Pregnant Women's Awareness and Knowledge of Nonverbal Communication Channels during Antenatal Care in Tertiary Health Institutions in South Eastern Nigeria.

[1]Onyenekwe, Ogochukwu N. and [1]Ekwenchi, Ogochukwu C.

[1]Department of Mass Communication, Nnamdi Azikiwe University, Awka Anambra State, Nigeria.
Email: on.onyenekwe@unizik.edu.ng.

Abstract

Nonverbal Communication is an integral part of communication. There are different channels of nonverbal communication which represent tangible expressions of actions. Unlike verbal communication, nonverbal communication is rarely studied due to absence of a curriculum that teaches, assesses and evaluates its use. The aim of this study was to ascertain pregnant women's awareness and knowledge of nonverbal communication channels during antenatal care in tertiary health Institutions in South East Nigeria. Three Tertiary Health Institutions in South East Nigeria were randomly selected for the study. Participants for the study were pregnant women registered for antenatal care at the antenatal clinic of the three Tertiary Health Institutions. The instrument for data collection was questionnaire. Statistical analysis of data was done using percentages and chi-square. Significant level was placed at $p<0.05$. Findings showed that a significant number of pregnant women were aware of nonverbal communication while only about 30% of the pregnant women had knowledge of nonverbal communication channels. The preponderant expressions of nonverbal communication used by the pregnant women were smiling, nodding of head and body language which is kinesics. However, they could not properly place these expressions in the nonverbal channels. The study concluded that for proper use and understanding of nonverbal communication, a formal curriculum should be introduced for the purpose of training in it.

Keywords: Antenatal Care, Communication Channels, Nonverbal Communication, Tertiary Health Institutions and Verbal Communication.

Introduction

Communication constitutes one of the eight domains of the quality of the perinatal care within the framework proposed by the World Health Organization (Tuncalp, Pena-Rosas, Lawrie, Bucagu, Oladipo, Portela & Metin Gulmezoglu, 2017). Any communication is influenced by the background in which it takes place. However, apart from looking at where the interaction takes place, that is the situational background (office, room etc.), the social background needs to be referred to (Matsumoto & Hwang, 2016). This means the roles, responsibilities and ranks of the participants. The emotional settings and participants' expectations of the interaction will also affect the communication (Sethi & Seth, 2009). Nonverbal communication in the antenatal clinic is not only the body language or nonverbal communication of the healthcare providers and patients (pregnant women) but an embodiment of everything that contributes in facilitating care provision within that environment (Cherry, 2021, Buller & Buller, 1987). Therefore, this study was designed to explore the extent of awareness and knowledge of nonverbal communications channels amongst pregnant women during antenatal care.

Review of Literature

Communication as a process of sending and receiving messages enables human beings to share knowledge, attitudes and skills. As a tool for providing information, communication is a tool for

navigating the sometimes stressful circumstances that accompany pregnancy. Good communication between healthcare professionals and pregnant women is essential (Buller & Buller, 1987; Brown, Nelson, Bronkesh & Wood, 1993; Cherry, 2021).

Anthropologist Ray Birdwhistell pioneered the original study of nonverbal communication in what he called 'kinesics.' He estimated that nonverbal communication accounts for sixty to seventy percent of human communication (Fontenot, 2018). Scholars argue that nonverbal communication can convey more meaning than verbal communication. Other scholars state that most people trust forms of nonverbal communication over verbal communication (Fontenot, 2018; MCcornack, 2019).

Nonverbal communication involves conscious and unconscious processes of encoding and decoding. While encoding is the ability to express emotions in a way that can be accurately interpreted by the receiver(s), decoding is the ability to take the encoded emotion and interpret its meanings accurately according to what the sender intended. Women are found to be better decoders than men since they are more observant of nonverbal clues and might be more likely to use them (Hall, 2006; Lausic, 2009; Gulabovska & Leeson, 2014). While healthcare providers are more interested in technical precision (Araugo & Silva, 2012), women may be more concerned with sensitive issues like interpersonal relations with healthcare providers (Mulondo, 2020; Ishola, Owolabi & Filippi, 2017). This brings to bear nonverbal communication which is an integral part of interpersonal communication as it relates to antenatal care.

Methodology

The study was conducted using three randomly selected Tertiary Health Institutions namely, Chukwuemeka Odumegwu Ojukwu University Teaching Hospital (COOUTH) Awka, Nnamdi Azikiwe University Teaching Hospital (NAUTH) Nnewi and Enugu State University Teaching Hospital (ESUTH) Parklane Enugu. All the Tertiary Health care facilities are situated within the South Eastern part of Nigeria. The antenatal clinic of these Health Institutions was the point of participant recruitment and administration of copies of the questionnaire. A total of 149 pregnant women selected randomly from the sampled Tertiary Health Institutions participated in the study. The pregnant women were aged between 17years and 49years. They attended the antenatal clinic for care. They had different levels of education.

The questionnaire was administered on 149 pregnant women but only 133 copies of the questionnaire were recovered. This represented a recovery rate of 89.3%. The content of the questionnaire was developed by the researchers and experts in the field of health sciences. The questionnaire contained two sections. The first section covered demographics like age, parity, marital status and number of antenatal visits in current pregnancy. The second section focused on awareness and knowledge of nonverbal communication channels. Other questions were directed to discover the pregnant women's ability to rightly place touch, smile and eye contact in appropriate nonverbal communication channels. The questionnaire was pretested on 10 pregnant women. The Ethics committee of the Tertiary Health Institutions granted ethical clearance for the study. Informed consent was also obtained from the pregnant women. The variables were expressed in percentages. The test statistics used for analysis of data were Chi-square, likelihood ratio and spearman correlation. Significant level was placed at $p<0.05$.

Results of the Findings

Table one is a presentation of the demographic variables of the pregnant women. Pregnant women within 15-19 years were 0.8% while there were 12.3% pregnant women in the 20-24 years' bracket.

A predominant number of pregnant women were within the 25-29 years bracket with a frequency of 38.9% and 30-34 years bracket with a frequency of 37.3%. The age bracket 35-39 years had a frequency of 8.4% and 40-44 and 45-49 years brackets with frequencies of 1.5% and 0.8% respectively. While there were 98.5% married women, 1.5% women were single. A predominant number of the women were nulliparous with a frequency of 38.5% while Primiparous and Secondiparous women had frequencies of 25.4% and 20.8%. The multiparous women were 15.5%. Pregnant women who had 4 or less antenatal care visits were 46.6% while those who had more than 4 antenatal care visits were 63.4%. Table 1.

Table 1: Socio-demographic features of the pregnant women

Variable	Frequency	Percentage
Age (yrs)		
15-19	1	0.8
20-24	16	12.3
25-29	51	38.9
30-34	49	37.3
35-39	11	8.4
40-44	2	1.5
45-49	1	0.8
Marital status		
Married	131	98.5
Single	2	1.5
Parity		
Nulliparous	50	38.5
Primiparous	33	25.4
Secondiparous	27	20.8
Multiparous	20	15.5
Antenatal visits		
≤ 4 visits	54	46.6
>4 visits	62	53.4

Table 2 shows the proportion of pregnant women that indicated awareness of nonverbal communication, in this regard, 74% were significantly higher than 26% of pregnant women that were not aware of nonverbal communication (X^2=30.298, $p<0.05$). The proportion of pregnant women that had formal/informal training in nonverbal communication 63.3% was significantly higher than 36.7% that had no formal/informal training in nonverbal communication (X^2=9.031, $p<0.05$). There was no significant difference between the proportions of the pregnant women that had formal training in nonverbal communication and those that did not have formal training (X^2= 0.011, $p>0.05$) while the proportion of pregnant women that had informal training in nonverbal communication 37.1% was significantly lower than 62.9% that did not have informal training in nonverbal communication (X^2= 4.629, $p<0.05$). Table 2.

Table 2: Showing Proportion of Pregnant Women Aware of NVC and the means through which the awareness was acquired.

Observation	Yes (%)	No (%)	X^2	p-value
Awareness	99(74)	34(26)	30.298	<0.05
Formal/informal training in NVC	81(63.3)	47(36.7)	9.031	<0.05
Formal training in NVC	44(50.6)	43(49.4)	0.011	>0.05
Informal training in NVC	26(37.1)	44(62.9)	4.629	<0.05

Key: NVC = Nonverbal communication.

Significantly higher number of pregnant women 72.6% use nonverbal communication compared with 27.4% that did not use nonverbal communication (X^2=25.290, p<0.05). Similarly, significantly higher number of pregnant women 63.8% recognized the use of nonverbal communication by Consultant Obstetrician and Gynaecologist compared with 36.2% that could not recognize the use of nonverbal communication by Consultant Obstetrician and Gynaecologist (X^2= 9.646, p<0.05). Also significantly higher number of pregnant women 66.2% recognized the use of nonverbal communication by Midwife Nurses compared with 33.8% that did not recognize the use of nonverbal communication by Midwife Nurses (X^2=13.569, P<0.05). Table 3.

Table 3: Showing proportion of pregnant women that use and recognize NVC channels when used by HCP

Observation	Yes (%)	No (%)	X^2	p-value
Use of NVC by pregnant women	90(72.6%)	34(27.4%)	25.290	<0.05
Recognized when NVC was used by O&G	81(63.8%)	46(36.2%)	9.646	<0.05
Recognized when NVC was used by MWN	86(66.2%)	44(33.8%)	13.569	<0.05

Key:
NVC = Nonverbal Communication
HCP = Health Care Providers
O&G = Consultant Obstetrician and Gynaecologist
MWN = Midwife Nurse

A significant proportion of the pregnant women, agreed that handshake with the healthcare provider is nonverbal communication 83.9% while 16.1% disagreed (X^2=56.903, p<0.05). A significant number of the pregnant women 82.2% agreed that palpating the body by the healthcare provider is nonverbal communication, 17.8% disagreed (X^2=30.260, p<0.05). Similarly, a predominant number of the pregnant women 86.2% agreed that eye contact with the healthcare provider is nonverbal communication while 13.8% disagreed (X^2=64.398, p<0.05). Table 4.

Table 4: Assessment of knowledge of pregnant women to some Nonverbal Communication actions

Observation	Yes(%)	No (%)	X2	p-value
Is hand shake with HCP NVC	104(83.9%)	20(16.1%)	56.903	<0.05
Is palpating of body by HCP NVC	60(82.2%)	13(17.8%)	30.260	<0.05
Is eye contact with HCP NVC	106(86.2%)	17(13.8%)	64.398	<0.05

Key:
HCP = Health care providers
NVC = Nonverbal communication

A significant number of the pregnant women 63.5% did not know the nonverbal channel haptics while 36.5% knew the nonverbal channel haptics (X^2=8.357, p<0.05). In the same vein, a significant number of the pregnant women 86.3% indicated that smile is an example of nonverbal communication unlike 13.7% that indicated otherwise (X^2=65.323, p<0.05). However, while an insignificant number of the pregnant women 44.6% could identify an example of haptics, 55.4% could not identify an example of haptics (X^2=0.865, p>0.05). Similarly, the number of the pregnant women 56.6% that could identify an example of kinesics were similar to 43.4% that could not identify an example of kinesics (X^2=0.925, p>0.05). Table 5.

Table 5: Assessing the ability of the pregnant women to identify NVC channels of Haptics and Kinesics

Observation	Yes(%)	No (%)	X^2	p-value
Do you know NVC channel haptics	42(36.5%)	73(63.5%)	8.357	<0.05
Is touch an example of haptics	33(44.6%)	41(55.4%)	0.865	>0.05
Is smile a NVC	107(86.3%)	17(13.7%)	65.323	<0.05
Is smile example of kinesics	30(56.6%)	23(43.4%)	0.925	>0.05

Key: NVC = Nonverbal communication

A significant number of the pregnant women 88.6% agreed that nonverbal communication is important while 11.4% were of a contrary view about the importance of nonverbal communication (X^2=73.374, p<0.05). The number of pregnant women that indicated that nonverbal communication can exist without verbal communication 56.2% was not significantly higher than 43.8% who disagreed (X^2=1.860, p>0.05) (Table 6).

Table 6: Responses of pregnant women regarding importance of NVC

Observation	Yes (%)	No (%)	X^2	p-value
Is NVC important	109(88.6%)	14(11.4%)	73.374	<0.05
Can NVC exist without VC	68(56.2%)	53(43.8%)	1.860	>0.05

Key:
NVC = Nonverbal communication
VC = Verbal communication

Discussion of Findings

The socio-demographic indicators showed that a predominant number of the pregnant women that participated in the study were aged between 20 and 39 years. This is equally known as the fertility range of women within this area of study. Age was not a significant factor as found by Ahmed, (2020) in assessing awareness of the pregnant women to healthcare providers' nonverbal communication. All the pregnant women that participated in the study were married except for 2 of the pregnant women. It is expected within the cultural context of the participants and the areas of study because single parenthood is not in vogue. This is unlike a South African study (Mulondo, 2020) in which 77% of the participants were single and only 23% were married.

Majority of the pregnant women were within the second and third trimester of their respective pregnancies. This is mainly attitudinal since most pregnant women often downplay antenatal visits during the early days of their pregnancy particularly the secondigravidae and multigravidae due to some factors (Kyei, Campbell & Gabrysch, 2012). Approximately 2/5 of the pregnant women were nulliparous while slightly above 3/5 had one or more children. This shows that the group of

pregnant women with one or more children have been exposed to repeated antenatal care education (Silverman & Kinnersley, 2010). Furthermore, studies have shown that women are better adapted to nonverbal channels of communication than men (Hall, 2006; Lausic, 2009; Gulabovska and Leeson, 2014) although this may not translate into knowledge based awareness.

Pregnant women from the 5 South Eastern states and the adjoining states in the Southern part of Nigeria participated in the study. The selected Tertiary Health Institutions used for the study have a large coverage spanning through most South Eastern states. However, about 50% and 30% were from Anambra and Enugu States respectively.

Significant number of the pregnant women were aware of nonverbal communication. The awareness of nonverbal communication was partly by informal and formal means of training as agreed by 63.3% of the sampled women in Table 2. Significant number of these pregnant women use nonverbal communication channels in their day to day activities. Nonverbal communication channels are known to be interwoven with verbal communication and women are known to engage in the use of nonverbal communication (Miller, 2005; Gulabovska & Leeson, 2014).

The ability of the pregnant women to identify usage of nonverbal communication was assessed. Based on this premise, the ability of the pregnant women to identify the use of nonverbal communication by the healthcare providers in this instance, the Consultant Obstetrician and Gynecologist and the Nurse/ Midwife was documented as shown by data in Table 3 where 72.6% of the women agreed that they use non-verbal communication, just as 63.8% held that consultant obstetricians and gynecologist also use nonverbal communication; these nonverbal communication channels are recognized according to 66.2% respondents. Significant number of the pregnant women as could be noticed in data collected in Table 4 attested that the healthcare providers use nonverbal communication channels such as touch, smile, physical examination and palpation in providing care for them. In addition, majority of the pregnant women acknowledged that the health care providers explain the intentions of their nonverbal communication actions. Could this be an indication of knowledge based awareness on the part of the pregnant women? Could it also mean that the healthcare providers are at home with nonverbal channels of communication? However, studies have shown that Physician's nonverbal behaviour can lead to higher patient satisfaction but is affected by factors that include gender of the doctor as well as of the patient (Stepanikova, Zhang, Wieland, Eleazar & Stewart, 2012; Mast, Hall, Klockner & Choi, 2008; Mast, 2007).

In general, as regards the female gender, women are approached more closely than men. The theory behind it being that young boys played with toys that take up space/encourage space like cars, trains, balls. Girls however, are given dolls and houses that take less space (Knapp & Hall, 2014). In a male dominant society, boys learn from observing men. Even in the sizes of clothes and shoes, the craze for girls is small sizes. For men, the bigger the size, the better. Some men do audacious things for big muscles for example.

Similarly, in the interactions of the pregnant women with the healthcare providers, they observed that the health providers used nonverbal communication channels (Ahmed, 2020), to express satisfaction and worry regarding the progress of their pregnancy particularly concerning its stability. Stability of pregnancy usually translates into good pregnancy and neonatal outcomes (AlAteeq & Al-Rusaiess, 2015; Abbey & Okpani, 2018).

In order to assess the nonverbal communication knowledge base of the pregnant women, they were asked certain questions such as 'is hand shake with healthcare providers a kind of nonverbal communication? When the health providers smiled at them if it was a form of nonverbal communication? When the health providers palpate the abdomen if it was a kind of nonverbal communication? Is eye contact a form of nonverbal communication? (Tables 4 and 5) The essence of these questions was to assess if the awareness of nonverbal communication by the pregnant women was knowledge based or not. 'Knowing' must be distinguished from merely being 'aware.' While awareness refers to mere consciousness of the existence of a fact or situation, knowledge is a deeper understanding and appreciation of such fact or situation. This means understanding its details, dimensions and dynamics (De Vries & Muddle, 2008). In responding to the above questions, a predominant number of the pregnant women affirmed in the positive that all those actions are forms of nonverbal communications. This is evidence that the pregnant women were aware of nonverbal communication and could likely identify its use.

The present study also stepped up the questions to know the depth of knowledge of the pregnant women in nonverbal communication by asking the pregnant women to rightly place the action of touch and smile into the proper nonverbal channels. In responding to placing touch in the proper nonverbal channel of communication, about half of the pregnant women did not respond while only about 44.6% of the pregnant women that responded got it right that the channel was haptics. However, it was not significantly different from the 55.4% in Table 5 that responded wrongly ($p>0.05$). Similarly, in responding to which nonverbal communication channel is smile, about 60% of the pregnant women did not respond to the question while among those that responded only 56.6% got it right while 43.4% got it wrong ($p>0.05$). Smile falls under the channel of nonverbal communication known as kinesics.

It is an assessment of their ability to properly identify kinesics as a channel of nonverbal communication. There is a disparity between the number who indicated awareness of this channel and those who showed they were knowledgeable on the use of this channel of communication. This analysis of the depth of knowledge of nonverbal communication by the pregnant women showed that only one fourth of the pregnant women had an in-depth knowledge based awareness of nonverbal communication channels.

Could one fourth of the study population be an indication of widespread knowledge of nonverbal communication? Even though women are acknowledged as better decoders of nonverbal communication channels (Hall, 2006; Lausic, 2009; Gulabovska & Leeson, 2014), the statistic may not stand. This is due to the fact that the studied population, when judged with other indices like level of education (Marcinowicz, Konstantynowicz & Godlewski, 2010), in spite of their level of awareness was not able to measure up on the scale of knowledge of the nonverbal communication channels used during antenatal care.

It could be conveniently said that pregnant women with knowledge of nonverbal communication were not significantly higher amongst the studied population meaning that the number of pregnant women that were aware of nonverbal communication were significantly higher amongst the studied population.

Conclusion

Findings showed that pregnant women, to a large extent were aware of nonverbal communication but the level of awareness did not translate into knowledge of those channels of nonverbal communication. This shows that these channels of communication are regularly used amongst the

studied population but identification of the taxonomies under which the various actions identified, fall is not easily recognized. The channels of nonverbal communication are in use during antenatal care and exert influence on the studied population but are not easily discernible by them.

Recommendation

Based on the findings, the study recommends that deliberate effort be made in developing a formal curriculum for nonverbal communication in the health sector to enhance use and understanding of nonverbal communication.

References

Abbey, M. & Okpani, A. (2018). Availability and Readiness of Antenatal Care in the Primary Healthcare Setting in Ogoniland. *Asian Journal of Medicine and Health.* 10(3): 1-12 DOI: 10.9734/AJMAH/2018/39787.

Ahmed, H. (2020). Role of Verbal and Nonverbal communication of health care providers in general satisfaction with birth care: a cross-sectional study in government health care settings of Erbil city, Iraq. *Reproductive Health;* 17:35 doi: 10.1186/s12978-020-0894-3.

Al-Ateeq, M. & Al-Rusaiess, A. (2015) Health Education during Antenatal Care: The Need for More *International Journal of Women's Health*, 7, 239-242. http://dx.doi.org/10.2147/IJWH.S75164.

Araujo, M. & Silva, M. (2012). Communication Strategies used by healthcare professionals in providing palliative care to patients. *USP* 46(3), 2012 http://dx.doi.org/10.1590/s0080-62342012000300014.

Brown, S., Nelson, A., Bronkesh, S. & Wood, S. (1993). Quality Service for Practice Success. Maryland: Aspen Publication. Patient Satisfaction Pays.

Buller, M. & Buller, D. (1987). Physicians' Communication Style and Patient Satisfaction. *Jour. Health Soc Behav*. 28(4): 375-388. Doi:10.2307/2136791.

Cherry, K. (2021). Types of Nonverbal Communication. https://www.dotdash.com https://www.verywellmind.com/social-psychology-overview-4581771

De Vries, O. & Muddle, P. (2008). Health Communication: An Introduction. Englewood Cliff, New Jersey: Prentice Hall.

Fontenot, K. (2018). "Nonverbal Communication and Social Cognition." Salem Press Encyclopaedia of Health. 4(4).

Gulabovska, M. & Leeson, P. (2014). Why are Women better Decoders of Nonverbal Language? Gender Issues: 31(3-4) DOI: 10.1007/s12147-014-9127-9.

Hall, E. (2006b). Women's and Men's Nonverbal Communication: Similarities, Differences, Stereotypes and Origins. In V. L. Manusov & Patterson (Eds). The SAGE handbook of Nonverbal Communication. Pp 201-218. Thousand Oaks, California: Sage Publications.

Ishola, F., Owolabi, O. & Filippi, V. (2017). Disrespect and Abuse of Women during Childbirth in Nigeria: a systematic review. *PLoS One.* 12(3):e0174084.

Knapp, M. & Hall, J. (2014). Nonverbal communication in human interaction. Boston: Wadsworth Cengage Learning.

Kyei, N., Campbell, O.& Gabrysch, S. (2012). The Influence of Distance and Level of Service Provision on Antenatal Care Use in Rural Zambia. *PLoS ONE* 7(10):e46475. https://doi.org/10.1371/journal.pone.0046475.

Lausic, D. (2009). *Communicating Effectively: Exploring Verbal and Nonverbal Behaviors and how they affect Team Coordination.* Dissertation submitted for award of Doctor of Philosophy, Florida State University.

Marcinowicz, L., Konstantynowicz, J. & Godlewski, C. (2010). Patients' perceptions of nonverbal communication: a qualitative study. *British Journal of General Practice: 60*(571): 83-87. DOI: https://doi.org/10.3399/bjgp10x483111.

Mast, M. (2007). 0n the importance of nonverbal communication in the physician-patient interaction. *Patient Education Counselling,* 67: 315-318

Mast, M., Hall, J., Klockner, C. & Choi, E. (2008). Physician gender affects how physician nonverbal behavior is related to patients' satisfaction. *Medical Care.* 6; 1212-1218.

Matsumoto, D. & Hwang, H. (2016). The Cultural bases of Nonverbal Communication. American Psychological Association Handbook of Nonverbal Communication. Pp 77-101.

MCcornack, S. (2019). CHOICES AND CONNECTIONS: an introduction to communication (2nd edition). Boston: Bedford Books St Martin's. Pp 138. ISBN 978-1-319-04352-0.

Miller, P. (2005a). Body Language in the Classroom. *Techniques*, 80(8), 28-30.

Mulondo, S. (2020). Factors associated with underutilization of antenatal care services in Limpopo, South Africa. *British Journal of Midwifery.* 28(11); 788-795.

Sethi, D. & Seth, M. (2009). Interpersonal Communication: Life blood of an Organization. *IUP Journal of Soft Skills,* Volume III; Numbers 3 and 4 50J-2009-09/12-05-01.

Silverman, J. & Kinnersley, P. (2010). Doctors' Nonverbal Behaviour in Consultations: Look at the patient before you look at the computer. *Br J Practice* 60(571):76-78 https://doi.org/10.3399/bjgp10x482293.

Stepanikova, I., Zhang, Q., Wieland, D., Eleazar, G. & Stewart T. (2012). Nonverbal Communication between primary care physicians and older patients: How does race matter? *Journal of General Internal Medicine,* 27(5): 576-581. Doi:10.1007/s11606-011-1934-z.

Tuncalp, O., Pena-Rosas, J.P., Lawrie, T., Bucagu, M., Oladapo, O. T., Portela, A. and Metin Gulmezoglu A. (2017). WHO recommendations on antenatal care for a positive pregnancy experience–going beyond survival. *British Journal of Obstetrics and Gynaecology,* 124(6): 860-862.