Trends in Methodological and Theoretical Approaches to Interpersonal Health Communication Research

OLAYINKA SUSAN OGUNDOYIN* AND EBENEZER O. SOOLA**

Abstract
Communication is an important tool used for dissemination of information in any health care setting. Smooth and uninterrupted doctor-patient communication is essential to a positive health outcome in medical practice. Studies have been carried out on this form of interpersonal communication by many researchers globally. This study examined the research methods adopted by some previous studies and the type of theories they adopted. One hundred and five full text journal articles published on doctor-patient communication over a period of twenty years from 1991 to 2010 were electronically and manually collected and examined for the study while content analyses of these articles was carried out. The study found that 51.4% of the articles employed qualitative methods, 18.1% adopted quantitative methods, and 30.5% adopted a combination of both quantitative and qualitative methods. Under quantitative research methods, survey (30.97%) was the most frequently used approach. It was observed that, there has been a drift from quantitative to qualitative research methods in the study of doctor-patient communication research and there has been an insufficient use of theories to back up these studies in relation to doctor-patient communication.

Key Words: Health Communication, Doctor-Patient Communication, Methodological Approaches, Theoretical Approaches, Theories and Research.

Introduction
Health communication is believed to be an area of investigation in applied behavioural science research. It is regarded as an applied area of research because it examines the practical influences of human communication, the provision of health care and the promotion of public health. Studies in this area are frequently adopted to enhance the quality of healthcare delivery and health promotion.

Within the field of health communication, communication is seen as a social process that provides and promotes healthcare delivery and public health. The communication process is based upon the persuasive roles that communication performs in creating,
gathering and sharing health information. Health information has been considered to be the most important resource in healthcare because it is critical in guiding strategic health behaviours, treatments and decisions (Kreps, 1988). Health communication is found to be crucial in a hospital setting because the communication between a doctor and a patient bothers greatly on the issues of health where much of gathering and sharing of information remains vital to the two parties.

Health communication is a broad research area which examines different levels of communication. The primary level of health communication analysis includes intrapersonal, interpersonal, group, organizational and societal communications. Interpersonal health communication research examines the relational influence on health outcomes, focusing on the doctor-patient relationship, dyadic provisional health education, therapeutic interaction and the exchange of relevant information in healthcare interviews.

A vital viewpoint of many health communication studies has been the role of interpersonal communication in healthcare delivery (Kreps, 1988b). To him, such investigation examines the array of communication relationships established between doctors and patients demonstrating how these interpersonal relationships exert powerful influences on health and healthcare delivery.

Several topics for interpersonal health communication inquiry include: doctor-patient healthcare relationship, health education and the development of interpersonal communication competencies in healthcare (Kreps, 2001). Interpersonal communication research has had a lot of impact on doctor-patient relationship in order to yield positive health outcomes. The study of doctor-patient communication interaction has shed a lot of light on the positive health outcomes of effective communication and also the negative impact of ineffective communication. The benefits are adherence to treatment regimen, patient satisfaction and patient consumerism, among others. The consequences of ineffective communication, however, are non-adherence to treatment regimen, patient dissatisfaction and the likelihood of patient abandoning health facilities for alternative medicine.

Interpersonal communication research employs various methods of research, ranging from quantitative to qualitative methods. The study of interpersonal communication is being considered as one of the more vibrant domains for social scientific theorizing and investigation (Kreps, 2010). The role of research in every field of study cannot be overstressed, as this can be found at every level of any academic pursuit. For this reason, the need to find out more about knowledge in communication becomes pressing and pertinent. That is why Ajala (1996:1) opines that researchers ‘need to take another look’, according to Cook, as cited by Ajala, that ‘to research is to search again, to take another look’, and this time a ‘more careful look to find out more’ because of the reason that along the line, something might have gone wrong without the researcher knowing it. She further explains that research is important because it helps to accumulate, enrich and make the necessary improvements without getting rid of the previous facts in order to favour new ones.

Several studies have, however, tried to look into trends in communication research. These include Trumbo’s (2004) analysis of research methods in mass communication research between 1990-2000 which reported that out of 62 studies using multiple procedures, that is, combining survey with content analysis, 29(48%) were quantitative, 28(44%) were mixed and 5(8%) were qualitative.

On the other hand, Kamhawi and Weaver’s (2003) analysis of research trends in mass communication from 1980-1999 revealed that in recent times, qualitative methods of research have re-emerged in mass communication research (as opposed to the frequently used qualitative methods in the past years, that is, in the 1980’s). It was
observed that qualitative research was not given much attention as quantitative in the 1980s.

Similarly, an exploration of which methods are used has been analyzed by Potter and Riddle (2007). They observed that Schramm’s from 1937-1956 in Public Opinion Quarterly, found out that larger percentage of articles studied, used quantitative methods. They (Potter and Riddle) also focused on methods used within a period of twenty-five years in Journalism and Mass Communication Quarterly and reported that out of the 1,977 article’s appearing during that period, 486(24.6% of the total) used content analysis. Also, Potter and Riddle’s (2007) study, observed that Kamhawi and Weaver examined articles published from 1980-1999 in ten communication journals and found out that 33.3% used survey method, 30.0% used content analysis, while 13.3% used experiments; 4.7% used historical method, 10.3% used qualitative method while 8.4% used a combination of methods.

The field of doctor-patient communication has received a lot of attention from several scholars who are interested in different aspects of medical encounters. These different aspects are patient’s satisfaction with care, adherence to treatment, recall and understanding of medical information, coping with the disease, quality of life, and even state of health. In measuring the degree of the medical encounter, various research methods have been employed by different researchers. The methods are both quantitative and qualitative. These methods were either used solely in a particular research or combined to get the desired data.

Early researchers (Balint, 1964; Byrne & Long, 1976; Coulter, 1999), cited by Marks, Murray, Evans, Willig, Woodall & Sykes (2005), made attempts at studying various types of approaches to the study of doctor-patient communication. According to Marks, et al (2005) the various approaches are:

<table>
<thead>
<tr>
<th>Perspective</th>
<th>Methods</th>
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<tbody>
<tr>
<td>Deviant Patient</td>
<td>Survey</td>
</tr>
<tr>
<td></td>
<td>Interaction analysis systems, that is, Audiotape and videotape</td>
</tr>
<tr>
<td>Authoritarian doctor</td>
<td>Interaction analysis systems</td>
</tr>
<tr>
<td>Interactive dyad</td>
<td>Conversation analysis</td>
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<td></td>
<td>Discourse analysis</td>
</tr>
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Early researchers in the field of doctor-patient communication labeled patients as being deviant in that, patient routinely masks the real problem and thus, withhold information from doctors and default clinic appointments which accounted for communication breakdown between the doctor and the patient. It was believed then that it was the task of the doctor to uncover this problem. So, a need to research into why patients behave that way became pertinent. Then, researchers made use of questionnaire and interaction analysis system as their method of study, as seen above. Later, an exploration was made to look at the communication style between doctors and patients, it was found that the communication style used by the doctor was authoritative, so, subsequent studies made use of interaction analysis system and survey methods. In the 1990s, however, the focus on doctor-patient communication shifted again. Researchers began looking at the communicative event to which both doctor and patient contribute. Thus, both doctor and patient are seen to be shaping the conversation as they make use of
culturally available discursive resources. Both of them use language in order to achieve interpersonal objectives like disclaiming or attributing responsibility for the patient’s ill health. It was then concluded with the assertion that doctor “knows best” should have no place in modern health care (Coulter, 1999). Hence, the use of conversation and discourse analysis as the research method used to study doctor-patient communicative interaction during this period.

Concurrently, researchers (Coupland, Robinson & Coupland, 1994) have also employed qualitative methods of text analysis such as discourse or conversation analysis which require accurate and detailed transcription of recordings of doctor-patient interactions (Marks, et al 2005). However, it has also been discovered that apart from the three approaches or methods designed to study the doctor-patient communication, the best studies would have to employ a combination of methods in order to provide a comprehensive account of conversational dynamics and their outcomes. In other words, the combination of methods for research purposes is called ‘triangulation’. It should however be noted that depending on the type of research to be conducted, researchers make use of different methods that most suit their studies. In addition, many studies have applied the use of triangulation to their studies. According to Trumbo (2004), examples of studies using the term triangulation can be found across a range of social sciences including communication, education, nursing, and community health. Triangulation, also known as mixed methods, was made use of in a study by Trumbo (2004). He observed that Kamhawi and Weaver in a study estimated that 2.5% of articles in ten journals, which were examined between 1980-1999 used mixed approaches.

In the field of academic research, apart from the research methods, another important area that is worth focusing attention on is the theoretical framework. Theoretical framework is the application of relevant theories or models to generate research questions and formulate hypothesis. The non-use of theory in a research work can be likened to a building without a foundation. In other words, a research work without a theoretical framework can be compared to one without basis or substance and better still, can never be substantiated. Nevertheless, as important as theoretical application is to research, it is quite amazing that some researchers conduct researches without any theoretical basis. An example can be inferred from Norman (2005) who observed that researches conducted in the 1970s were essentially atheoretical. These studies, according to him, were directed at understanding the problem-solving process of expert-physicians.

The role of theory in research

Theory provides quick solutions to situational problems. Without theoretical foundation, having meaningful research effort can never be possible. In a similar vein without research, people will only engage in hearsay, conjure, anecdote and possibly propaganda (Pemberton, 1992). The purpose of theory and research is to be able to generalise confidently about specific phenomena and not merely describe them one at a time in isolation. When given sound methodology, research can develop solid answers to specific problems.

As a process, research breaks down into manageable units the large issues posed by theory (Pemberton, 1992). According to him, research is considered as the necessary bridge between theory and practice which alone can supply both consistently credible and useful tools for researchers. He believes that the development of meaningful research depends directly on the development of theories to stimulate it, on the availability of trained researchers to carry out the research, without which continuing expansion of a credible knowledge base will be difficult.

Scholars (Potter & Riddle 2007) are particularly worried about the low application of theory to drive research efforts. In a bid to explore the extent of theory-driven literature,
the duo examined some literature and observed that the application of theory is at low ebb and there is the need to be more explicit in the use of theory both in the generation of empirical research studies and in the interpretation of results. Potter & Riddle (2007), in analyzing eight journals from 1965-1989 found that only 8.1% of 1,326 articles were guided by theory and provided a test of that theory. Another 19.5% were tests of hypotheses not derived from a theory. Kamhawi & Weaver, cited by Potter & Riddle (2007), reported that only 30.5% of articles in ten communication journals from 1980-1999 specifically mentioned a theory.

Against this backdrop, it has been observed that not all communication studies are theory-driven. As a result, the researcher would review through the use of content analysis studies which are theory-driven and separate these from the ones which are atheoretical published in articles that deal with doctor-patient communication interaction.

The objective of this study therefore, is to describe trends in interpersonal health communication research by using articles that have been published over a period of twenty years (1991 – 2010) on doctor-patient communication. This study will acquaint health researchers and students with the knowledge of the various methodologies employed in interpersonal health communication research.

**Research Questions**

Two research questions were specifically posed for the study.

1. What has been the trend in interpersonal health communication research in the last 20 years?
2. To what extent are the research publications on Doctor-Patient Communication Interaction theory-driven?

**Method of Study**

The researcher used content analysis for the study. For the purpose of analysis, the researcher obtained full text journal articles only and articles with abstracts only were excluded. The data collected were electronically and manually obtained. Some of these sources were Social Science and Medicine: an international journal, Journal of Patient Education and Counseling, Journal of Health Psychology and basically, majority of the data collected were electronically obtained from Questia Archives Online (http://questia.com) and JSTOR Archive Online (http://www.jstor.org). The World Wide Web was searched for some sites using the search engines: Google Search (http://www.google.co.uk/search), and Hinari (http://hinari-gw.who.int/hinari/en/browsejournaltitles.php). Hard copies of some of these journal articles were also obtained from the serial sections of the Libraries of Bowen University, Iwo, Nigeria and College of Medicine, University of Ibadan, Ibadan, Nigeria. The phrase “Doctor-patient communication” was the key words used mainly to search for the journals and to link the website. The search produced 105 full text articles on Doctor-Patient Communication and related articles published over a period of 20 years from 1991 – 2010 and these were purposively content analysed.

Journal articles were selected based on the specific methodology used and any study that did not state the specific method used was discarded. The criteria for selection for this study include: year of publication, journal types, emphasis on research methods and topics of each of the articles.

The unit of analysis used for this study was each publication examined. The categories established for coding were quantitative and qualitative methods while studies that combine the two methods were coded under “mixed methods” category. Survey and Content Analysis were grouped under quantitative methods, while under qualitative method; the following formed the sub-categories: observation, in-depth interviews,
discourse (textual) analysis and Focus Group Discussion (FGD). Theoretical Application represented whether the authors used any health communication theories or models to form research questions, generate hypothesis or support their findings in the articles that were reviewed.

The publications were coded for research methods, the specific methodological approaches, and finally, theoretical application that is, if the author employed any at all in his study. Out of all the publications reviewed, only 32 of 105 articles used mixed methods.

**Discussion**

A total of 105 journal articles were reviewed to determine the research methodology used. Table 1 shows the frequency of the use of research methods in studies on Doctor-Patient Communication. Majority of the articles made use of qualitative research method (51.4%, n=54), 18.1% (n=19) used quantitative methods, and 30.5% (n=32) used mixed methods.

This finding corroborates Kamhawi and Weaver’s (2003) analysis of Research trends in Mass Communication from 1980-1999 which revealed that, in recent times, qualitative methods of research have re-emerged in Mass Communication Research, as opposed to quantitative research used in the 1980’s.

Of the methodological approaches used in studies on Doctor-Patient Communication, table 2 shows that only two quantitative methods were used. The Questionnaire was more frequently used (30.9% n=48) with 3.9% (n=6) using content analysis. Videotape recording under qualitative method was the most frequently used (24.5%, n=38). This is followed by in-depth interviews (20.7%, n=32) and audiotape recordings (16.7%, n=26) while direct observation (2.6%, n=4) and focus group discussion (0.7%, n=1) were less frequently used. It is to be noted that many researchers made use of more than one methodological approach which may either be a mixed method, or quantitative method giving a total of 155 methods used in 105 journal articles.

It can be observed from the above analysis that, among the quantitative research methods used, survey method was the most frequent in the journal articles reviewed. This is consistent with the findings of Potter and Riddle (2007) who, examined ten communication journals and observed that, between 1980-1999, survey method was the most frequently used.

Table 3 shows some of the studies that offered themselves to qualitative, quantitative and triangulation or mixed methodologies.

Table 4 shows that majority (90.5%, n=95) of the researchers did not make use of communication theories in their studies. Studies with qualitative methodology made the most use of communication theories (4.7%, n=5). This is followed by studies with mixed methodology (3.8%, n=4) and quantitative methodology 1% (n=1). This, however, was not surprising as the majority of researchers in the medical profession are not used to using theories because they may consider it as unimportant. These studies used communication and non-communication theories and some of the theories applied include: Self-regulatory model of illness, Politeness theory, Paternalistic model, Mutual participation model, Consumerist model, Habits model.

According to table 4, it was observed that in Doctor-Patient Communication studies, researchers did not frequently apply theories to their investigations. Obviously, only 9.5% (10) were theory-driven, while 90.5% (95) were not theory driven. This is consistent with the finding of Potter and Riddle (2007) which revealed that 8.1% of 1,326 articles were guided by a theory and provided a test of that theory. Nevertheless, with the common trend among some researchers who did not perceive the need to hinge their studies on any theoretical framework, Lehmann, Koch & Mehnert (2009) advocated for theory-driven
researches and also appealed to future researchers to design their researches according to theoretical assumptions.

**Communication Theories used**
The Paternalistic Model (Greenfield, 2001) of doctor-patient relationship is one in which patient plays a passive, dependent role and which the physician is the expert. Patient’s involvement is minimal in terms of treatment decision. In this model, the relationship that exists between the doctor and the patient is one that exists between father and child. In this model the physician is seen as an expert who is knowledgeable and exerts control over information and treatment decision-making.

The consumerist model (Charles, Gafini and Whelan, 1999) is a type of relationship where the patient plays an active and autonomous role by exercising control. In this model, the doctor provides the patient with all the relevant information which includes treatment decisions and leaves the patient to decide on which is best for him. In the consumerist model, the consulting room is seen as a market place where business transaction takes place. The consulting room is seen as a marketplace where the doctor and patient are seen as a seller and a buyer respectively. If the patient is dissatisfied with the services rendered he goes to seek help elsewhere. The advantage of this model is that patients are empowered to be active participants in the decision making process.

The Habit model (Frankel and Terry, 1999) is also referred to as the four habit model which discusses what is expected to transpire between the doctor and the patient. There are four stages a doctor must pass through in the habit model.

**Habit 1:** invest in the beginning: this is where the doctor is expected to create rapport quickly within the first few moments of the medical encounter by establishing a welcoming atmosphere for the patient.

**Habit 2:** Eliciting the patient’s perspective: This occurs immediately the patient settles down for the medical encounter. The patient’s point of view is heard about his medical condition which includes signs and symptoms and ultimately the request for care.

**Habit 3:** Demonstrating Empathy: doctors are expected to show care and compassion to the patient. This is believed to speed up the therapeutic process and provides a strong bond in the doctor-patient relationship. Showing empathy is just taking a step further to entering into the patient’s world to have a feel of his emotional distress. For all these first three habits to be successful, it requires information gathering.

**Habit 4:** Invest in the End: This habit requires information sharing which entails giving good news, bad news, or no news at all. The doctor too is expected to encourage patients to participate in the decision making process and negotiating treatment plans which as a result will enhance adherence to treatment.

Mutual participation model (Marincowitz, 2004) is built on a relationship in which the physician and patient work together to take joint responsibility and decision. It is a model that has replaced consumerism in doctor-patient relationship. This model involves mutual understanding of the problem and the impact of the problem on the patient’s life.

The Politeness model (Spiers, 1998) refers to the action people engage in to promote face. It has to do with how others are treated in terms of courtesy and good manners. Politeness is used mainly to simplify social interaction that provides verbal interaction such as requests, command or questioning. It also provides a means for covering embarrassment, anger, or fear in situations especially when such emotion will be of disadvantage to the interaction. The model is usually used in order to enhance intimacy or to establish formality and social distance between people.

Self-Regulatory model of illness behaviour (Furze, Roebuck, Bull, Lewin and Thompson, 2002) describes parallel subjective perception of the illness, the emotions
associated with this process (fear or distress), coping responses, appraisals of outcome. In this model, people are problem solvers who will try to achieve an ideal state and that behavior in illness depends on how the person builds cognitive representations of their current state and the methods that they have for appraising progress.

Conclusion
Of the 105 studies examined, 51.4% (n=54) employed qualitative method, 18.1% (n=19) used quantitative method, and 30.5% (n=32) used mixed method, that is, they combined both qualitative and quantitative methods. Under quantitative research methods, survey (30.97% n=48) was the most frequently used methodological approach, while videotape (24.5% n=38) was the most frequently employed under qualitative methodological approach. In all, during the period covered by this study, that is, 1991 and 2010, it was discovered that 65.2% (n=101) articles employed qualitative method, as against 38.8% (n=54) the quantitative method. It was further revealed that 19 articles that used quantitative methods (1.1% n=1) were theory-driven, while 4.7% (n=5) of 54 studies that used qualitative methods were theory-driven.

In addition, the data presented in this study show that during the period of the study (1991-2010), there was an appreciable drift from quantitative to qualitative methods in the study of doctor-patient communication research. This is different from the use of quantitative methods which had been the trend before the period studied. The finding has also revealed that there has been insufficient use of theories in the studies relating to doctor-patient communication.

We observed that studies on doctor-patient communication have shifted from the use of quantitative to qualitative research methods. We also observed that most of the research works carried out during the period under study were not theory-driven as majority of them were done in the field of medicine and related fields where the application of theories to either support or explain their studies is not compulsory.

We suggest that future researchers on doctor-patient communication should encourage the use of relevant theoretical assumptions or framework to anchor their research works. Also, the use of mixed methods should be considered in any research process relating to doctor-patient communication to enhance the outcome of such research works.
Table 1: Research Methods used by Researchers on Doctor – Patient Communication (n=105)

<table>
<thead>
<tr>
<th>Research Method</th>
<th>Frequency</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Quantitative</td>
<td>19</td>
<td>18.1</td>
</tr>
<tr>
<td>Qualitative</td>
<td>54</td>
<td>51.4</td>
</tr>
<tr>
<td>Mixed</td>
<td>32</td>
<td>30.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>105</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table 2: Specific Methodological Approaches Used by Researchers on Doctor – Patient Communication (n=155)

<table>
<thead>
<tr>
<th>Quantitative Method</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Qualitative Method</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaire</td>
<td>48</td>
<td>30.9</td>
<td>Direct Observation</td>
<td>4</td>
<td>2.6</td>
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<td></td>
<td></td>
<td></td>
<td>Focus Group Discussion</td>
<td>1</td>
<td>0.7</td>
</tr>
<tr>
<td>Content Analysis</td>
<td>6</td>
<td>3.9</td>
<td>Interview</td>
<td>32</td>
<td>20.7</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Videotape</td>
<td>38</td>
<td>24.5</td>
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<td></td>
<td></td>
<td></td>
<td>Audiotape</td>
<td>26</td>
<td>16.7</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>54</strong></td>
<td><strong>34.8</strong></td>
<td><strong>TOTAL</strong></td>
<td><strong>101</strong></td>
<td><strong>65.2 (100)</strong></td>
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</table>
Table 3: Examples of some of the studies and specific methods used

<table>
<thead>
<tr>
<th>Study</th>
<th>Method</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>Quantitative</strong></td>
</tr>
<tr>
<td>Mixed</td>
<td>Clark et al. (1998)</td>
</tr>
<tr>
<td></td>
<td>Dowsett et al. (2000)</td>
</tr>
<tr>
<td></td>
<td>Heisler et al. (2002)</td>
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<td></td>
<td>Furze et al. (2002)</td>
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<td></td>
<td>Ajayi (2003)</td>
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<td></td>
<td>Charles et al. (2003)</td>
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<td></td>
<td>Street et al. (2003)</td>
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<td></td>
<td>Shield et al. (2005)</td>
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<tr>
<td>Survey</td>
<td>Adegbite and Odebunmi (2006)</td>
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<td></td>
<td>Bensing et al. (2006)</td>
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<tr>
<td></td>
<td>Flynn and Smith (2007)</td>
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<tr>
<td>Survey and Interview</td>
<td>Clever et al. (2008)</td>
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<td></td>
<td>Cegala and Post (2009)</td>
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<td></td>
<td>Abioye-Kuteyi et al. (2010)</td>
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<td></td>
<td>Ransford et al. (2010)</td>
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Table 4: Classification of Studies on Doctor – Patient Communication by Communication Theories (n=105)

<table>
<thead>
<tr>
<th>Quantitative Method</th>
<th>Qualitative Method</th>
<th>Mixed Method</th>
<th>Cumulative</th>
</tr>
</thead>
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<tr>
<td>Theory Applied</td>
<td>Freq</td>
<td>%</td>
<td>Theory Applied</td>
</tr>
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<td>1.0</td>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
<td>18</td>
<td>17.1</td>
<td>No</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>18.1</td>
<td>Total</td>
</tr>
</tbody>
</table>
References
Frankel, R.M and Terry, S (1999). Getting the most out of the clinical Encounter: the four Habits model. The Permanente Journal 3(3).


