not opening up to the doctor due to shyness or related emotional display. Here, the patient-centred style fails, thereby, making the conversation resulting in a dead-end (Maguire, 2013).

In the last type, the doctor uses open-ended questions to stimulate the patient to talk about his complaints. This approach involves taking time to listen and trying to understand the patient's point of view (Mutuality). This type of approach promotes partnership between the doctor and the patient, in other words, both are seen as equal team player in the consultation process. Thus, this study sought to investigate which of the communication styles enhance patients' adherence to treatment as well as establish the influence and relationship between doctor-patient communicative interactions and patients' adherence to treatment.

Causes of non-adherence to treatment

Patients' dissatisfaction with doctor-patient interaction can be responsible for non-adherence. When patients are satisfied with the information provided by the doctor and with the medical interaction, the outcome will be higher or increased adherence to recommended treatment. Taylor (2003) opines that when patients are dissatisfied with doctor-patient interaction, there is the possibility of non-adherence to medical recommendation and thereby, avoid using the same medical services in the future.

Satisfaction with the relationship with the doctor also predicts adherence. Taylor (2003) observes that when patients perceive the doctor as warm and caring, they tend to be more adherent; patients tend to be more observant and thereby make their own decision concerning their relationship with their doctors, whereas doctors who show anger or impatience toward their patients have more non adherent patients. Also, doctors who answer patients' questions and give them information about their symptoms have more adherent patients. This might be attributed to the fact that such actions might convince them that their doctors are clinically competent.

Another factor that may promote non adherence is the patients' belief systems (Marks, Murray, Evans, Willig, Woodall, Sykes, 2005). According to these scholars, if the prescribed medication conforms to the patients' belief system, the more likely they are to adhere to treatment. Also, the health belief model has been used to explain adherence to medical recommendations. It argues that the extent to which a person adheres depends upon perceived seriousness of the disease, vulnerability to disease, benefits of the treatment recommended and barriers to the treatment in question (Marks, et al, 2005). In the light of this, there have been degrees of support for the model. It has

been found that the more the patient perceives his condition to be serious, the more likely he will adhere with the recommended treatment. Marks, et al (2005) reported that belief in the benefit of medical care and low barriers to care predicted high adherence and the perceived success of treatment was a better predictor of adherence in diabetics than the perceived barriers. Based on the above discussion, it can be said that effective communicative interaction between the doctor and the patients can improve adherence to a great extent.

Communication factor that promotes patient's adherence to treatment

Taylor (2003) opines that many communication factors contribute to adherence, some of which are patients' decision to adhere to treatment regimen, patients' understanding of the treatment regimen, emotional satisfaction with the relationship between the patient and the doctor as well as patient centred interview. Attention will therefore be paid more on patient centred interview as it relates to patient's adherence to treatment. Taylor (2003) claim that the adherence level in a patient reaches the highest point when a patient receives a clear, technically-free explanation of the etiology, diagnosis, and treatment recommendations. Similarly, it has been observed that adherence is enhanced in a patient if he has been asked to repeat the instructions, especially when the instructions are written down.

Patient-Centred Interviewing

Lyles, Dwamena, Lein, & Smith, 2001 claim that interest in the medical interview has increased greatly over the past two decades since researchers now have the understanding that there is a relationship between communication and health. Among the core characteristics of the patient-centred interview are gathering of data for diagnosis and treatment exclusively consisting of information concerning disease symptoms, medical history, and diagnostic tests. In 1977, George Engel advocated expanding the medical paradigm. He believes that in patient-centred interview, the social and psychological dimensions of human existence had to be considered alongside biomedical data in order to fully account for health and the disease of patient (Lyles, et al, 2001).

Smith (2001), describes patient-centred interviewing as gathering personal or psychological data from patients and also competency interviewing techniques that elicit information as well as relationship-building skills that nurture confidence and human understanding. During the patient-centered interview, the patient is motivated to take the conversational lead, thereby, initiating topics in the area of their knowledge and experience that is, symptoms, worries, preferences and values. In this type of interview, the doctor is not expected to insert new ideas into the conversation but he is expected to allow the patient to direct the conversation (Smith, Marshall-Dorsey, Osborne, 2000). This approach is rightly called patient-centred because the doctor acknowledges and meets the need of the patient to express problems, emotions and concerns in order to obtain information. When this is effectively optimised, it has been observed to be associated with numerous positive outcomes for both patients and doctors.

It has been observed that this type of approach has proved to be advantageous in a number of areas, including patients' health, patient and doctor satisfaction among other benefits. Research has linked effective patient-centered interviewing to improved health outcomes. Smith, Marshall-Dorsey, Osborne, (2000) reported the findings of a research conducted by Kaplan, Greenfield, Ware, in 1989, who found that, among patients with chronic diseases, reduced doctor information-giving and low levels of patient control in the doctor-patient dialogue, has been directly associated with poorer health outcomes. They also found that patients who were encouraged to participate in their care by asking questions during medical appointments, had greater improvement in blood pressure and glucose levels compared with patients whose doctors were more authoritarian. This study demonstrated that patients benefit more when the relationship between the doctor and the patient is cordial in such a way that medical interview is shared and information needs are met.

Another area that is worthy of note in terms of the benefits of patient-centred interview is the patient's satisfaction which is important because it influences the patient's compliance with medical treatment which as a result impacts health.

Smith (2001) proposes some essential elements that are to be contained in patient-centred interview, which was called Basic Skills for Patient-Centred Interview:

Non-focusing, open-ended skills

- Silence
- Nonverbal encouragement (head nodding, leaning forward)
- Neutral utterances, continuers ('um-hum')

Focusing open-ended skills,

- Reflection, echoing (eg, patient says: 'I 'm worried'; physician echoes 'Worried?')
- Open-ended requests ('can you say more about that?')
- Summary, paraphrasing

Emotion-seeking skills

- Direct ('how did that make you feel?)
- Indirect: self-disclosure, impact on life, impact on others, and belief about problem

Emotion-handling skills (N U R S)

- **N**aming, labeling (eg, 'you sound sad.')
- **U**nderstanding, legitimation (eg, 'I can sure understand why …')
- **R**especting, praising (eg, 'you have been through a lot.')
- **S**upporting, partnership (eg,'I am here to help you any way I can.')

In an attempt to look into the medical interview, a set of core experienced patient-centred educators and researchers (Smith, 2001; Smith, et al 2000 and Lyles, Francesca, Lein, & Smith 2001) claim that these basic ingredients have been found to be essential and need to be included in a patient-centred interviewing curriculum. According to the basic skills mentioned above, open-ended skills, both non-focusing (eg, silence, neutral

utterances, non-verbal encouragement) and focusing (e.g, echoing, requests and summary statements), elicit patient talk. It was their belief that focusing skills respectfully keep the patient on track during a medical interview and redirect patients so that they continue to discuss topics that enhance understanding of their primary concern, by knowing how and when exactly the non-focusing and the focusing skills are to be used, doctors are more likely to gather accurate and reliable information about the patient. However, emotion-seeking skills and emotion-handling skills provide the doctor with a clue to the psychological aspect of the patient's story, and it also forms the building block of the doctor-patient relationship. It also affords the doctor with a greater chance to make the patient feel better.

Theoretical Framework

Four models that are crucial to the Doctor-patient relationship were considered; paying particular attention to their various features that may encourage or discourage patients from adhering to treatment.

Paternalist Model

Paternalism is regarded as the traditional form of doctor-patient relationship and it is still what is commonly used in most interactions. This type of doctor-patient communicative interaction places more emphasis on a passive patient and a dominant doctor. It is quite natural for a person to fall sick and decide to seek technically competent help and also adhere to medical advice. According to this model, the patient's role is passive and dependent; on the contrary, the doctor's role is defined as 'professionally dominant and autonomous'. Consequently, the doctor validates the patient's illness and determines the course of treatment. In doing so, the doctor is authorised by his professional principles to act only in his sphere of expertise, to maintain an emotional aloofness and distance from the patient, and to act in the patient's best interest.

The Informative Model

In this model of communicative interaction, the central role of the doctor is to provide the patients with relevant and important information about their health, leaving the patients to select, among various interventions presented by the doctor, for the doctor to execute the selected interventions. To this end, the doctor takes it upon himself to inform the patient of his disease state, the nature of possible diagnostic and therapeutic interventions, the nature and probability of risks and benefits associated with the interventions, and take care of every uncertainty of the patient's knowledge about his health. As a result, patients could be acquainted with all medical information relevant to their disease and all interventions available to the patients for them to select the interventions that best realise their values and what they can cope with (Chin, 2002).

In the informative model, the doctor is seen as the supplier of technical expertise, providing the patient with the means to exercise control. The doctor also has an important obligation to provide truthful information to maintain competence in his area of expertise

and to seek also the opinion of others when his knowledge and skills are inadequate (Chin, 2002). The patient is also considered as a person who is eager for information from the doctor. Roter (2000) regards the patient in the medical encounter as a consumer rather than a patient, hence, the establishment of the use of the term health care provider in replacement for the traditional doctor. This perspective is in a bid to change the social relationship between the medical profession and the lay world; therefore, the relationship should be referred to as a consumer-provider exchange. With these features in mind, patients are equipped with the necessary information that can encourage them to adhere to treatment even when faced with challenges of non-compliance.

The Interpretive Model

Under the interpretive model, the objective of the doctor is to explain the patient's values and what he actually wants. The model assumes that the values of the patient are unknown to the patient; it is therefore, the responsibility of the doctor to work with the patient. In this model, the doctor serves in his capacity to the patient as a counsellor or adviser, by supplying relevant information, helping and suggesting what treatment best realises these values. The role of the doctor is also the same as mentioned in the informative model but also requires engaging the patient in a joint process of understanding. In the interpretive model, the conception is of patient's autonomy and self-understanding. Here, the patient has a full understanding of self and how the various medical options bear on this self or his individuality (Emanuel & Emanuel, 1992). In addition, the patient is expected to simply choose among available options because he lacks medical training but instead, the doctor helps to interpret and understand the patient's general values and preferences. The doctor then recommends the treatment option which is mostly consistent with the patient's values.

In the interpretive model, patients' autonomy is seen as an important aspect of the interaction. Patients are made to understand all aspects of care-giving and care-seeking which also encourages patients to ask questions about treatments, side effects and any area of concern since this model encourages detailed explanation of the disease and treatment choice that best suits the patients' value. The striking advantage of this model is that it places more emphasis on patients' autonomy by ensuring patients' understanding and interpretation of values that suits them. This may in turn enhance patients' satisfaction.

The Deliberative Model

In the deliberative model or shared model, the doctor is seen as a teacher or friend, engaging the patient in a dialogue, that is, it is a shared decision-making process which involves a two-way exchange of information preferences on what course of action would be best. The concept of patient autonomy is moral self-development, that is, the patient is empowered to consider through dialogue, alternative health-related values, their worth, and their implications for treatment. In the deliberative model, the doctor discusses only health-related values, that is, values that affect or are affected by the patient's disease and

treatments, hence, the doctor aims only at persuading the patient to adopt a given behaviour and, ultimately, coercion is avoided. The role of the doctor is to help the patient explain information on the patient's clinical situation and the types of values embodied in the available options. In other words, the doctor assists the patient in value clarification and processing the various potential interventions. The aim is not only to discuss what the patient could do but also what the patient should do in a particular situation. This will help the patient to formulate plans and make decisions that are most authentic and relevant to him. This model is a type that provides for professional guidance which is relevant in this internet age where patients are afforded the opportunity to have access to streams of information. Aside from helping the patient to make decisions in his best interest, efforts are also made to facilitate and enhance the patient's capacity for self-determination in all areas which also includes adherence to treatment in accordance with the patient's perspective.

Methodology

The population of the study consists of doctors who worked in and patients who visited the University College Hospital, Ibadan. The population of doctors who were Consultants in the three clinics is as follows: Surgery 21, Medicine 20, Obstetrics and Gynaecology 19, hence, the total number of doctors in all the clinics was 60 (Department of Human Resources, University College Hospital, Ibadan, 2013). The heads of the three departments studied were considered for the in-depth interview (IDI) as they were among the most senior in the Consultant cadre and they were also expected to have more experience in the areas of doctor-patient relationship. In this study, accidental sampling technique was used in the selection of patients, while purposive sampling technique was used to select both patients and doctors for IDI.

For the selection of Patients, the patients who visit the three out-patient clinics are heterogeneous in nature; they visit UCH with the aim of seeking care. The categories of patients that were considered for the study were those that visited the various clinics between May 15 and August 15, 2013. The table below shows the distribution of patients according to their clinics.

Distribution of Patients according to their Clinics

S/No	Outpatient Clinic	No of clinics per day	No of clinics per week	No of clinic days per month	Average attendance per day	Average attendance per week	Average attendance per month
1	Obstetrics and Gynaecology	2	11	48	56	394	1,709
2	Surgery (SOP)	2	12	50	57	397	1,721
3	Medicine (MOP)	3	20	88	63	442	1,964
	TOTAL	**7**	**43**	**186**	**176**	**1,233**	**5,394**

Source: Medical Statistics Unit, Health Records Department, University College Hospital, Ibadan, 2013

Stage 1: Sample selection was organised along the lines of the three departments, namely; Surgery, Medicine and Obstetrics & Gynaecology.
Stage 2: In each of the Departments of Medicine, Surgery and Obstetrics & Gynaecology, a simple random sampling technique, using a table of random numbers, was employed. A sampling frame consisting of all the clinics named and listed in numerical order, were used to select 5 clinics out of a total number of 20, 12 and 11 clinics each week respectively, i.e. a total number of 15 clinics were selected each week. The total number of clinics selected in a month is 60 (i.e. 15 X 4 = 60 clinics). **Stage 3:** Accidental sampling technique was used to select seven patients in each clinic (out of an average daily attendance in each clinic of 25 patients). The total number of patients selected in a month was 7 X 15 X 4 = 420 patients. For sample size, this was made up of 140 respondents selected from each of the clinics, making 420 respondents for the three departments. Three patients were selected for in-depth interview (IDI) to confirm the responses of the doctors, one taken from the out-patient clinic of each of the departments under study using purposive sampling method. These patients were selected purposively because they have attended the clinics more than ten times; consequently they were expected to have interacted most with their doctors compared with other patients. Also selected for IDI were the 3 doctors who were also the heads of the three departments studied. Thus, 426 respondents which included 420 patients who were administered questionnaire, 3 patients and 3 doctors who were both interviewed were recruited for the study.

Patients' co-operation was best obtained during clinic days hence; the researcher visited the three departmental clinics in order to get them enlisted in the study. The doctors, on the other hand, were approached during clinic days and any other days that were convenient for them. Ethical approval was sought and obtained through the UI/UCH Ethics Committee.

Results and Discussion of findings

This study tried to establish how doctor-patient communicative interactions influence patients' adherence using regression analysis. The relationship between doctor-patient communicative interactions was however sought first using correlation analysis followed by regression analysis to determine the influence the communicative interactions have on patients' adherence to treatment.

Table 1: Correlation Analysis between Doctor-Patient Communicative Interaction and Patients' Adherence to Treatment

Variables	Patients' adherence to treatment	Paternalism	Mutuality	Consumerism	Default
Patients' adherence to treatment	1				
Paternalism	-0.07	1			
Mutuality	0.24**	-0.09	1		
Consumerism	0.03	-0.18**	0.53**	1	
Default	-0.26**	-0.21**	0.00	0.23**	1

Note: ** Correlation is significant at the 0.05.

Table 1: shows the correlation between doctor-patient communicative interaction and patients' adherence to treatment. It shows that the relationship between mutuality (r = 0.24) and patients' adherence to treatment is positive and significant, that is, the higher the mutuality, the higher the patients' adherence to treatment. On the other hand, the table shows a negative but significant relationship between default style (r = -0.26) and patients' adherence to treatment, implying that the higher the default style, the lower the patients' adherence to treatment.

The findings of the correlation analysis reveal that mutuality as a pattern of doctor-patient communication increases the patients' adherence to treatment. This implies that mutuality has a significant relationship with patients' adherence to treatment. Also, there is a negative but significant relationship between paternalism and default.

Table 2: Regression analysis of doctor-patient communicative interaction and Patients' Adherence to Treatment

Variables	Beta Coefficient
(Constant)	18.25**
Paternalism	-0.06*
Mutuality	0.10**
Consumerism	-0.10
Default	-0.33**
R-Square	0.139(13.9%)
F-statistic	16.72
P-value	0.00

Note: * and ** depict significance at the 5%

Table 2: shows the regression analysis of doctor-patient communicative interaction and adherence to treatment. The result shows that some of the communication patterns have influence on respondents' adherence to treatment and it is significant. The table shows that all the communication patterns under study jointly account for a significant variation in patients' adherence to treatment. The F-statistic which measures the joint contribution of independent variables to the model is 16.72 and is statistically significant at 5% level. In addition, the estimate of R-square shows that 13.9% of the proportion of variability in patients' adherence to treatment variables explained the doctor-patient communication patterns. In other words, paternalism, mutuality and default styles of doctor-patient communicative interaction can only explain 13.9% of patients' adherence to treatment. However, there are some other factors beyond the scope of this study that may explain the remaining 86.1% of patients' adherence to treatment. The prediction falls within an acceptable range, given that the study is cross sectional in nature.

It further reveals that paternalism significantly influences respondents' adherence to treatment at 5% level, also, mutuality and default significantly influence respondents' adherence to treatment at 5% level. That is, a unit increase in mutuality ($\beta = 0.10$) increases patients' adherence to treatment while a unit increase in paternalism ($\beta = -0.06$) and default styles ($\beta = -0.33$) of doctor-patient interaction decrease patients' adherence to treatment respectively. This implies that when mutuality as a style of communication is increasingly used by the doctors, more patients tend to adhere to their treatment regimen. On the other hand, when the use of paternalistic and default styles of communication are adopted more by the doctors, adherence to treatment by their patients tend to decrease.

The responses from the interview are as follow:

The Head of Department of Medicine, in his response, was of the view that the patient-doctor communicative interaction improves patients' adherence to treatment in

that openness about side effects, benefit of treatment and the risk of leaving the disease untreated may encourage the patient to adhere to treatment. He also said that patients are expected to get explanation from their doctors about each treatment, the reasons for each treatment, the benefits of each treatment, side effects and the risks of leaving the disease untreated. He further said that patients' motivation is not only a function of the ability of the doctor to explain the treatment to the patients. Other factors like the cost of treatment, availability of drugs, effectiveness of the drugs as well as side effects are also involved. The patient needs to have the treatment available, affordable and effective with little or no side effects, coupled with the doctor's explanation for him to be well motivated. Therefore, with proper explanation and involvement of patients in making cost conscious efforts to choose treatment (drugs) under the guidance of the doctor, a patient who can afford a treatment is expected to be well motivated and be better able to adhere to treatment regimen.

The Head of Department of Obstetrics and Gynaecology (O and G) thinks the patient-doctor communicative interaction improves patients' adherence to treatment. He said that the doctor is expected to explain to the patient why he is using the drugs, the possible side effects of the drugs and what he expects the patient to do without which patients will be uncooperative. He also stressed that patients who tend to adhere to drug prescriptions are those that are motivated and those who acknowledged that they are in need of treatment, but patients who think that they are not in need of the treatment might not adhere to the treatment. A doctor needs to explain in detail their ailments and the need to give them prescribed drugs by telling them in simple and open manner about side effects of those drugs; if not, the drugs will be stopped by the patient, which will not help to achieve positive health outcomes. In all, the education and explanation that is given the patients help in promoting adherence.

The Head of Department of Surgery also thought the patient-doctor communicative interaction improves patients' adherence to treatment a lot because if the doctor prescribes a drug for a patient without explanation on side effects, the patient will stop taking it, but if the patient is equipped with the necessary information on the side effects, he may continue with the drugs. He, therefore said, "…if you communicate well with your patient, he will adhere better to your treatment and if you don't, many patients would take their own decisions."

He also said that he did not think the patients are well motivated, no matter what is done; they can never be motivated because they have already formed a wrong impression about U.C.H. For example, some of them believe that if you are given injection in U.C.H., you will die and the cost of treatment in U.C.H. is very high. This may force the patients to go to quacks to seek for alternative and cheaper source of treatment. The motivation can be improved by honest and sincere communication by the doctor.

In order to complement the responses of the three heads of departments, the three patients' responses interviewed from the three out-patient department is as follows:

The patient from SOP believes that patient-doctor communicative interaction enhances the patients' adherence to treatment because when both parties interact well, it helps the patient to be more committed to the prescription given by the doctor. The patient from O and G is certain that if the patient and doctor interact well, the patient will be encouraged to adhere to treatment regimen, since the doctor will take time to answer questions relating to the patient concerning the treatment regimen. The patient from MOP also believes that it will enhance adherence to treatment regimen because both the doctor and patient will make out time to discuss both the risks and benefits of treatment which will encourage the patient to adhere to his treatment.

The summary of these responses is that the three doctors and patients agreed that adherence to treatment by the patients can only be encouraged with proper, honest and detailed explanation of the treatment to be prescribed to them by the doctors, including the side effects of the drugs. This pattern of doctor-patient communication is in the realm of mutuality which is known to enhance patients' adherence to treatment.

The regression data reveal that mutuality significantly influence patients' adherence to treatment. It shows that mutuality increases adherence to treatment by 0.097, which implies that patients are willing to adhere to the treatment regimen since they are involved in their treatment decision, unlike paternalism and default which show that the two communication styles discourage adherence to treatment by patients. This may be so because both communication styles do not go into real details on what patients are likely to expect during the cause of treatment as compared with mutuality. So, the desire to take care of the health condition may likely pose a problem to them.

In the same vein, the correlation analysis reveals that there is a significant relationship between the pattern of doctor-patient communication and adherence to treatment. It shows that mutuality has a positive influence on patients' desire or willingness to adhere to treatment at 0.241, whereas, the default style reveals both negative and weak correlation as far as adherence to treatment is concerned at -0.255 which is significant. In other words, the default style discourages patients' adherence to treatment.

This contradicts the findings of the interview conducted on the doctors, which revealed that they favour the paternalistic style of doctor-patient communication.

From the analysis above, the following could be inferred:

That patients' involvement in treatment choice encourages them to adhere to treatment. In addition, their knowledge about the benefits of treatment, the risk involved in leaving the disease untreated, the possible side effects of treatment and lastly, encouraging them to make cost conscious decision tend to increase adherence. On the other hand, the default and paternalistic styles discourage adherence because the communication styles are not participatory and as informative as mutuality. So, patients tend to discontinue treatment when they possibly experience side effects that are beyond explanation or when made to buy drugs that are quite too expensive for them.

The finding of this study agrees with that of Heisler, Bouknight, Hayward, Smith, Kerr (2002), who found that the communication styles adopted by both the doctor and patient have an implication for health outcomes. Heisler et al, (2002) observed that provider communication significantly increased adherence to treatment in diabetic patients, especially when the communication style is participatory. Also, Abioye-Kuteyi, Bello, Olaleye, Ayeni and Amedi (2010), revealed that information provision by the doctor predicted adherence to treatment regimen.

According to Wong and Lee (2006), adherence to treatment regimen is attributed to the doctor's ability to elicit patients' concerns and the provision of appropriate information. In addition, Scotts, Blyth and Jones (2009) aver that patients' involvement in clinical decision-making has also been shown to improve treatment adherence and reduce the need for repeated consultations with other doctors.

This can be corroborated with the health belief model (Marks, Murray, Evans, Willig, Woodall, Sykes, 2005), which states that a patient adheres more to medical treatment if he is well informed about the costs and benefits of treatment, that is, through information, patients can perceive the effectiveness of the treatment and the problems or costs that may ensue thereafter. Thus, beliefs that treatment will benefit the condition substantially increases adherence to doctor's instruction, whereas, any ambiguities about safety, side effects or distress associated with treatment reduce the likelihood that patients will do as advised. In addition, if a patient is well informed about possible side effects of drugs or therapy during or after treatment, then the likelihood that the patient will adhere to the recommended treatment will be high.

In a study by Mead & Bower (2000), a friendly, sympathetic approach may increase the likelihood of patients' adherence to treatment, whereas, a negative emotional response by either party (anger, resentment) may serve to complicate medical judgment or cause patients to default from treatment.

According to Street, Krupat,, Bell, Kravitz, (2003), information given to patients during any medical consultation enhances patients' satisfaction and adherence to medical treatment. In the same vein, Taylor (2003), avers that the adherent level in a patient reaches the highest point when a patient receives a clear, technically-free explanation of the etiology, diagnosis and treatment recommendations.

Conclusion

This study has examined the various doctor-patient communicative interactions adopted by doctors with their patients in relation to adherence to treatment regimen. The relationship and influence of adherence to treatment was examined in relation to doctors' communication patterns. Based on the finding of this study, the following conclusions were made: Mutuality as a communication style was found to enhance adherence to treatment, from the findings of this study, patients affirmed that they are actively involved in the communicative interaction and they are thus able to hear from their doctor their disease state, treatment options, preventive strategies and ultimately, the doctor

allows them to bring in their own ideas into the interaction. The patients are of the view that this style of interaction allows them to discuss freely with their doctor, and permits them to make treatment choices that best suit them and, by implication, affords the doctor to spend more time with them.

Fewer patients identified the default style as being exhibited by the doctor. The style which has to do with the doctor lessening his control over the interaction has been found by this study not to increase patients' adherence to medical treatment.

From the findings of this study, it was discovered that paternalism and consumerism, unlike mutuality, did not increase patients' adherence to treatment which is crucial to health outcomes.

References

Abioye-Kuteyi, E.A., Bello, I.S., Olaleye, T.M., Ayeni, I.O., and Amedi, M.I. 2010. Determinants of Patient satisfaction with Physician interaction: a cross-sectional survey at the Obafemi Awolowo University Health Centre, Ile – Ife, Nigeria. *South African Family Practice;* 52(6): 557 – 562.

Beck, RS, Daughtridge, R, Sloane, PD (2002). Physician-patient communication in the primary care office: A systematic review. *Journal of American Board of Family Practice;*15(1):25-28.

Bull, S.A., Hu, X.H., Hunkeler, E.M., Lee, J.Y., Ming, E.E., Markson, L.E. 2002. Discontinuation of use and switching of antidepressants: influence of patient-physician communication. *Journal of American Medical Association*; 288 (11): 1403-1409.

Chin, J.J. 2002. Doctor-patient relationship: From medical paternalism to enhanced autonomy. *Singapore Medical Journal;* 43 (3): 152-155.

Copper, LA, Roter, DL, Carson, KA, et al (2011). A randomized trial to improve patient centered care and hypertension control in underserved primary care patients. *Journal of General internal medicine;*. 26(11):1297-1304.

Department of Human Resources, University College Hospital, Ibadan, (2013).

Emanuel E.J. and Emanuel L.L. 1992. Four Models of Physician-Patient relationship. *Journal of The American Medical Association;* 267: 2221-2226.

Gechanowski, P.S., Katon, W.J., Russo, J.E., Walker, E.A. 2001. The patient-provider relationship: attachment theory and adherence to treatment in diabetes. *American Journal of Psychiatry;* 154(1): 29-35.

Heisler, M., Bouknight, R.R., Hayward, R.A. Smith, D.M. and Kerr, E.A. 2002. The relative importance of physician communication participatory decision making and patient understanding in Diabetes self-management. *Journal of General Internal Medicine;* 17(4): 243-252.

Lyles, J.S., Francesca, C.D., Lein, C.,Smith, M.D. 2001. Evidence-based Patient-Centered Interviewing. *Journal of Communication;* 8: 7; 28-34.

Maguire, K. 2013. Doctor/Patient relations. In: *Sociologies of Health and Illness E-Learning Databank.* Retrieved on 30 April, 2013 from www.medgraphics.com.ac.uk/shield/.

Marks, D.F., Murray, M., Evans, B., Willig, C., Woodall, C., Sykes, C.M. 2005. *Health Psychology: Theory, Research and Practice.* London: SAGE Publications Ltd.

Mead, N. and Bower, P. 2000. Patient-centredness: a conceptual framework and review of the empirical literature. *Journal of Social Science and Medicine;* 51: 1087 – 1110.

Ogundoyin, OS (2016). Information and Communication Strategies for Improving Adherence to Anti-retroviral Drugs Among Patients with Human

Immunodeficiency Virus Infection. *International Journal of Management Sciences*; 9(1): 1-10.

Roter, D. 2000. The enduring and evolving nature of the patient-physician relationship. *Patient Education and Counselling;* 39, 5-15.

Scott, H.R., Blyth, K.G., and Jones, J.B., 2009. *Davidson's Foundations of Clinical Practice*. Oxford. Elsevier.

Smith, R.C., Marshall-Dorsey, A.A., Osborne, G.G., Shebroe V., Lyles, J.S., Stoffelmayr, B.E., Van Egeren, L.F., Mettler, J., Maduschke, K., Stanley, J.M., Gardiner, J.C. 2000. Evidence- based guidelines for teaching patient-centred interviewing. *Patient Education and Counseling;* 39: 27-36.

Smith, R.C. 2001. *Patient centred interviewing: an evidence based method (video tape).* East Lansing (MI): Marketing Division, Instructional Media Centre, Michigan State University.

Street, R.L., Krupat, E., Bell, R.A., Kravitz, R.L. 2003. Beliefs about control in the physician-patient relationship: Effect on communication in Medical Encounter. *Journal of General Internal Medicine;* 18: 609 – 615.

Stewart, M, Brown, JB, Donner, A, et al (2000). The impact of patient-centered care outcomes. *Journal of Family Practice*; 49(9):796-804.

Taylor, S. 2003. *Health Psychology.* New York: McGraw- Hill.

Travaline,JM, Ruchinskas, R, D'Alonzo, GE (2005). Patient-Physician Communication: Why and How. *The Journal of American Osteopathic Association;* 105:13-18.

Wong, S.Y.S. and Lee, A. 2006. Communication skills and Doctor-Patients Relationship. *Medical Bulletin;* 2.3: 1-8.

Zolnierek, KBH, and DiMatteo, MR (2009). Physician communication and patient adherence to treatment: A meta-analysis. *Medical Care*; 47(8):826-834.