

Effectiveness of Self Instructional Module (SIM) on Knowledge Regarding Non Stress Test (NST) Among Staff Nurses Working at Recognized Hospitals in Gurugram.

Ms. Munesh Devi¹, Mr. Sunil Kumar Dular^{2*}

¹PhD Scholar, Faculty of Nursing, SGT University, Gurugram, Haryana.

²Associate Professor, Community Health Nursing, Faculty of Nursing, SGT University, Budhera, Gurugram, Haryana.

Corresponding Author

Mr. Sunil Kumar Dular

Associate Professor, Community Health Nursing

Faculty of Nursing, SGT University,

Budhera, Gurugram-122505, Haryana

Email: skdular@sgtuniversity.org

ABSTRACT

Introduction: Non-stress's a method used to test fetal wellbeing before the onset of labor. A prenatal non-stress test functions in overall antepartum surveillance with ultrasound as a part or component of the biophysical profile. **Aim:** The main aim of this study was to assess knowledge regarding Non stress test and to find association between among staff Nurses.

Material/Method: It was a pre experimental study conducted amongst 60 consented nurses of recognized hospital in gurugram. Data was collected through a structured questionnaire and provide self-instructional module on knowledge regarding NST. **Result:** in that 40% had good knowledge score in pre-test which was improved in post-test that is 90%. **Knowledge score.**

The mean of pre-test mean score was 19.33 which was increased in post-test mean score 24.22. 't' value for knowledge 11.13 at the level of significance $p < 0.05$. No association was found between knowledge and other demographic variables.

Conclusion: Self Instructional Module will be effective in improving knowledge regarding Non Stress Test (NST) among Staff Nurses in recognized Hospitals at Gurugram.

Key words: Knowledge, Effectiveness, Non Stress Test (NST).

Introduction:

Non-stresses is a method used to test fetal wellbeing before the onset of labor. A prenatal non-stress test functions in overall antepartum surveillance with ultrasound as a part or component of the biophysical profile. The presence of fetal movements and fetal heart rate acceleration is the most critical feature of the non-stress test. It is a non-invasive test used for the surveillance of high-risk pregnancies when the fetus is judged clinically to be at risk for hypoxemia or increased risk of death. Trained and certified nurses, midwives and physicians should read and interpret the non-stress test. The NST readings are as reactive and none reactive. The non-stress tests can initiate at 26 to 28 weeks. The NST is reactive from 32 weeks^[1]

Assessing foetal wellbeing should reduce perinatal mortality and morbidity; however the outcome of pregnancy in the developed world is usually good with adverse perinatal outcomes being relative rare. It therefore follows that the majority of fetuses subjected to tests designed to assess foetal wellbeing will be healthy. These tests should not only be sensitive in their ability to detect a compromised foetus, but also specific in that they do not give an abnormal result when

foetus is well. Thus electronic foetal monitoring is one of the important parameter in determining the foetal wellbeing of the unborn babies and the nurses should have adequate knowledge regarding electronic foetal monitoring in order to prevent complication.

A study was done to assess the knowledge and practice of the nursing personnel on antenatal foetal assessment before and after Video Assisted Teaching. Quasi experimental one group pre-test post-test design was used. The findings revealed that there was an increase in mean scores of knowledge from 14.8 to 21.0 and practice from 11.8 to 24.7 after the Video Assisted Teaching which shows the effectiveness of Video Assisted Teaching on the knowledge and practice of the nurses on antenatal foetal assessment. This study enabled nurses to become competent in doing antenatal foetal assessment in the wards and confidently interpret the readings and inform the doctors accordingly. The structured instructional module prepared by the investigator can be used as guideline for all nurses in the antenatal wards and labour room while the video can serve as a tool for educating students in clinical area. Continuing nursing education sessions on interpretation of NST tracings for nurses may improve their knowledge and skills.²

A quasi-experimental design was used in carrying out the study to impact knowledge and awareness assessment of methods of fetal wellbeing among staff nurses. The study was conducted at obstetric & gynecological department working at setting in Jarsh Governorate Hospitals & Prince Hussein Bin Abdullah Hospitals. Methods: The study sample consisted of all staff nurses working at obstetric & gynecological department in Jarsh Governorate Hospital & Prince Hussein Bin Abdullah Hospitals who have agreed to participate in the study. The current study has included 150 staff types of sample convenient sample. Results: The main findings of this study showed that there is a highly statistical significance differences between pre-test and post-test in all answers regarding knowledge about methods of fetal wellbeing assessment. Conclusion: Nurses have a major role to prevent the complication for the fetus and mother during pregnancy. Nurses coming in contact with the antenatal mothers should take initiative to provide necessary information to the women and the relatives on different methods used for the assessment of fetal wellbeing, so as to improve the quality of life among the pregnant women. For that they should adequate knowledge about all the aspects of fetal wellbeing, so that they can prevent the complication.³

The risk of perinatal mortality and morbidity can be reduced if the nursing personnel are competent to adopt and practice newer instrumentation and technology like electronic foetal monitoring or NST.

The main aim of this study is assess knowledge regarding Non stress test and to find association between among staff Nurses.

Material and methods : This is a pre experimental one group per test post-test study. non probability purposive sampling was used. The study was conducted on staff nurses working in maternity units in recognized hospital in gurugram. The sample size was 60. data collection tool consist in 3 section. That is selected demographic variable, Prepared SIM on NST, Structured questionnaire to assess knowledge regarding NST. Ethical Approval to conduct study was obtained from institutional review board of SGT University, Gurugram. Then permission obtained from the medical superintendents of hospital was included in research study. Content validity of the tool was determined by expert's opinion and suggestion on relevance of items. The reliability of the tool was found out by using Kuder&Richards on formula 20. Pilot study was conducted in Aarvy Hospital to find the practice ability and feasibility of the study. The study was conducted for period of 12 days in the month of february 2018. The informed consent was obtained. Appropriate orientation had given to the subjects about the objectives of the study, nature of structured knowledge questionnaire and adequate care was taken for protecting the subjects from potential risk including maintain confidentiality, security and identify. The demographic variables collected from the subjects. The pre-test was done to assess the knowledge of staff nurse regarding NST through structured knowledge questionnaire. The self-instructional module was administered. The post test of study was carried out one week later,

using same tools as pre-test. Collection data was then tabulated and analysed.

RESULT:

DISTRIBUTION OF STUDENT ACCORDING TO SOCIO-DEMOGRAPHIC VARIABLES.

Majority of the staff nurse (63.33%) from the age group of 20-24yrs, (85%) of staff nurses were females, According to general education,(53.33%)of staff nurses were GNM(General nursing midwifery), According to years of experience in hospital (71.66%)of staff nurse had a experience in between 1-4yrs, According to years of experience in OBG ward/labour room (43.33%)of staff nurses had nil experience, According to No.of times NST performed in ward independently, (21.66%)of staff nurses had none experience.

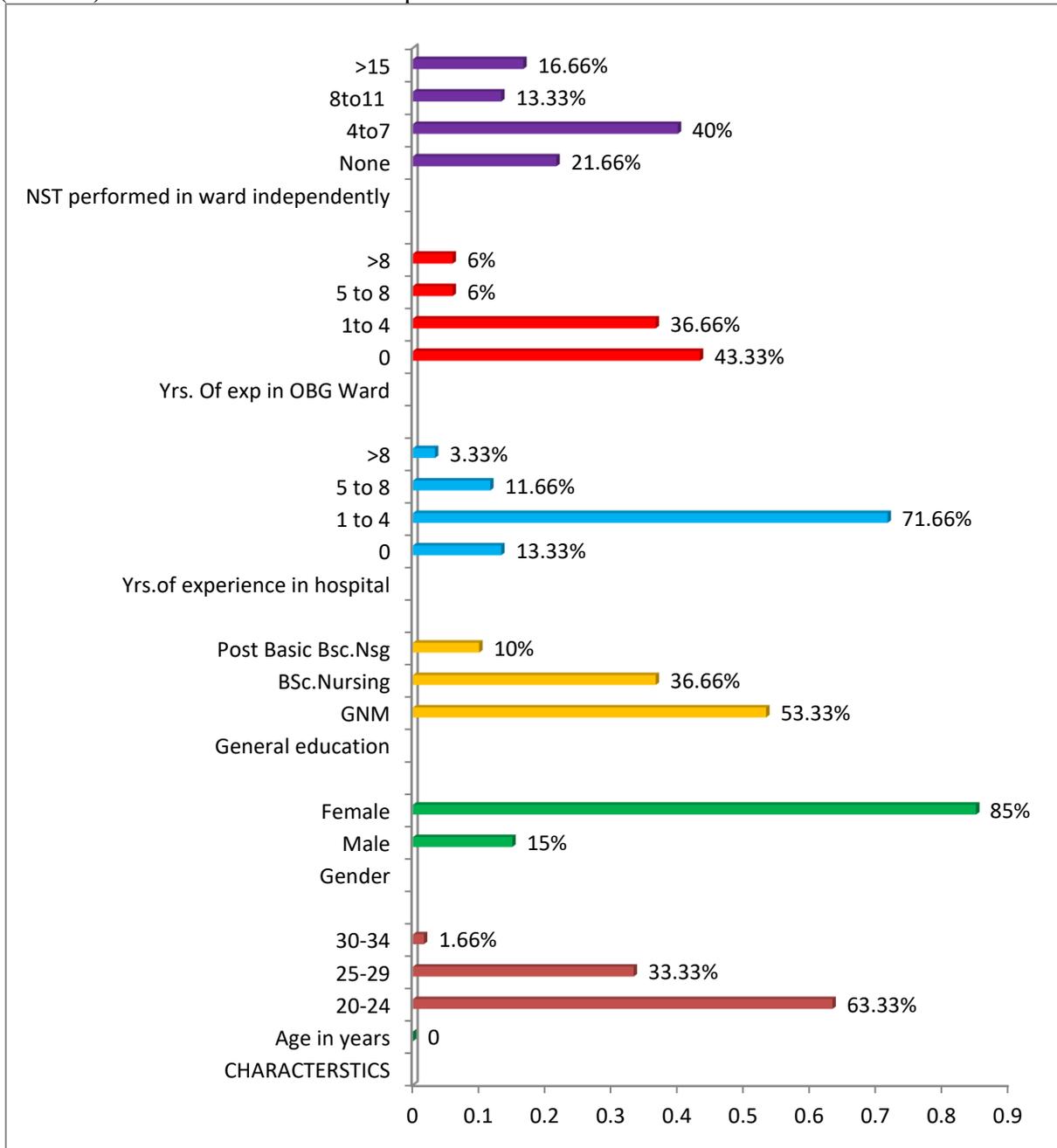


Fig1: Bar Diagram showing percentage distribution of sample characteristics regarding NST among staff nurses

KNOWLEDGE OF STAFF NURSES BEFORE AND AFTER INTERVENTION

Pre-test knowledge regarding NST among staff nurse 60% had average knowledge and 40% had good knowledge.it was improved in post-test that is 10%had average knowledge and 90% had good knowledge.

COMPARISON OF PRETEST AND POSTTEST KNOWLEDGE SCORE OF STAFF NURSES REGARDING NST

Comparison of Pre test knowledge score of staff nurses regarding NST of different Hospitals

The comparison of pre test knowledge score regarding NST among staff nurses of different Hospitals to assess the effectiveness of self instructional module regarding NST among staff nurses. The mean of pre test knowledge score of Sanjeevani Hospital (19) ,Gurugram Hospitals(19.43) and the SGT Hospital (19.67) having a significant difference with 't' value for knowledge of sanjeevani hospital is 6.66, Gurugram Hospital is 6.95 & SGT hospital is 5.43 at the level of significance $p < 0.05$.

Comparison of Post test knowledge score of staff nurses regarding NST of different Hospitals

The comparison of Post-test knowledge score regarding NST among staff nurses of different Hospitals to assess the effectiveness of self instructional module regarding NST among staff nurses. The mean of Post- test knowledge score of Sanjeevani Hospital (24.14) ,Gurugram Hospitals(24.52) and the SGT Hospital (23.80) having a significant difference with 't' value for knowledge of sanjeevani hospital is 6.66, Gurugram Hospital is 6.95 & SGT hospital is 5.43 at the level of significance $p < 0.05$.

EFFECT OF SIM ON KNOWLEDGE REGARDING SIM AMONG THE STAFF NURSES

The comparison of pre test and post test knowledge score to assess the effectiveness of self instructional module regarding NST among staff nurses. The mean of pre test knowledge score 19.33 that was increased in post test knowledge score 24.22 .with 't' value for knowledge 11.13 at the level of significance $p < 0.05$.

Therefore, it was concluded that there was a significant difference in pre test and post test knowledge score to assess the effectiveness of self instructional module regarding NST among staff nurses. Hence, there was the research hypothesis accepted.

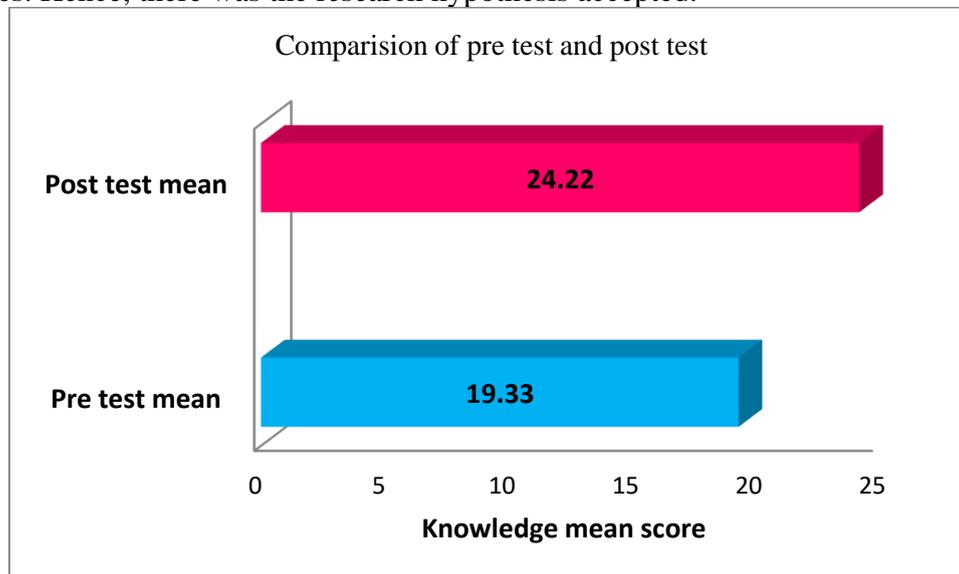


Fig 2: The comparison of pre test and post knowledge Score regarding NST among staff nurses

TO ASSOCIATE KNOWLEDGE REGARDING NST WITH SELECTED DEMOGRAPHIC VARIABLES

The association of post test knowledge regarding NST among staff nurses with selected demographic variables such as General education was found statistically significant 0.003 at $p < 0.05$ and also of years of experience in OBG ward was found statistically significant 0.030 at $p < 0.05$ and remaining demographic variables such as age in years, gender, yrs of experience in

hospital, NST performed in ward independently was found no statistically significant by using ci square test

DISCUSSION: This study was a pre-experimental study, pretest-posttest design without control group approach was used to assess the Effectiveness of Self Instructional Module (SIM) on Knowledge Regarding Non Stress Test (NST) Among Staff Nurses. Majority of the staff nurse (63.33%) from the age group of 20-24yrs, (85%) of staff nurses were females, (53.33%) of staff nurses were GNM, (71.66%) of staff nurse had a experience in between 1-4yrs, (43.33%) of staff nurses had nil experience in OBG, (21.66%) of staff nurses had none experience in NST. The mean of pre test knowledge score 19.33 that was increased in post test knowledge score 24.22 .with 't' value for knowledge 11.13 at the level of significance $p < 0.05$. it was concluded that there was a significant difference in pre test and post test knowledge score to assess the effectiveness of self instructional module regarding NST among staff nurses. Hence, there was the research hypothesis accepted. For the implication Nursing personnel are the primary care give rs and are responsible for educating women about normal foetal movement and take appropriate actions if it deareas. They also need to observe and interpret the tracing of the electronic foetal monitor to assess foetal wellbeing. One of the main aims of the nursing research is to contribute knowledge to the body of nursing to expand and broaden the scope of nursing. This is possible only if nurses are taking initiative to conduct the research. Recommendation are a similar study can be replicated on larger sample to make generalizability. The same a study can be carried out to evaluate the efficiency of various teaching strategies like STP, pamphlets, PTP, video assisted teaching module on NST. A study can be done to assess the different skills of the staff nurses. Limitations are The study confines itself only to find the knowledge of staff nurses, their attitude and practice are not studied. The study is limited to the experience level of the researcher.

The present study supported by They can provide appropriate information and support through the testing process and help to interpret results. Therefore a non experimental quantitative study was conducted to evaluate the knowledge of staff nurses regarding antenatal assessment of fetal well being in Mahila Chikitsalya Sanganeri gate Jaipur (Rajasthan). Where non experimental quantitative research design was used and 60 staff nurses were selected using convenient and purposive sampling. Too consist of 40 items to assess the knowledge. 4 items for general concept of fetal well being, 17 items for clinical methods, 14 for biophysical methods and 5 for biochemical methods. The association between experience of staff nurse and knowledge score was statistically significant ($\chi^2 = 4.53$) as established by chi – square test. The mean knowledge score obtained by staff nurses was 23.9 and median score was 26 with standard deviation 7.4257 and the knowledge score were in the range of 9 – 36. Study findings concluded that overall knowledge score is 59.75. The analysis showing that they don't have adequate knowledge about antenatal assessment of fetal well – being. There is a need to determine what form of assistance would best to improve the knowledge of staff nurses regarding antenatal assessment.⁴

CONCLUSION:

The study at last concluded that there was a significant difference in knowledge score of Staff Nurses before and after administering the Self-Instructional Module (SIM) regarding NST. It was proven that the effectiveness of Self Instructional Module was effective for Staff Nurses regarding NST.

REFERENCES

1. Preboth M, ACOG guidelines on antepartum fetal surveillance. American College of Obstetricians and Gynecologists. American family physician. 2000 Sep 1 [PubMed PMID: 10997537].
2. Jenifer M, Sony A, Singh D, Lionel J, Jayaseelan V. Knowledge and practice of nursing personnel on antenatal foetal assessment before and after video assisted teaching. Indian J Cont Nsg Edn.. Available from: <https://www.ijcne.org/text.asp?2017/18/2/87/286275>.

- 3.El-Razek, A. (2016) Impact of Educational Programs about Methods of Assessment of Fetal Wellbeing during Pregnancy among Staff Nurses. Open Journal of Obstetrics and Gynecology, 6, 473-481. doi: 10.4236/ojog.2016.68063.
4. Babu Lal Meena, A Study to Assess the Knowledge of Staff Nurses Regarding Antenatal Assessment of Fetal Well Being Working in Mahila Chikitsalaya Sanganeri Gate Jaipur Rajasthan., International Journal of Engineering Science and Computing, Volume 8 Issue No.3.
- 5.Dutta DC. Textbook of Obstetrics. 6th ed. Calcutta: New Central Book Agency; 2004.105-6.
- Cardazo L, Drife JO, Kean L. Obstetrics and gynaecology. London: Arnold Publication; 2004. 240
- 7.Infant mortality rate .available at <https://hindustantimes.com/delhi/delhi.infant-mortality-increases/story-2015>.
- 8.Pilliteri A. Maternal and child health nursing. 5th ed. Philadelphia: Lippincott Williams and Wilkins; 2007. 197.
- 9.Newborn health in India. Available at <http://www.newbornwhocc.org/pdf/teachingaids/2010/Newborn-health-in-India>.
- 10.Experienced obstetric nurses decision making in foetal risk situations. Available at <http://www.ncbi.nih.gov/pubmed/11012127> (2000 sep-oct).
- 11.Maryam Z, Mohsen T. A Study on Foetal Wellbeing through the Non-Reactive Non-Stress Test in the Patients referred to Motazedi Kermanshah, Iran. AnatomyPhysphysiologyBiochemIntJ.2017: 2(2)