

VOLUME 6 ISSUE 3, 2021

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Journal of Social Sciences

Published by
Faculty of the Social Sciences
Enugu State University of Science & Technology
www.esutjss.com

Healthcare Providers' Professional Arts during Antenatal Care and Appropriate Taxonomies of Nonverbal Communication

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Abstract

Nonverbal communication channels of healthcare providers have a significant impact on patients during consultations. The study was undertaken to place the professional arts of the healthcare providers into the appropriate taxonomy of nonverbal communication. Two different sets of questionnaire were administered to pregnant women and to healthcare providers. Non-participant observation report was also made. The study was carried out at three Teaching Hospitals in South East Nigeria. 133 pregnant women and 26 healthcare providers were randomly recruited for the study. Variables were expressed in percentages and Chi-square test was used for determination of level of association. Significant level was placed at $p < 0.05$. The findings of the study showed that a predominant number of healthcare providers had handshakes with their clients ($X^2 = 56.903$; $p < 0.05$), smile with their clients ($X^2 = 21.160$; $p < 0.05$), palpate their clients' abdomen ($X^2 = 30.260$; $p < 0.05$) and conduct physical examination of their clients (8.167; $p < 0.05$). The study also showed that the nonverbal interactions created satisfaction and allayed the worries of the clients ($X^2 = 60.552$; $p < 0.05$ & $X^2 = 57.800$; $p < 0.05$). The dress code/uniform and chronological age elicited respect (4.263; $p < 0.05$). Other professional arts include eye contact, body language, consulting room, sitting arrangements and posters on the wall. These professional arts fall into artifactual communication, haptic, kinesics and proxemics while the time the healthcare provider spends with clients falls into chronemics. The study concludes that the diverse professional arts of healthcare providers fall into various taxonomy of nonverbal communication. This study thus recommends formal training in nonverbal communication for healthcare providers.

Keywords: Arts, healthcare, nonverbal communication.

Introduction

Communication has been shown to possess preeminent features in healthcare delivery (Junaid, Shaban & Khan, 2018). While communication in the healthcare provider /patient interface involves both verbal and nonverbal communication, this study focused on the nonverbal aspect of such communication that occurs within the context of healthcare provision.

In considering the channels of nonverbal communication, the environmental setting or context comes into play (Matsumoto & Hwang, 2016). Nonverbal communication channels could have

different connotations in differing contexts. It becomes pertinent to examine the physical and social aspects of the environment to facilitate sufficient assessment of contributory factors to nonverbal channels as complete components of communication.

Effective healthcare provider-patient communication is a key element in optimal maternal service delivery. In order to build a good relationship, there is a need for healthcare providers and patients to communicate effectively (Segal, Smith, Boose & Jaffe, 2016). When there is positive communication between healthcare providers and women in the maternity ward, women are encouraged to maximally utilize maternal services at a health facility (Mulondo, 2020; van der Pijl, Kasperink, Hollander, Verhoeven, Kingma & Jonge, 2021).

The study takes a bearing from the Nonverbal Expectancy Violations theory developed by Judee K. Burgoon, a Professor of Communication and Family Studies and Human Development at the University of Arizona. The theory posits that people hold expectations about the nonverbal behaviours of others (Burgoon & Hale, 1988). Nonverbal Expectancy Violations follow that if a positive violation of expectation based on the credibility of source occurs, then the communication itself will produce a more positive outcome. Conversely, negative violations will produce less favourable communication outcomes.

According to Burgoon & Hale, source credibility is determined in most settings based on aspects such as title, education and outward appearance (Burgoon & Hale, 1988). Based on these, the pregnant women can make a judgment of what they expect from the healthcare providers based on their 'respectable titles.' The pregnant women can also make such judgments based on their educational attainment which is societally perceived as high and their formal dressing which, from the non-participant observation, elicited respect. All the actions of the healthcare providers perceived as positive, elicited positive responses from the patients, the pregnant women. The reverse will also be applicable as capable of evoking negative responses.

This study is also girded by the proxemics theory introduced by a cultural anthropologist, Edward Twitchel Hall in 1963. Hall posited that human beings use personal space and concrete objects to establish their territory. The theory posits that the desired/expressed intimacy is inversely related to the physical distance between people. This means that the more intimacy that is desired, the less the distance/space and the less the intimacy that is desired, the more space is desired. The spacing not only reflected in the nature of the buildings housing the antenatal clinics in the facilities under study, it also had a bearing on the space observed between the healthcare providers (Consultant and Nurse/Midwife) and their patients (pregnant women). Hall postulated four distances kept by people: intimate, personal, social and public space.

Touch (haptic communication) for instance, is the most basic form of communication humans and animals have. It is somewhat like delivering our emotions in a physical form for the recipient to be enabled to feel and experience. Other taxonomies or channels that would be considered in this study include kinesics (body language), artifactual (dress and adornment), proxemics (use of space and distance) and chronemics (use of time in communication).

Methods

The study was conducted at antenatal clinics of Enugu State University Teaching Hospital (ESUTH), Parklane Enugu; Chukwuemeka Odumegwu Ojukwu University Teaching Hospital (COOUTH), Awka and Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi Anambra State, Nigeria. All the Tertiary Health care facilities are situated within the South Eastern part of Nigeria. A total of 133 pregnant women were recruited at the antenatal clinics of these Tertiary Health Institutions. They were administered copies of questionnaire containing sections on identifying the professional arts of the healthcare providers. Similarly, 26 healthcare providers recruited randomly from the mentioned Tertiary Health Institutions also participated in the study. They represented more than 90% of the work force in these facilities. The healthcare providers were aged between 20 years and > 60 years. They were Consultant Obstetricians/Gynaecologists and Nurse/Midwives who functioned at the antenatal clinic of the tertiary health institutions. The healthcare providers were administered copies of the second questionnaire tailored for them. These facilities were also sites for the Non-Participant Observation that took place during their antenatal clinics. The questionnaire contained two sections. The first section covered demographics like age, gender and work experience. The second section focused on professional arts of the healthcare providers during antenatal care such as palpation, smiles, eye contact, body language, touch, tone of voice, disposition of face or body, expression of worries and satisfaction with physical examination of the clients.

Non-Participant Observation was used to document the professional arts and interactions between the healthcare providers and their clients. These professional arts once identified will be placed into their appropriate taxonomy in nonverbal communication. The Ethics Committee of each Tertiary Health Institution granted ethical clearance for the study in their various institutions. Informed consent was also obtained from the pregnant women. The variables were expressed in percentages. The test statistics used for analysis of data was Chi-square. Significant level was placed at $p < 0.05$.

Findings

The chronological age of the healthcare providers spanned between 20 years to 70 years. However the mode age was within 35 to 39 years although intensity in age was around 25 to 54 years. The male and female healthcare providers constituted 50% each of the population.

The mode in terms of work experience was between 1 to 5years while the predominant work experience was 1year to 15years. Table 1.

A significant proportion of the healthcare providers 106(84.8%) always showed expressions of satisfaction with the performance of the pregnant women while only about 15.2% were indifferent in expression ($X^2=60.552$; $p<0.05$). Similarly, a significant number of the healthcare providers 105(84%) also always express worry when the performance of the pregnant women were not as they were instructed but about 16% of the healthcare providers were non expressive ($X^2=57.800$; $p<0.05$). Predominant numbers of the healthcare providers 104(83.9%) always have a hand shake with their clients while only about 16.1% don't always have a hand shake with their clients ($X^2=56.903$; $p<0.05$). Furthermore, a predominant number of healthcare providers 60(82.2%) always palpate their clients while only 17.8% don't always palpate ($X^2=30.260$; $p<0.05$). Similarly, more of the healthcare providers 106(86.2%) always use eye contact to interact with their clients compared with 13.8% that do not always use eye contact ($X^2=64.398$; $p<0.05$). Table 2.

Table 1: Demographic presentation of Health care providers

Age (yrs)	Frequency	Percentage
15-19	0	0.0
20-24	1	4.2
25-29	4	16.8
30-34	3	12.6
35-39	6	25.2
40-44	2	8.4
45-49	3	12.6
50-54	3	12.6
55-59	0	0.0
60-64	1	4.2
65-70	1	4.2
Gender distribution		
Female	13	50.0
Male	13	50.0
Duration of practice of Health care provider		
1 to \leq 5	9	36.0
>5 to \leq 10	8	32.0
> 10 to \leq 15	5	20.0
>15 to \leq 20	2	8.0
>20 to \leq 25	1	4.0
>25 to \leq 30	1	4.0
>30 to \leq 35	0	0.0

Table 2: Evaluation of nonverbal communication arts of the healthcare providers as submitted by pregnant women during antenatal visits.

Observation	YES (%)	NO (%)	X ²	P-VALUE
Show of satisfaction	106(84.8)	19(15.2)	60.552	(p<0.05)
Expression of worry	105(84.0)	20(16.0)	57.800	(p<0.05)
Hand shake	104(83.9)	20(16.1)	56.903	(p<0.05)
Palpating	60(82.2)	13(17.8)	30.260	(p<0.05)
Eye contact	106(86.2)	17(13.8)	64.398	(p<0.05)

Predominant numbers of healthcare providers 19(79.2%) claimed they interact nonverbally with their clients compared with 5(20.8%) that do not interact nonverbally with their clients ($X^2=8.167$; $p<0.05$). Similarly, 24(96%) smile at their clients while 1(4%) do not smile at the client ($X^2= 21.160$; $p<0.05$). However, predominant numbers of healthcare providers 21(87.5%) claimed they do not shake hands with their clients compared with 3(12.5%) that claimed to shake hands with the clients ($X^2= 13.500$; $p<0.05$). While 19(79.2% claimed to conduct physical examination of their clients, 5(20.8%) claimed they do not conduct physical examination ($X^2=8.167$; $p<0.05$). All the healthcare providers claimed to use eye contact with their clients. Predominant numbers of the healthcare providers 20(95.2%) think that their clients understood their arts compared with 1(4.8%) that thought otherwise ($X^2= 17.190$; $p<0.05$). Table 3.

All the healthcare providers think that their uniforms elicit respect from their clients. Similarly, a significant number of the healthcare providers 14(73.7%) think that their chronological age elicits respect from their clients compared with 5(26.3%) that think otherwise ($X^2= 4.263$; $p<0.05$). Similarly, a predominant number of healthcare providers think their clinical approach disarms their clients compared with those that think otherwise ($X^2= 5.762$; $p<0.05$). Many of the healthcare providers build relationship with their clients compared with the few that don't build relationship with their clients ($X^2= 15.696$; $p<0.05$). The healthcare providers did not think that their clients always show signs of relief ($X^2= 2.667$; $p>0.05$). Table 4.

Table 3: Evaluation of nonverbal communication arts of the healthcare providers as responded to by healthcare providers

Observation Pvalue	Yes (%)	No (%)	X²	
NV interactions	19(79.2)	5(20.8)	8.167	<0.05
Smiles with client?	24(96)	1(4)	21.160	<0.05
Shakes hand with clients?	3(12.5)	21(87.5)	13.500	<0.05
Examination of clients?	19(79.2)	5(20.8)	8.167	<0.05
Eye contact with clients?	25(100)	0	-	-
Client understands your arts?	20(95.2)	1(4.8)	17.190	<0.05

Key NV = Nonverbal

Table 4: Assessing the influence of healthcare providers arts on their clients

Observation pvalue	Yes (%)	No (%)	X²	
Your uniform/dress elicits respect?	21(100)	0		
Your chronological age elicit respect?	14(73.7)	5(26.3)	4.263	0.039
Does your approach disarm the clients?	15(76.2)	5(23.8)	5.762	0.016
Do you build client relationship?	21(91.3)	2(8.7)	15.696	0.000
Do your clients express relief?	8(33.3)	16(66.7)	2.667	0.102

Findings of Non-participant observation

Dress Code

During the Non Participant Observation, it was observed that the healthcare providers have a peculiar style of dressing or adorn uniforms that easily identify them as being in charge in the midst of the multitude of patients and other healthcare providers. Interaction with the healthcare providers showed that their type of dress is a form of communication.

Chronological Age & Work Experience

The chronological age of the healthcare provider vis-à-vis interaction with their client was also considered. The older the healthcare providers, the more likely the clients will interact with them confidently. The chronological age tends to overshadow the age of practice.

Clinical Coat

The physicians were putting on white clinical coats while attending to their clients. However, the Midwife/Nurses did not put on any additional dress or coat apart from their uniform.

Size of Consulting Rooms

The sizes of the antenatal care consulting rooms differ with the Consultant having the biggest consulting room. High level of privacy is maintained in the consulting room and the sitting arrangement was arranged to promote intimacy (for physical examination) and engender a cordial relationship between healthcare provider and client during consultation.

Sitting arrangement in the consulting rooms

The Consultant sits behind the table while the client sits lateral left of the physician by the side of the table. This enables the physician to touch, feel the pulse, make eye contact or measure the blood pressure through the left arm using an artificial intelligent machine or make on the spot examination of the foot of the client for signs of oedema (swelling of the feet) or paleness of the eyes. The distance between the Consultant and the client was about an arm's length. The Consultant Obstetrician/Gynaecologist take a client per time with utmost privacy maintained.

Sitting arrangement in the antenatal care halls

Unlike in the consulting rooms, the sitting arrangement in the antenatal hall is different. Pregnant women sit clustered on the benches/pew-like seats to take the health talk being delivered by the Nurse/Midwife. Thereafter, the pregnant women are attended to by taking their weight and checking their urine. At other times, other specimens like blood samples or stool are sent to the laboratory for analysis. The distance between the Nurse/Midwife and the clients are farther than an arm's length during the health talk. There were enough benches in their antenatal hall of each health facility to accommodate the pregnant women. The Nurse/Midwife after the health talk takes on the patients' one after the other for their vital statistics which the Consultants will use in the course of their clinical encounter with the pregnant women.

Wall posters inside Consulting Room and Antenatal Hall

Wall posters were sparsely seen in the consulting rooms but were more copious on the walls of the antenatal halls. There were handbills and leaflets on some consulting tables and on the Nurse/Midwife's table in the antenatal hall. In one of the facilities, a poster strictly warned that entrance into the antenatal care hall will be prevented without a face mask.

Duration/Time of Interaction

The patients spend more time individually with the Consultant Obstetrician/Gynaecologist depending on the stability of the pregnancy and physical examination that may be required. However, the pregnant women spend longer time at the antenatal hall with the Nurse/Midwife collectively but spend lesser time with the pregnant women individually.

Other professional arts of the healthcare professionals

The Nurse/Midwife checks fetal heart beat using the pinard that is placed on the lower abdomen of the pregnant women. The Nurse/Midwife palpates the protruded lower abdomen to have a feeling of the positioning of the baby. They run a tape round the mid-lower abdomen to determine the gestational age of the pregnancy. The healthcare providers also crack jokes, beaming smiles, use pats on the back, jesting about patients being in laws or family and even use silence in the course of consultation. Such approaches by the healthcare providers remind patients that being able to surmount earlier health issues working with the healthcare team, present issues with their cooperation, will equally be overcome. These are all channels of nonverbal communication which help the patients feel at home and consequently open up on what they are experiencing.

Discussion

The findings of this study attest to the use of nonverbal communication channels by the healthcare providers. Earlier, we had reported a poor level of knowledge of nonverbal communication channels among healthcare providers (Onyenekwe & Ekwenchi, 2021). The chronological age of the healthcare providers spanned between 20 to 70 years while their predominant years of work experience spanned between 1 to 20 years. In the health sector, chronological age tends to elicit respect more than years of work experience.

It was observed that a lot of patients were willing to open up on their medical conditions to much older healthcare providers than to younger healthcare providers. This attitude may frustrate communication between both parties. Some of the patients equate age with experience but this may not be the case in the healthcare sector. This means that for the Nurse/Midwife, a younger person wearing skirts can be overlooked for an older person on gown just because of the chronological age. The same scenario is applicable with doctors who normally are good, formal dressers.

Consultants can easily be identified by the suit or formal dress they wear in the midst of other doctors. This distinguishes them from other healthcare providers. On the other hand, among nurses, a matron is identified by her white shirt/blouse and skirt. It is a form of nonverbal communication known as artifactual communication. This is part of the reason why everyone that is well dressed within hospital environment is often referred to by patients as a doctor. This is because patients are often unable to decipher the various categories of healthcare providers by their dress code. Except patients are tutored about the significance of these dress codes, the patients will not know. It was in the category of dress/uniform that the healthcare providers responded 100% that they acknowledged it had an effect on the patients. This brings to bear the assertions of the nonverbal expectancy violations theory (Burgoon & Hale, 1988).

In this study, the pregnant women responded that the healthcare providers interacted with them through hand shake, eye contact, palpating the lower abdomen and also showed facial expression of worry or satisfaction depending on the condition of their pregnancy. These actions were also corroborated by a predominant number of healthcare providers. It was also in the category of maintaining eye contact that all the healthcare providers indicated that they employ it as a means of communicating with the pregnant women. It clearly portrays the veracity of Burgoon's Nonverbal Expectancy Violations theory. Segal, Smith, Boose and Jaffe, 2016 stated that nonverbal communication is a powerful tool that helps healthcare providers connect with patients in a positive way by reinforcing mutual understanding and respect (Burgoon & Hale, 1988). The healthcare providers actually admitted using eye contact, touch, smile, palpation and tone of voice to interact nonverbally with the pregnant women (Rogers, 2002; Segal, Smith, Boose & Jaffe, 2016). Due to the peculiarity of the healthcare sector and the importance of service satisfaction in enhancing recuperation, it is necessary to improve on the quality of service through incorporating the gains of nonverbal communication channels in communication (Adamu & Oche, 2014; Junaid, Shaban & Khan, 2018).

Indeed some of the professional arts of the healthcare providers are actually nonverbal communication channels. Placing these arts into the proper taxonomy of nonverbal communication may help spur the desire to become skillful in nonverbal communication channels. For instance, the following professional arts as observed in the present study can be conveniently grouped under the different taxonomies of nonverbal communication. Handshakes, palpation and use of gadgets like the sonicad (for determining fetal heart beat) are artificial intelligence. When put in contact with the patients through touch, is an example of haptics while eye contact, smile and body language are examples of kinesics. In addition, the office space, sitting arrangement within the office between the physician and pregnant women are examples of proxemics while the time spent on attending to individual pregnant women or in physical examination is an example of chronemics. The use of uniform or the dress code aids in identification of healthcare providers, from the patients' perspective and even among the healthcare providers is an example of artifactual communication. If properly understood, a patient can easily identify who the consultant is despite the population of similar-looking physicians through the manner of his dress. They are always on suit or formal wear and occupy the central position on their rectangular shaped consulting tables, flanked by the Residents, House Officers and medical students. This is equally an example of proxemics and a testament to the use of the tenets of proxemics theory as it regards space during antenatal care.

It has been shown that a physician's nonverbal behavior that expresses concern, for instance, through frequent eye contact, a concerned facial expression, or close interpersonal distance, leads to more patient trust than a physician's behavior that conveys more distance (Silverman & Kinnersley, 2010). Regarding patient adherence, it has been shown that physician touching of the patient increases patient adherence with their medication (Mast & Cousin, 2013).

In another study (Junaid, Shaban & Khan, 2018), it was reported that the first thing patients observe about healthcare providers is their facial expression. This would translate to a smile, maintain appropriate eye contact-not staring- to indicate interest in what the patient is saying. Rogers, 2002 adds maintaining an open and relaxed posture when sitting, leaning forward to show engagement, not standing and looking down on the patient, nodding to indicate the healthcare provider is listening to what the patient is saying. He advises that nonverbal communication that might indicate hurry or boredom should be jettisoned. This includes certain situations that might trigger negative nonverbal reactions like seeing a difficult patient, managing a patient complaint or dealing with stress.

In the study by Junaid, Shaban & Khan, (2018), other less noticed nonverbal communication channels include touch, body movement and postures, interpersonal distance, hospital room environment and healthcare providers' getup. In spite of these findings, the present study found that body language is important though the healthcare providers' seeming inability to show relief will translate to their inability to read such an expression on the pregnant women. Likewise the seeming discrepancy in their indication of not predominantly engaging in handshakes and the contrary view of the pregnant women can be explained. While the healthcare providers were all for maintaining physical distance due to COVID-19 precautionary measures, the pregnant women though on masks during consultation, may have given the information based on what was the norm before the pandemic and subsequent lockdown.

As regards palpation, while the pregnant women always delight in that singular act of touch by the healthcare provider, there might be occasions when based on what has been clerked by the Nurse/Midwife, there might not be need for such palpation. It was however observed that the insistence of the pregnant women on being palpated, results in their being palpated. For a high contact culture, Nigerians, more especially South Easterners can be understood in their desire to maintain touch, no matter how little (Matsumoto & Hwang, 2016).

The inverse relationship between proxemics and haptics always manifests in studies of this nature. Touch (haptics) was always observed at the intimate distance (task-related touch) while a normal tone of voice was used in speaking at the personal distance. Though the social zone was observed only during the health education, the voice tone did not get into screaming mode. It was still within normal limits. A South American study of proxemics communication, found through non-participatory observation that apart from no gender influence, the predominant distance with the HIV/AIDS patients, was in the personal zone while the intimate distance was observed in close to a quarter of the interactions. The tone of voice was found to be always adequate (Galvao, Paiva, Sawada & Pagliuca, 2006).

However, in the consulting room and antenatal care halls, the attention of the pregnant women are constantly being attracted to the wall posters indicating current happenings in health care, especially antenatal care, emerging and re-emerging diseases and simple illustrative interventions. This is proxemics though there are placed to create an impulse of action that may result in other forms of nonverbal communication. For instance a poster indicating 'show' that is amniotic fluid draining down the legs of a pregnant woman is body language which is an

example of kinesics but to the healthcare provider it is chronemics which is an indication of onset of real labour. Such a poster will usually instruct that the pregnant woman move straight to see her healthcare provider in the facility she registered for antenatal care because they are in possession of her health records.

Considering some of these professional arts exhibited during the course of patient care, it is convincing enough to show that healthcare providers particularly doctors and nurse/midwives engage daily in the use of nonverbal communication channels. This study thereby recommends that in order to improve the knowledge of nonverbal communication channels among healthcare providers, the professional arts of the healthcare providers should be profiled into the appropriate taxonomies of nonverbal communication.

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