

<https://doi.org/10.33472/AFJBS.6.6.2024.7730-7738>



African Journal of Biological Sciences

Journal homepage: <http://www.afjbs.com>



Research Paper

Open Access

A Study to Assess the Acceptability Assessment of Antenatal Assessment Tool among the Healthcare Professionals at the Community Health Center, Bisrakh, Greater Noida Sector 1, UP

**Rekha Kumari^{1a*}, Prof. Pity Koul^{2b}, Priyanka Nirman^{3c}, Ramesh Singh Chauhan^{4c},
Neeta Singh^{5d}, Neha Singh^{6c}**

- a. PhD Scholar, Associate professor, Sharda School of Nursing Science and Research, Sharda University, Greater Noida
- b. Emeritus Professor, Ph.D. supervisor, Sharda School of Nursing Science and Research, Sharda University, Greater Noida.
- c. Nursing Tutor, College of Nursing, GIMS, Greater Noida.
- d. Assistant Professor, College of Nursing, GIMS, Greater Noida.

*Corresponding Author

Article Info

Volume 6, Issue 6, July 2024

Received: 02 June 2024

Accepted: 03 July 2024

Published: 29 July 2024

*doi: 10.33472/AFJBS.6.6.2024.7730-7738***ABSTRACT:**

Antenatal screening is the process of identifying those at high risk of a disorder. Prenatal diagnosis establishes whether the disorder is present. Screening is used to select a high-risk group so that they can be offered prenatal diagnosis. Selection is needed, since for most disorders diagnosis is only possible by an invasive procedure, and this carries a slight risk of miscarriage. Antegraph is used as a tool for antenatal screening. **Objective** of the study was to observe the utility and effectiveness of the antenatal assessment tool and to find out the acceptability of antenatal assessment tool among health care professionals. **Method:** Methodological research approach using Delphi technique was adopted to develop antenatal assessment tool for antenatal mother. The posttest design was used. The samples size was 36 antenatal assessments done by 12 healthcare professionals. The sampling techniques were used which included Purposive sampling technique to select study subjects. **Result** of the study show that initially in observation one acceptance of antegraph was less among healthcare professional however in observation three acceptance of antegraph was gradually increased as compared to 1st observation. It was found feasible to use by nurses and doctor. **Conclusion** The new antenatal assessment tool is valid and reliable for assessing the antenatal mothers from 1st to 3rd trimester giving detail necessary information related to antenatal mother and improve the stranded of antenatal care. Awareness about use of antenatal assessment tool can enhance the feasibility, utility and acceptance of antenatal screening tool. The tool was highly effective and acceptable by the health care professional

Key words: Acceptability, Antenatal assessment, Healthcare professionals, Community Health Center

© 2024 Prashant Vishnoi, This is an open access article under the CC BY license (<https://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made

1. INTRODUCTION

According to the Education Policy 2020, the healthcare delivery system should prioritize preventative healthcare above curative care and rehabilitative. As healthcare professionals, we must provide comprehensive care to patients. To provide comprehensive care, we must provide quality care to patients, and quality comes when we have a standard instrument for providing quality care. Pregnancy usually occurs during the reproductive period of the woman. Based on the date of the last menstrual cycle, the average pregnancy lasts 280 days, or 40 weeks. The second trimester is the longest of the three trimesters that generally make up pregnancy. Pregnancy's first 12 weeks are referred to as the first trimester, the second trimester's 13–28 weeks as the middle, and the final 29–40 weeks as the last trimester. Pregnant, according to reports during pregnancy, several bodily systems undergo significant morphological, physiological, endocrinological, and biochemical changes. Antenatal care is a thorough inquiry that includes both a physical examination and counseling for pregnant mothers. It is believed that becoming a mother completes a woman. Every woman is prepared for conception, delivery, and motherhood by Mother Nature. The term "pregnancy" refers to the time a woman spends carrying a living being inside her womb from conception until delivery. Expectant parents can learn, adapt, and get ready for parenthood during these nine months. A family's new child's birth is a joyous event with enduring significance (Sharma, 2020)

The primary aim of a good childbearing mother is the health of both the mother antenatal and the kid. Future parents must have a favorable learning experience. Pre-Natal Care includes regular doctor appointments and assures a healthy baby's birth. The mother's nutrition and health ensure a healthy fetus and a safe birth. As the pregnancy advances the body gains weight and alterations shape. Exercises and Relaxations Regular exercises help with posture and movement. Labor and birth are the final stages of pregnancy. Childbirth is a miracle that a woman has the honor of executing with Mother Nature's help. During this normal process, challenges and abnormalities may exist, and one must be concerned that no issues arise. (Kavita, 2020)

Need of the Study

Antenatal care (ANC) is crucial for ensuring the health and well-being of both mothers and their unborn children. Effective antenatal care can prevent potential health issues, provide timely interventions, and promote healthy behaviors during pregnancy. However, the success of antenatal care programs heavily depends on the tools and methods used by healthcare professionals to assess and manage the health of pregnant women.

Assessment tools in antenatal care are designed to standardize the evaluation of maternal and foetal health, identify risks, and facilitate timely interventions. These tools can vary widely, including questionnaires, checklists, and diagnostic tests. The acceptability of these tools among healthcare professionals is critical, as it directly affects their usage and the overall quality of care provided.

A study was conducted by Say and Raine (2007) conducted a systematic review of inequalities in the use of maternal health care in developing countries. They found that the acceptability of health care interventions, including assessment tools, was a significant factor in their utilization. The study suggested that understanding the perceptions and acceptability of these tools among healthcare providers could help address disparities in maternal health care.

Objectives:

- a. To observe the utility and feasibility of the antenatal assessment tool
- b. To find out the acceptability of antenatal assessment tool among health care professionals

2. METHODOLOGY

Methodological research approach using Delphi technique was adopted to develop antenatal assessment tool for antenatal mother. The Tool which was developed in three Delphi rounds by taking opinion and suggestions from 15 multi-disciplinary health care professionals selected as panelists. Thereafter, posttest only design was used to assess the utilization of antenatal assessment tool and its acceptance among the health care professional. The mini study was conducted in community health center, bhisrak, Noida. The sampling techniques were used which included purposive sampling technique to select study subjects; the posttest only design was used by observing 36 antenatal mothers by 12 different health care professionals.

3. RESULTS**Table 1 Findings related to Socio - demographic variables of Study subjects.**

Socio - demographic characteristics	f	%
Age		
21-30	6	50
31-40	4	33
41-50	2	17
Profession		
Physician	2	17
Nurses	10	83
Other	0	0
Professional Qualification		
Diploma	6	50
UG	4	33
PG	1	8
Super specialty	1	8
Area of work		
Antenatal ward	4	33
Labor room	5	42
OPD	3	25
Any other	0	0
Total Years of Professional Experience		
0-5	3	25
6 -11	4	33
12-16	2	17
17 and above	3	25
Total Years of professional experience in the field of		

obstetrics and gynecology		
0-5	3	25
6 -11	4	33
12-16	3	25
17 and above	2	17
Have you participated in any continuing education program in Obstetrics and Gynecology		
Yes	5	42
No	7	58
How many days of the program have you attended		
0-5 days	3	25
6-10 days	2	17
More than 10 days	0	0
Do you have previous knowledge regarding antenatal assessment tool		
Yes	0	0
No	12	100

Table 1: Depicts the socio-demographic profile of 12 study subjects. According to age categories Majority of subjects 6 (50%) were in the age group of 21-30 years, remaining 4 (33%) belonged to the age group of 31-40 years remaining 2(17%) belongs to 41-50years; as per profession maximum were nurses 10(80%) and 2(17%) were the physician; as per professional qualification, majority of subjects 6 (50%) were having diploma, followed by 4 (33%) having under graduation, 1 (8%) we're having post-graduation and super specialty; maximum 5 (42%) health care professionals work in labor rooms, followed by 33% (4) in antenatal wards and 3 (25%) in outpatient department (OPD); according to duration of professional experience, most of the subjects 4 (33%) had a professional experience of 6-11 years, followed by 3(25%) having an experience of 0-5 and 12-16years and remaining 2 (17%) had an experience more than 17 years; in terms of total years of professional experience in the field of OBG, the majority of subjects (4/33) had 6–11 years of experience, followed by 3(25%) with 0–5 years and 12–16 years, and the remaining 2(17%) with experience beyond 17 years. According to the number of program days attended, 3 (25%), and 2 (17%), for days 0–5, 100% 12 have no prior knowledge about antenatal assessment tool

Findings in terms of use of antenatal assessment tool by study subjects and its effectiveness

Data was collected in terms of use of antenatal assessment tool by study subject and its effectiveness. Each study subject carried out three assessments on antenatal mothers using antenatal assessment tool. Investigator used rating scale to observe the study subjects while performing antenatal assessment.

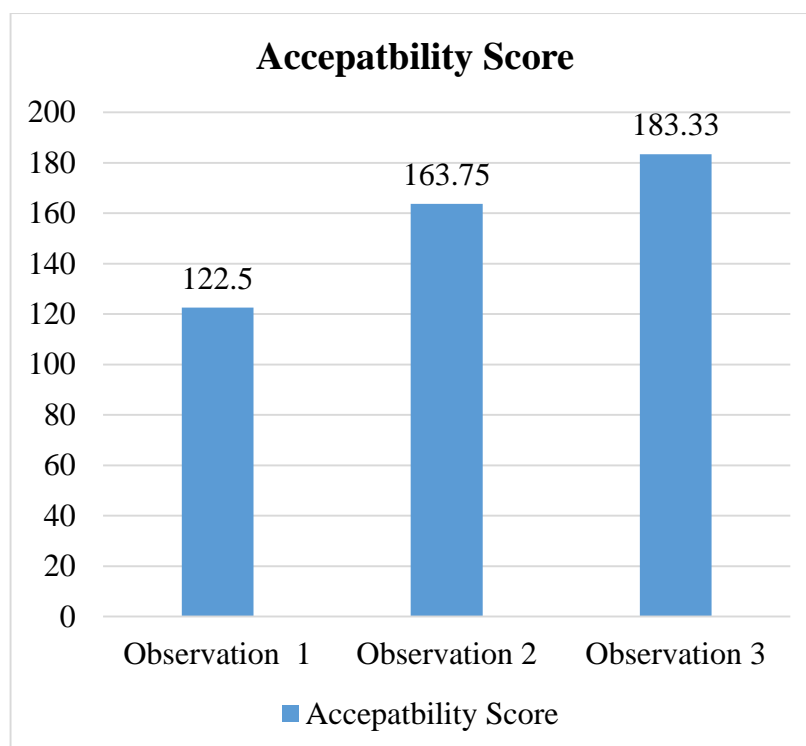


Fig. 1 Acceptability of antenatal assessment tool by the health care professionals

Effective administration = 70% above; To some extent = 50-70 %; Not effective less than= 50%

Fig no. 1 shows mean scores of acceptability of antenatal assessment tool by the health care professionals carried out during three different observations which is represented O1=122.5±4.74(p=0.038), O2=163.75±5.83(p=0.035) and O3=183.3±0.74(p=0-004). Hence, interpreted that maximum area wise assessment was completely filled by the study subject and the assessment score was found to be above 70% for maximum area, which indicated the antenatal assessment tool was very effective.

Acceptance of antenatal assessment tool by the health care professional.

Table 2 Depicts the acceptance of antenatal assessment tool by health care professional on basis of 10 evaluator

N =12X3=36 observation

ITEMS	Mean ± SD	Mean % score
1. The information provided in the tool is comprehensive and covers all aspects of the antenatal period	0.29±0.92	92%
2. It is clear and information can be can be filled easily	0.45±0.75	75%
3. It serves as beneficial tool for antenatal assessment across all trimesters of pregnancy	0.39±0.83	83%
4. It saves time	0.29±0.92	92%
5. It does not disrupt routine work	0.45±0.75	75%
6. It helps to reduce the work load.	0.39±0.83	83%
7. It can be implemented in the antenatal wards, antenatal OPD and MCH clinics etc. to carry out comprehensive antennal examination	0.45±0.75	75%
8. It facilitates to identify risk status of pregnant mother	0.39±0.83	83%

9. It aids in maintaining a comprehensive record of progress during the pregnancy.	0.45±0.75	75%
10. It gives a sense of satisfaction after using antegraph.	0.29±0.83	83%

Acceptance = Above 70%, Non-acceptance = Below 50 %

Table 2: Shows that Out of all the parameters, maximum score of 0.29±0.92 was given to save time and information provided in the tool is comprehensive and covers all aspects of the antenatal period. Minimum score was 0.45±0.75 was obtained for not disrupt routine work, it can be implemented in the antenatal wards, antenatal OPD and MCH clinics and it aids in maintaining a comprehensive record of progress during the pregnancy. This concludes there was significant acceptance among health care professional regarding antenatal assessment tool.

4. DISCUSSION

A study conducted by Chorwe-Sungani and Chipps (2018) systematically reviewed screening instruments for depression in antenatal services in low-resource settings. It found that while several screening tools were available, their acceptability and feasibility among healthcare providers varied significantly, influencing their implementation and effectiveness in antenatal care settings. The study highlighted the need for tools that are not only effective but also acceptable to the healthcare providers who use them.

A Cochrane review by Dowswell et al. (2015) compared alternative versus standard packages of antenatal care for low-risk pregnancies. The review indicated that the acceptability of different care packages, including assessment tools, played a crucial role in their adoption and effectiveness. The findings emphasized the importance of designing antenatal care tools that are user-friendly and acceptable to healthcare professionals to ensure their effective use.

Lee et al. (2016) conducted research to assess the acceptability of a digital antenatal care tool among healthcare professionals in rural India. The study found that while the digital tool had the potential to enhance care, its acceptability was influenced by factors such as ease of use, training, and the perceived usefulness of the tool.

5. CONCLUSION

This study aimed to assess the acceptability and utility of an antenatal assessment tool among healthcare professionals at the Community Health Center in Bhisrak, Noida. The study utilized a methodological research approach incorporating the Delphi technique to develop the antenatal assessment tool through three rounds of expert panel consultations. Subsequently, a posttest-only design was employed to evaluate the tool's utilization and acceptance among healthcare professionals. The study's findings indicate that the antenatal assessment tool was well-received by healthcare professionals, with high scores on various evaluator parameters, such as comprehension, ease of use, benefit, timesaving, and reduction of workload. The tool's acceptance was further supported by the progressive improvement observed across three different observations, with mean acceptability scores showing significant increases (O1=122.5±4.74, O2=163.75±5.83, O3=183.3±0.74).

The socio-demographic profile of the study subjects revealed that the majority were nurses (80%), with professional qualifications ranging from diplomas to post-graduation and super specialty. Most healthcare professionals had significant experience in the field of obstetrics and gynecology, further validating the credibility of their feedback on the antenatal assessment tool.

In conclusion, the antenatal assessment tool demonstrated high utility and feasibility among healthcare professionals at the Community Health Center in Bhisrak, Noida. The study

highlights the importance of developing user-friendly and acceptable antenatal assessment tools to enhance the quality of maternal care. The positive reception and the progressive improvement in the tool's acceptability underscore its potential for broader implementation in antenatal care settings. Future research should focus on larger-scale studies to further validate these findings and explore the long-term impact of the antenatal assessment tool on maternal and fetal health outcomes.

6. REFERENCES:-

1. Basha, G.W., 2019. Factors Affecting the Utilization of a Minimum of Four Antenatal Care Services in Ethiopia. *Obstetrics and Gynecology International journal*, 1–6. <https://doi.org/10.1155/2019/5036783>
2. Babu, L. M., 2018. A Study to Assess the Knowledge of Staff Nurses Regarding Antenatal Assessment of Fetal Well Being Working in MahilaChikitsalayaSanganeri Gate Jaipur Rajastha. *International Journal of Engineering Science and Computing* 8(3) 16294-16300. [https://ijesc.org/upload/b169171605b141eac51b52d0ace5d863.A%20Study%20to%20Assess%20the%](https://ijesc.org/upload/b169171605b141eac51b52d0ace5d863.A%20Study%20to%20Assess%20the%20)
3. Devi, B., Khandelwal, B., Das, M., 2016. Analysis of knowledge and attitude regarding antenatal examination among nursing students in Sikkim a descriptive co-relational study. *Int J ReprodContraceptObstetGynecol* 3871–3878. <https://doi.org/10.18203/2320-1770.ijrcog20163856https://www.ijsr.net/archive/v7i3/23031801.pdf>
4. World Health Organization (WHO). WHO recommendations on antenatal care for a positive pregnancy experience. Geneva: WHO; 2016. Available from: <https://www.who.int/publications/i/item/9789241549912>
5. Centers for Disease Control and Prevention (CDC). The Importance of Maternal Health Before, During, and After Pregnancy. Atlanta: CDC; 2020. Available from: <https://www.cdc.gov/ncbddd/maternalinfanthealth/pregnancy.html>
6. Say L, Raine R. A systematic review of inequalities in the use of maternal health care in developing countries: examining the context of different inequalities. *BMC Public Health*. 2007;7:34. doi:10.1186/1471-2458-7-34
7. Fabbro, M.R.C., Wernet, M., Baraldi, N.G, 2022. Antenatal care as a risk factor for caesarean section: a case study in Brazil. *BMC Pregnancy Childbirth* 22, 731. <https://doi.org/10.1186/s12884-022-05008-z>
8. Greenfield, M.F.,2022. Antenatal Care in Nepal: A Qualitative Study into Missed Opportunities in the First Trimester. *AJOG Global Reports* 100127. <https://doi.org/10.1016/j.xagr.2022.100127>
9. Gholap, P.R., 2018. A Study to Assess the Knowledge and Effectiveness of Teaching Regarding Antenatal Care among Primigravida Mothers in the Selected Hospital of Nashik. *International Journal of Science and Research (IJSR) ISSN (Online)*, pp.2319-7064.
10. Ibe-Dladla, N.S., Adam, Y., 2018. Audit of the patient-carried antenatal card, South Africa. *African Journal of Midwifery and Women's Health* 12, 168–172. <https://doi.org/10.12968/ajmw.2018.12.4.168>
11. Irania, F., Ginting, C.N., Siagian, M., 2022. Evaluation of Integrated Antenatal Care Implementation With Cipp Model In The Work Area. *International journal of health and pharmaceutical* 3, 63–71. <https://doi.org/10.51601/ijhp.v3i1.109>
12. Kavita,B.H., 2020 A study to assess the effectiveness of planned health teaching on knowledge regarding antenatal care among the primigravida mothers in selected

- hospitals of aurangabadcity,sudhaganga, available at [:http://shodh.inflibnet.ac.in:8080/jspui/handle/123456789/8087](http://shodh.inflibnet.ac.in:8080/jspui/handle/123456789/8087)
13. Kumar, G., et.al 2019. Utilisation, equity and determinants of full antenatal care in India: analysis from the National Family Health Survey 4. BMC Pregnancy Childbirth 19, 327. <https://doi.org/10.1186/s12884-019-2473-6>
 14. Chorwe-Sungani G, Chipps J. A systematic review of screening instruments for depression for use in antenatal services in low resource settings. BMC Psychiatry. 2018;18(1):125. doi:10.1186/s12888-018-1684-5.
 15. Dowswell T, Carroli G, Duley L, Gates S, Gülmezoglu AM, Khan-Neelofur D, Piaggio G. Alternative versus standard packages of antenatal care for low-risk pregnancy. Cochrane Database Syst Rev. 2015;(7). doi:10.1002/14651858.CD000934.pub3.
 16. Lee SH, Nurmatov UB, Nwaru BI, Mukherjee M, Grant L, Pagliari C. Digital technology for rural antenatal care: a systematic review of the acceptability and feasibility. BMC Pregnancy Childbirth. 2016;16:41. doi:10.1186/s12884-016-0836-0.