ANNEXURE -III

QUALITY OF TEACHERS AND TEACHING

- Reference to 3(a) List of Teachers with PhD.
- Reference to 3(d) List of Publications in referred journals
- Reference to 3(e) List of Publications in Conferences
- Reference to 3(f) List of Books published.

JAMIA HAMDARD

(Declared as Deemed-to-be University under Section 3 of the UGC Act, 1956 vide
Notification No. F.9-18/85-U.3 dated 10.5.1989 of the Government of India)

Doctor of Philosophy

This is to certify that

Feba Gee Varghese

D/o K Y Gee Varghese

Enrolment No. 2017-851-001 after approval of his/her thesis

"A study to assess the effectiveness of nurse navigation program
for patients undergoing open abdominal surgery in tertiary
care hospital of Delhi with a view to develop a nursing
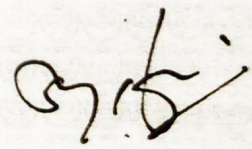care protocol" in Nursing

has been admitted to the degree of

Doctor of Philosophy in 2021

Place of Issue : New Delhi

Date of Issue :

2 2 JUN 2021

Registrar

Vice-Chancellor

QUALITY OF TEACHERS AND TEACHING

3(d) LIST OF PUBLICATIONS IN REFERRED JOURNALS (2022-2023)

S.NO	FACULTY NAME	PUBLICATION	JOURNAL	ISSN No.
1.	Prof. Dr. Feba Geevarghese	Effectiveness and Implications of a 'Structured Hands–on Training on OSCE' for Nursing faculties: A pilot project by Trained Nurses' Association of India	The Nursing Journal of India	0029- 6503
2	Prof. Sheeba P. Joseph	A descriptive study to assess the knowledge and practice regarding self- medication among patients visiting outpatient department in a selected hospital of Delhi	International Journal of Advanced Research	2320-5407
3	Prof. Sheeba P. Joseph	A descriptive study to assess the knowledge regarding gestational diabetes mellitus among antenatal women attending antenatal OPD in a selected hospital of Delhi with a view to disseminate information through pamphlets	International Journal of Advanced Research	2320-5407
4	Ms. Sheljy Shajan	An Exploratory Study To Assess The Level Of Stress And Associated Stressors During Covid-19 Pandemic Among Nursing Students Attending Virtual Classes From Home In A Selected College Of Nursing, Delhi, With A View to Disseminate Stress Management Techniques	International Journal of New Technology and Research	2454-4116
5	Ms. Karthika Krishnan	Effectiveness of Structured Teaching Programme on knowledge regarding ICDS among Anganwadi Workers	International Journal for Research Trends and Innovation	2456-3315
6	Ms. Mala	Effectiveness of Structured Teaching Programme on knowledge regarding ICDS among Anganwadi Workers	International Journal for Research Trends and Innovation	2456-3315

3 (e) PUBLICATIONS IN CONFERENCES (2022-2023)

S.NO	FACULTY NAME	CONFERENCE	ABSTRACT	DATE
1.	Prof. Dr. Feba Geevarghese	Poster Presentation at ICN 2023 Congress "Nurses together: a force for global health"- International Conference at Montreal, Canada.	Effectiveness of nurse navigation programme for patients undergoing open abdominal surgery in tertiary care hospitals with a view to develop a nursing care protocol	01-07-2023 to 05-07-2023

3 (f) BOOKS PUBLISHED (2022-2023)

S.NO	FACULTY NAME	BOOK	PUBLISHERS	VOLUME NO
1.	Prof. Dr. Feba Geevarghese	Nursing Foundation Book	TNAI Publication	Volume 2

Prof. Dr. Feba Geevarghese

Principal

St. Stephen's Hospital College of Nursing

Effectiveness and Implications of a 'Structured Hands-on Training on OSCE' for Nursing faculties: A pilot project by Trained Nurses' Association of India

Latha Venkatesan[1], Kamlesh Sharma[2], Smriti Arora[3], Cecilia Mary[4], Muthu Venkatachalam[5], Feeba Varghese[6], Sunita Srivastava[7], Ramandeep Kaur[8], Deepa Mukherjee[9], Geetanjali Sirohiwal[10], Akoijam Mamata Devi[11], Sanghamitra Sawant[12], S Vatchala Dhinakaran[13], Renu Nagar[14], Rashmi[15]

Abstract

Nursing is one of the professions which require knowledge along with clinical competence to provide high quality nursing care. Objective Structured Clinical Examination (OSCE) and Objective Structured Practical Examination (OSPE) methods of evaluation have emerged as an alternative to traditional evaluation methods for the skills assessment. This study was planned to train nursing faculties on OSCE and evaluate its effectiveness. The primary objective of the study was to evaluate the effectiveness of the structured hands-on training program on OSCE for nursing faculties on knowledge regarding OSCE. A one group pretest/posttest design with a quantitative research approach was used. Convenient sampling method was used include 27 faculties from all the available colleges of Nursing in NCT of Delhi. A structured 15-item questionnaire with multiple choice questions each comprising four responses with one correct response was used to evaluate the knowledge of the participants regarding OSCE. The two-day training programme comprised the theory sessions and demonstration of OSCE stations comprising each speciality of nursing. Study findings revealed that the training programme was effective in significantly improving the knowledge regarding OSCE among nursing faculties. The study suggests that there is a need to develop a structured training programme and conduct training for faculties across the country to bring in uniformity in implementation of OSCE method of evaluation in colleges.

Key words: OSCE, OSPE, Nursing education, Faculty development

Nursing is one of the professions which requires knowledge along with clinical competence to provide high quality nursing care. Student nurses are exposed to various clinical areas from their undergraduate period to gain all these competencies under supervision and mentorship. Many evaluation methods are in vogue to assess the knowledge of nursing students. But when it comes to the assessment of skills these evaluation methods are reduced as few in numbers such as clinical examination, simulation, Objective Structured Practical Examination (OSPE), and Objective Structured Clinical examination (OSCE). Evaluation of skills acquired by nursing student is the critical component of their education.

Traditionally, the nurse teachers carried out the assessment of student performance giving summative scores in traditional evaluation methods (TEM). However, conventional clinical examination used to assess the clinical skill of students is associated with several defects such as patient and examiner variability which leads to difference in the scores obtained. In the conventional clinical examination overall performance is evaluated rather than evaluating the individual components due to lack of examiners and time to assess each student throughout the examination. In this method evaluation of attitude component is completely lacking. Final score always reflects the overall performance of the students, and it is not giving any significant feedback to the students (Ananthakrishnan, 1993). OSCE and OSPE methods of evaluation have emerged as an alternative to traditional evaluation methods and are well accepted methods to assess clinical skills among nursing stu-

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dents since 1970s (Bartfay et al, 2004). OSCE is increasingly used from the time of development and in nursing education principles OSCE is used in a formative way to enhance skills acquisition through simulation (Alinier, 2003). In the year 2021, the Indian Nursing Council has amended the syllabus for undergraduate nursing students in which the OSCE is mandatory to assess the skills of nursing students. OSCE method of evaluation helps to assess each step of practice among students rather than overall performance and it helps to improve their skills in a better manner. The OSCE is well established, with an extensive body of research documenting that this is a valid means to assess clinical skills (Tervo et al, 1997).

OSCE is an assessment tool in which the components of clinical competence such as history taking, physical examination, simple procedures, interpretation of lab results, patient management problems, communication, attitude etc. are tested using agreed check lists and rotating the student round a number of stations some which have observers with checklists. Under OSCE and OSPE, several stations are established, and each station is independent and designed to assess a set of skills. Usually, each station is allotted a time limit of four to five minutes. Based upon the number of stations that many students enter the OSCE hall, each student is directed to different stations established. Based upon the instruction or task or question displayed in the station, a student needs to carry out the activity. If the student is performing certain skill, there is an observer with a checklist to assess each component in student's action. If the station involves certain calculation or identification of instruments, the student need to put their answer in the answer sheet provided at each station. When the given time for a station is up, the student needs to move to the next station upon bell or signal. The total time required to complete the exam would be number of stations multiplied with time allotted to each station. For example, if there are 10 stations and 5 minutes allotted for each station, then it will take 50 minutes to complete the exam.

Every year number of students admitted in undergraduate nursing course is increasing all around the world. Assessing the students' psychomotor skills is very challenging especially in facilities with limited clinical resources. Traditional clinical nursing examinations are not standardised to assess clinical competency and clinical reasoning skills (Eldarir et al, 2013). Traditionally many methods are used to assess clinical competency but most of them are subjective in nature. Omu (2016) explored the acceptance of OSCE as an evaluation method among

nursing students and found that the nursing graduates perceived OSCE as gold standard for assessment even though it is stressful to them. Pierre et al (2004) reported that the students perceived OSCE score as more accurate measure of their clinical skills without any bias. Eldarir et al (2013) concluded that the highest rate of satisfaction belonged to OSCE methods than the traditional methods in terms of measurement of course objectives, enhanced teaching level, correlating theory to practice, increased decision making ability, enhanced methods of evaluation and well developed exam. OSCE helps in more comprehensive evaluation of psychomotor skills of students in non-clinical setting without risk for real patients. In OSCE, all students are exposed to same scenario which eliminates the luck and draw factor among students. This evaluation method can be easily used among large group of students and in areas with limited clinical facility to assess student's psychomotor skills. This method employs more objective method of evaluation and eliminate personal bias. This method evaluates each step of a procedure rather than the global performance which helps in identifying the specific shortcoming in students' performance.

Need for the Study

Nursing is a solemn profession requiring a great deal with clinical competency. Nursing education involves learning and assessment of psychomotor skills to a great extent, a challenge for nursing faculty. Objectively assessing and evaluating the clinical nursing skills of nursing students pose a great difficulty to the nursing faculties and clinical instructors. Nursing is a discipline where hands-on practice plays a major role particularly before implementation of new methods or protocols. Hence, this study was planned to evaluate the effectiveness of the 'structured hands-on training program on OSCE' for nursing faculties on knowledge regarding OSCE. This in turn will guide us identify the strategies to implement the training on a large scale to improve the objective evaluation of clinical skills of nursing students.

Methods and Materials

A one group pre-test post-test design with a quantitative research approach was adopted to test the hypothesis whether the 'structured hands-on training on OSCE' for nursing faculties will improve their knowledge regarding OSCE. A convenient sampling method was used include faculties from all the colleges in NCT of Delhi The nursing colleges in the NCT of Delhi were asked to nominate faculties to the training programme. Twenty-seven faculties participated in

the training programme. A self-developed 15-item multiple choice questions, each comprising four responses with one correct response, was used to evaluate the knowledge of the participants regarding OSCE. The knowledge questionnaire was validated by the three experts. The questionnaire was filled by the participants before the beginning of the training programme and again after the completion of the two-days training programme. Participants were given 10 minutes to fill the questionnaire.

Intervention

The two-day training programme comprised the theory sessions and demonstration of OSCE stations. OSCE stations were prepared for each speciality of nursing, i.e. medical surgical nursing, psychiatric nursing, paediatric nursing, obstetric & gynaecological nursing, and community health nursing, to demonstrate the functionality of the stations to the participants. Checklists and scoring sheets were prepared for each station to appraise the participants about the operationalisation of OSCE stations. The demonstration of station was carried out after dividing the participants into small groups of 6 students each.

Data Analysis

The data obtained for this study were analysed to determine the effects of the intervention on the knowledge of the study participants on OSCE. Knowledge score was categorised into Inadequate (0-7), Moderately adequate (8-11) and Adequate (12-15) knowledge to describe the level of the knowledge of study participants at pre-test and post-test level. Paired 't' test was employed to test the hypothesis whether the knowledge level has increased significantly from pre-test to post-test. Analysis was performed with SPSS 21.0 version.

Results

Twenty-seven participants participated in the study out of which 11 (40.7%) were postgraduates. Mean age of the participants was 33.7 years, their age ranged from 23 years to 70 years.

The knowledge level of the study participants

Table 1: Knowledge level of study participants in OSCE/OSPE (N=27)

Level of Knowledge	Frequency (%)	
	Pre-test	Post-test
Inadequate	18 (66.7%)	06 (22.2%)
Moderate	09 (33.3%)	13 (48.1%)
Adequate	00 (0%)	08 (29.6%)

Table 2: Mean and standard deviation of pre-test and post-test (N=27)

Variable	Pre-test score (Mean ± SD)	Post-test score (Mean ± SD)	MD	t value	p value
Knowledge score	6.0 ± 2.43	9.93 ± 2.7	3.92	8.18	<0.001

is illustrated in Table 1. Two-third of the participants had inadequate level of knowledge and one-third of them had moderate level of knowledge before the training. After the training, only 22.2 present of the participants had inadequate knowledge and 29.6 present of the participants had adequate knowledge regarding OSCE.

Independent sample 't' test was employed to compare the mean knowledge score between pre-test and post-test scores, and it was found to be significant (t= 3.92, p<0.001) as shown in the Table 2. The significant increase in knowledge scores of the study participants can be attributed to the hands-on training programme on OSCE.

Discussion

There is a growing interest in implementation of OSCE as an evaluation method for the assessment of clinical skills of nursing students. The knowledge and skill regarding appropriate application of OSCE method among nursing faculties is pertinent. This study findings revealed that the faculty working in nursing colleges of Delhi are new to learn OSCE and its method of implementation in their respective practice. The training session was helpful for them to learn about the concepts of OSCE and how to set up different types of OSCE stations in various specialities of nursing. They participated in OSCE stations and were also given opportunity to set up OSCE stations and develop checklists for OSCE evaluation. The hands-on training programme on OSCE has resulted in a significant improvement of knowledge regarding OSCE among nursing faculties. A study by Piryani Piryani (2018) on training workshop on developing OSCE in Nepal revealed that the confidence level of faculties increased significantly after having undergone the training programme on OSCE. A study by Elsa (2022) among nursing faculties in a College of Nursing in Kerala revealed that the majority (76%) of nursing faculties had inadequate knowledge. However, this descriptive study does not have any intervention to assess effectiveness of an OSCE training. There is dearth of literature on effectiveness of hands-on workshop on knowledge level of OSCE among nursing faculties.

Limitations

The study has some limitations in terms of limited sample size and only the knowledge was assessed to evaluate the effectiveness of the hands-
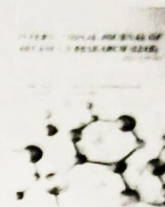
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RESEARCH ARTICLE

A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE AND PRACTICE REGARDING SELF-MEDICATION AMONG PATIENTS VISITING OUTPATIENT DEPARTMENT IN A SELECTED HOSPITAL OF DELHI

Ms. Suparna Mill[1], Ms. Sheeba P. Joseph[2], Ms. Ashley Abraham[3], Ms. Jasmin Jacob[4], Ms. Angel Akansha Singh[5], Ms. Kesiya Mariyam Philip[6], Ms. Annie Dominic[7] and Ms. Sandra Sebastian[8]

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Manuscript Info

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Abstract

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A Descriptive study was conducted to assess the knowledge and practice regarding self-medication among patients visiting outpatient department in a selected hospital of Delhi. A sample of 100 patients was selected using convenient sampling technique. A structured knowledge questionnaire and self-expressed checklist was administered to assess the knowledge and practice regarding self-medication. The data analysis and interpretation were done using descriptive and inferential statistics. Most of the patients visiting outpatient department had average knowledge regarding self-medication and 99% of the patient considered self-medication as an acceptable practice. There was no correlation found between knowledge and practice regarding self-medication.

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Introduction:-

Self-medication is one of the major health concerns worldwide and World Health Organization (WHO) has laid emphasis on correctly investigating and controlling it. World Health Organization has defined self-medication as "use of pharmaceutical or medicinal products by the consumer to treat self-recognized disorders or symptoms, the intermittent or continued use of a medication previously prescribed by a physician for chronic or recurring disease or symptom, or the use of medication recommended by lay sources or health workers not entitled to prescribe medicine. There is much public and professional concern regarding self-medication practices, which have dramatically increased in the last few decades, especially in the developing countries. Easy availability of a wide range of drugs and inadequate and inequitable health services result in increased proportions of drugs to be used as self-medication in developing countries like India. There are many benefits and risks that have led to the increase in self-medication among people. It has been observed that inappropriate and uncontrolled self-medication results in increased resistance of pathogens, wastage of resources, and health hazards such as adverse drug reactions and drug dependence. But if done appropriately, self-medication can save the time spent in waiting to consult a doctor and can readily relieve acute

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medical problems and emergencies, may be economical and can even save lives in many conditions. The dangers associated with self-medication are resistance to microorganisms in the body that causes sickness, drug abuse and addiction, instant relief with long term side effects and it can also lead to death. It can also make the body resistant to antibiotics and can cause withdrawal symptoms. Individuals should know the medication's method of use, efficacy and their management. A holistic approach should be taken to improve the use of self-medication through public education, training of health care professionals and strict pharmaceutical regulations on public advertising and drug use. Individuals should know the medication's method of use, efficacy and their management.

Objectives:-
1. To assess the knowledge regarding self medication among patients visiting out-patient department.
2. To determine the practice regarding self-medication among patients visiting out-patient department.
3. To find association between selected demographic characteristics and the level of knowledge regarding self-medication among patients visiting out-patient department.
4. To find relationship between level of knowledge and practice regarding self-medication among patients visiting out-patient department.

Assumptions
1. The patients visiting outpatient department have some knowledge regarding self-medication.
2. The patients visiting outpatient department do practice self-medication to some extent.

Delimitations
The study is delimitated to:
1. The patients visiting outpatient department of selected hospital of Delhi.
2. The age limit selected for the research study was more than and equal to 20years.

Materials and Methods:-
Research design:
A Descriptive research design was selected for the study to assess the knowledge and practice regarding self-medication among patients visiting outpatient department in a selected hospital of Delhi

Setting of the study:
The present study was conducted at outpatient department of a selected Hospital, Delhi.

Population:
The target population of the study consisted of patients in a selected hospital, Delhi.

Sample and sampling technique:
A sample of 100 patients was selected using convenient sampling method.

Development of the tool
The Structured Knowledge Questionnaire and a Self-Expressed Checklist were developed to assess the knowledge and practice regarding self-medication among patients visiting outpatient department in a selected hospital of Delhi. It consisted of three parts:

Part A-Socio-Demographic characteristics
Consisted of 10 items on background information of the subjects such as age, gender, religion, education, occupation, marital status, common system of self-medication, common conditions of self-medication, source of information and self-medication during Covid 19.

Part B-Structured Knowledge Questionnaire
Consisted of 20 items on knowledge regarding self-medication. For every correct answer the score was 1 and incorrect was 0.

The possible range of knowledge scores to be obtained by patients was from 0-20. Hence, their scores were interpreted as:

14-20: Good knowledge
7-13: Average knowledge
0-6: Inadequate knowledge

Part C - Self Expressed Checklist
Consisted of 11 items to check the practice on self-medication.
The possible range of practice scores to be obtained by patients was from 0-11. Hence, their scores were interpreted as:
7-11: Acceptable practice
0-6: Non-acceptable practice

Content validity and Reliability of the tool
In order to obtain the content validity of tool, it was submitted to the experts and was requested to judge the items on the basis of relevance, clarity, feasibility and organization of items included in the study. Necessary modifications were incorporated based on their suggestions.

The reliability of the Structured Knowledge Questionnaire and Self-Expressed Checklist was established at 0.75 and 0.72 respectively, using Karl Pearson's formula.

Pilot study
Pilot study was conducted on 10 patients on 8th February 2021 at General OPD of a selected hospital of Delhi. The study was found to be feasible.

Procedure for Data collection
1. After the formal administrative permission obtained from the selected hospital ofDelhi.
2. The patients who were visiting OPD were taken as sample.
3. The investigator introduced her to the subjects and took a written consent from them.
4. The Structured Knowledge Questionnaire and Self-Expressed Checklist was given in Hindi and English language to patients in order to assess the knowledge and practice regarding self-medication which took around 10-15 minutes for each patient.

Data Analysis and Interpretation
The data was analyzed using both descriptive and inferential statistics.
1. Frequency and Percentage Distribution to be computed for describing the sample characteristics.
2. Mean, Mean percentage, Median and Standard Deviation of knowledge score of patients.
3. Chi- square test to examine the association between the between the Knowledge score of patients visiting Outpatient Department and selected demographic variables.
4. Karl Pearson Coefficient of Correlation of Knowledge score and Practice score of patients visiting Outpatient Department.

Result:-

The analysis of the data revealed that majority of the patients i.e. 80 (80%) had average knowledge, 16 (16%) had good knowledge and only 4(4%) had inadequate knowledge regarding self-medication. 99(99%) patients had acceptable practice score and only 1 (1%) had non-acceptable practice score. There was a significant association between knowledge score and selected demographic variables i.e. age and education among patients at $p<0.005$ level of significance. There was no correlation found between knowledge and practice of self-medication among patients

Table 1:- Frequency and Percentage Distribution of Socio-demographic variables of patients

N=100.

S.No	Socio-demographic variables	Frequency (f)	Percentage (%)
1	**Age**		
	a)20-29	37	37
	b)30-39	26	26
	c)40-49	22	22

	d)50 and above	15	15
2	**Gender**		
	a) Male	52	52
	b) Female	48	48
3	**Religion**		
	a) Hindu	57	57
	b) Muslim	14	14
	c) Sikh	15	15
	d) Christian	12	12
	e) Others	02	2
4	**Education**		
	a) Illiterate	02	2
	b) Matriculation	22	22
	c) 12th class	29	29
	d) Graduate and above	47	47
5	**Occupation**		
	a) Government Services	19	19
	b) Private Services	30	30
	c) Own business	27	27
	d) Unemployed	24	24
6	**Marital status**		
	a) Single	31	31
	b) Married	59	59
	c) Separated/Divorced	04	4
	d) Widowed	06	6
7	**Common System of Self-medication**		
	a) Allopathy		
	b) Homeopathy	47	47
	c) Herbal Products	28	28
		25	25
8	**Common conditions of self-medication**		
	a) Fever		
	b) Pain	28	28
	c) Acidity	11	11
	d) Diarrhea	15	15
	e) Cough and Cold	05	5
	f) Vomiting	13	13
	g) Vitamins/Minerals	04	4
	h) Proteins	09	9
	i) Never taken for any of the above conditions	07	7
		07	7
	j) Any other	01	1
9	**Source of information**		
	a) Drug Commercials	13	13
	b) Acquaintances	14	14
	c) Previous Prescription	27	27
	d) Prescription issued to others	04	04
	e) Self Decision	23	23
	f) Internet	15	15
	g) Others	04	4

10	Self-medication during Covid 19		
	a) Yes	43	43
	b) No	57	57

Table 2:- Frequency and percentage distribution of patients visiting Outpatient Department according to Knowledge score

N=100.

Knowledge Score	Range of Knowledge Score	Frequency	Percentage (%)
Good Knowledge	14-20	16	16
Average Knowledge	7-13	80	80
Inadequate Knowledge	0-6	04	4

Table 3:- Mean, Median and Standard deviation of knowledge score of patients visiting Outpatient Department

N=100.

Area	Score range	Mean	Median	Standard Deviation
Knowledge	0-20	11	11	2.632

Table 4:- Frequency and percentage distribution of patients visiting Outpatient Department according to Practice score

N=100.

Area	Score range	Frequency	Percentage (%)
Non-Acceptable	0-6	1	1
Acceptable	7-11	99	99

Table 5:- Mean, Median and Standard deviation of practice score of patients visiting Outpatient Department

N=100.

Area	Score range	Mean	Median	Standard Deviation
Practice	0-11	8	8	1.141

Table 6:- Association between knowledge score of patients and selected demographic variables

N=100.

S.No	Socio-demographic variables	Good	Average	Inadequate	df	Chi-square Value	Table value
1	**Age**						
	a) 20-29	5	31	1			
	b) 30-39	4	21	1			
	c) 40-49	3	19	0	6	13.353*	12.59
	d) 50 and above	1	9	5			
2	**Gender**						
	a) Male	7	44	1	2	0.104^{NS}	5.99
	b) Female	6	40	2			
3	**Religion**						
	a) Hindu	7	46	4			
	b) Muslim	2	12	0	8	4.802^{NS}	15.57
	c) Sikh	2	13	0			
	d) Christian	4	8	0			
	e) Others	0	2	0			
4	**Education**						
	a) Illiterate	0	1	1			
	b) Matriculation	0	22	0	6	15.702*	12.59
	c) 12th class	7	20	2			

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	d)Graduate & above	8	38	1			
5	**Occupation**						
	a) Government Service	3	14	2			
	b) Private Service						
	c) Own business	5	23	0	6	4.177^{NS}	12.59
	d) Unemployed	6	23	0			
		3	20	1			
6	**Marital status**						
	a) Single	1	24	5			
	b) Married	5	48	5	6	3.112^{NS}	12.59
	c) Separated/ Divorced	1	3	0			
	d) Widowed	0	5	3			
7	**Common System of Self-medication**						
	a) Allopathy						
	b) Homeopathy						
	c) Herbal Products	5	40	2	4	2.97^{NS}	9.49
		4	23	1			
		7	17	1			
8	**Common conditions of self-medication**						
	a) Fever	1	25	1			
	b) Pain	1	10	0			
	c) Acidity	5	11	1			
	d) Diarrhea	1	3	0			
	e) Cough & Cold	3	9	2			
	f) Vomiting	0	4	0	18	14.677^{NS}	28.87
	g) Vitamins/Mineral	1	6	0			
	h) Proteins	1	6	0			
	i) Never taken for any of the above condition	1	7	0			
	j) Any other	1	0	0			
9	**Source of information**						
	a) Drug commercials	2	10	1			
	b) Acquaintances	3	10	0			
	c) Previous prescription	4	23	1			
	d) Prescription issued to others	2	2	3	12	9.432^{NS}	21.03
	e) Self Decision	1	22	0			
	f) Internet	3	9	3			
	g) Others	0	4	0			
10	**Self-medication during COVID 19**						
	a) Yes	7	34	2	2	0.0415^{NS}	5.99
	b) No	9	44	4			

*significant at p<0.05 level of significance

NS- Not significant at p<0.05 level of significance

Table 7:- Karl Pearson Coefficient of Correlation of Knowledge and Practice score of patients visiting Outpatient Department

N=100.

Variables	Mean	Standard Deviation	'r' value
Knowledge	11	2.632	

Practice	8	1.141	-0.18417

Observations of contemporary and past annotations on the topic
The discussion has been presented in context with the objective and findings of the study conducted in the context with the findings revealed by the other researches.

The present study revealed that 80% had average knowledge, 16% had good knowledge and 4% had adequate knowledge regarding self-medication which is similar to the study conducted by Awada S, Diab B, Khachman D, Zeidan R, Slim H, Zein S.et al who conducted a cross sectional study to assess the knowledge and practice of self-medication among Lebanese population in 2020. Sample size was 40 participants. The findings of the study showed that there was high level of practice but inadequate knowledge among the respondents.

A similar study was conducted by Karmacharya A, Uprety B, Pathiyil R, Gyawali S. They conducted a descriptive cross- sectional study to assess the knowledge and practice of self-medication among undergraduate medical students of Lumbini Medical College in 2018. The sample size was 356 students. The findings showed that undergraduate medical students had average knowledge about self- medication and more than 80% of them practiced self-medication.

In the present study there was no correlation found between the knowledge and practice of self-medication which was similar to the study conducted by Makeen H, Albarraq A, Banji O. Taymour S, Meraya A, Alqhatani S who conducteda cross sectional descriptive study to assess the Knowledge and Practice towards self - medication in a rural population in South Western Saudi Arabia in 2019. The sample size was 500. Study findings showed no correlation between knowledge and practice of self-medication among the respondents.

Limitations
1. The study was conducted on a small sample and in the selected hospital of Delhi which limits the generalization of the findings of the study.
2. The findings of the study were purely based on the written responses of study subjects and were subject to response set bias from the respondents.

Recommendations:-
1. A similar study can be replicated on a larger sample to help validate and generalize the findings to the entire population of a region or a part of the country.
2. A comparative study can be conducted to ascertain the prevalence, causes and effects of self-medication in rural and urban populations.

Implication of the study
1. The study throws light on the need to educate public regarding the advantages and disadvantages of self-medication.
2. It is the duty of a community health nurse to motivate the public to be aware of certain medications which can be administered in case of emergency that are acceptable.
3. Nursing administrators can conduct workshops and conferences to increase awareness among nurses and nursing students about the self-medication.

References:-
1. World Health Organization. Guidelines for the regulatory assessment of medicinal products for use in self-medication. Geneva: World Health Organization; 2000.
2. Kumar V, Mangal A, Yadav G, Raut D, Singh S. Prevalence and pattern of self medication practices in an urban area of Delhi. Medical Journal of DY Patil University. 2015;8:16-20.
3. Bennadi D. Self-medication: A current challenge. Journal of Basic Clinical Pharmacology. 2013;5:19–23.
4. Ahmed MN, Dr. Sulaiman HK. Self medication practice among patients attending a sample of primary health care centres in Erbil city. Journal of education and practice. 2016;7(24): 73-74.
5. Awada S, Diab B, Khachman D, Zeidan R, Slim H, Zein S. Self medication practices and knowledge among Lebanese population. Dr. Sulaiman Al Habib Medical Journal. 2020;2(2):56-64.
6. Makeen HA, Albarraq AA, Banji OJ, Taymour S, Meraya A, Alqhatani S, Banji D. Knowledge, attitudes and

practices toward self-medication in a rural population in South Western Saudi Arabia. Saudi Jao rnal of Health and Sciences. 2019;8:54-59

7. Karmacharya A, Uprety B, Pathiyil R. Gyawali S. Knowledge and Practice of Self-medication among Undergraduate Medical Students. Journal of Lumbini Medical College.2018;6(1):21-26.
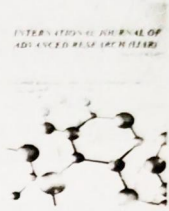
RESEARCH ARTICLE

A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE REGARDING GESTATIONAL DIABETES MELLITUS AMONG ANTENATAL WOMEN ATTENDING ANTENATAL O.P.D IN A SELECTED HOSPITAL OF DELHI WITH A VIEW TO DISSEMINATE INFORMATION THROUGH PAMPHLETS

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Manuscript Info

Abstract

A descriptive study was conducted to assess the knowledge regarding Gestational Diabetes Mellitus among antenatal women attending antenatal O.P.D. in a selected hospital of Delhi with a view to disseminate information through pamphlets. A sample of 100 antenatal women, was selected using purposive sampling technique. A structured knowledge questionnaire was administered to assess the knowledge regarding Gestational Diabetes Mellitus. The data analysis and interpretation was done using descriptive and inferential statistics. Most of the antenatal women attending ANC OPD of the selected Hospital had good knowledge regarding Gestational Diabetes Mellitus. A pamphlet on Gestational Diabetes Mellitus was developed and disseminated among antenatal women.

Introduction:-

Gestational Diabetes Mellitus (GDM) has appeared to be growing diagnostic and epidemiological problem in recent years. As per WHO (World Health Organization) GDM is defined as any degree of glucose with onset or first recognition during pregnancy. GDM arises because the action of insulin is diminished (insulin resistance) due to hormone production by placenta. Other risk factors include older age, overweight, obesity, excessive weight gain, a family history of diabetes and history of still birth or giving birth to infant with congenital abnormality. GDM is a serious health concern because it not only poses immediate maternal (pre-eclampsia, cesarean delivery) and neonatal (macrosomia, shoulder dystocia, birth injuries, hypoglycemia, respiratory distress syndrome) complications but also increase the risk of future type-2 diabetes mellitus in mother as well as the baby. The prevalence of GDM is on the rise globally. This global increase is occurring mostly in low- and middle-income countries like India where access to maternal care is often limited. Recently, prevalence of GDM was found to be 18% in HAPO study (hyperglycemia and adverse pregnancy outcome). WHO estimated that prevalence of GDM in India was about 40.9 million in 2009 & is expected to rise to 69.9 million by 2025. Thus, making it an important public health problem in India. We can avoid GDM if

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proper cautions are taken before the gestation period. Women engaging in regular physical activities before pregnancy are at lower risk. Bio-psycho-social factorslike genetic condition, age, lifestyle, personality characteristics, stress levels, social support systems, familyrelationships, andculturalbeliefsplayavitalroleintheeffectivemanagement of GDM. Dietary recommendations, self-monitoring of blood glucose, self-administration of insulin, identification and treatment of hypoglycemia are the main management strategies. Some of the factors that motivate self-management include higher educational level, health literacyandpsychologicalsupportfromthepartnerandfamilymembers

The knowledge can be complete if the individual can comprehend entirely about all theassociated factors of this condition. Decreased knowledge can lead to poor preventive and management strategies. The present study aims to understand the status of the awareness regarding GDM among antenatal women attending ANC OPD in a selected hospital of Delhi. Also, it intends to understand the primary sources, as well as the adequacy of the knowledge about GDM among theparticipants.

Objectives:-
1. To assess the knowledge of antenatal women regarding Gestational Diabetes Mellitus.
2. To find out the association between knowledge of antenatal women regarding Gestational Diabetes Mellitus with selected socio demographicvariables.
3. To provide information of Gestational Diabetes Mellitus throughpamphlets.

Assumptions
1. The Antenatal women will have some knowledge regarding Gestational DiabetesMellitus.
2. The knowledge regarding Gestational Diabetes Mellitus among antenatal women can   be measured by structured knowledgequestionnaire.
3. The selected variables will have an influence on the knowledge of Gestational Diabetes Mellitus among antenatalwomen.

Delimitations
The study is delimitated to:
1. Antenatal mothers who are available and willing to participate in thestudy
2. Antenatal women who visited Antenatal OPD in a selected hospital ofDelhi.

Materials and Methods:-
Research design:
A Descriptive research design was selected for the study to assess the knowledge regarding Gestational Diabetes Mellitus among Antenatal women attending Antenatal OPD in a selected hospital.

Setting of the study:
The present study was conducted at Antenatal OPD of a selected Hospital, Delhi.

Population:
The target population of the study consisted of antenatal women in a selected hospital, Delhi.

Sample and sampling technique:
A sample of 100 antenatal womenwas selected using purposive sampling method.

Development of the tool
The Structured Knowledge Questionnaire was developed to assess the knowledge of Antenatal women attending Antenatal OPD in a selected hospital.

It consisted of two sections:
Section A-Consisted of 10 items on background information of the subjects such as age, Gravida, religion, occupation, number of live children, previously diagnosed with Diabetes Mellitus, family history of Diabetes Mellitus, family income per month and source of information regarding Gestational Diabetes Mellitus.

Section B- Consisted of 24 items on knowledge regarding Gestational Diabetes Mellitus. Thus a total of 34 items were included in the structured knowledge questionnaire. For every correct answer the score was 1 and incorrect was 0

The possible range of knowledge scores to be obtained by antenatal women was from 0-24. Hence, their scores were interpreted as:
16-24: Good knowledge
8-15: Average knowledge
0-7: Inadequate knowledge

Content validity and Reliability of the tool
In order to obtain the content validity of tool, it was submitted to the experts and were requestedtojudgetheitemsonthebasis of relevance, clarity, feasibility and organization of items included in the study. Necessary modifications were incorporated based on theirsuggestions.

The reliability of the tool was established at 0.81, using Kuder Richardson formula 20 (KR-20)

Pilot study
Pilot study was conducted on 10 Antenatal women on 8th February 2021 and 9th February 2021 at Antenatal OPD of a selected hospital of Delhi. The study was found to be feasible.

Procedure for Data collection
1. After the formal administrative permission obtained from the selected hospital ofDelhi.
2. The Antenatal women who were attending Antenatal OPD were taken assample.
3. The investigator introduced herself to the subjects and took a written consent from them.
4. The Structured Knowledge Questionnaire was given in Hindi and English language to Antenatal women in order to assess the knowledge regarding Gestational Diabetes Mellitus which took around 10-15 minutes for eachsample.

Data Analysis and Interpretation
The data was analyzed using both descriptive and inferential statistics.
1. Frequency and Percentage Distribution to be computed for describing the sample characteristics.
2. Mean, Mean percentage, Median and Standard Deviation of knowledge score of Antenatal women
3. Chi- square test to examine the association between the knowledge scores of the Antenatal women regarding Gestational Diabetes Mellitus and the selected demographic.

Result:-
The analysis of the data revealed that majority of the women i.e. 49 (49%) had good knowledge, 46 (46%) had average knowledge and only 5 (5%) had inadequate knowledge regarding Gestational Diabetes Mellitus.There was a significant association between knowledge score and selected demographic variables i.e. Religion and Family Income per month among antenatal women at $p < 0.005$ level of significance.

Table 1:- Frequency and Percentage Distribution of Socio-demographic variables of Antenatal women N=100.

S.No.	Socio-demographic variables	Frequency (f)	Percentage (%)
1	**Age** a) Below 21 years b) 22-27 years c) 28-33 years d) 34 years and above	 04 41 39 16	 04 41 39 16
2	**Gravida** a) Primigravida b) Multigravida	 53 47	 53 47
3	**Religion** a) Hinduism	 82	 82

	b) Islam	12	12
	c) Sikhism	02	02
	d) Christianity	03	03
	e) Others	01	01
4	**Education**		
	a) Illiterate	02	02
	b) 10th pass	10	10
	c) 12th pass	14	14
	d) Graduate and above	74	74
5	**Occupation**		
	a) Housewife	47	47
	b) Self employed	09	09
	c) Private/ Government service	10	10
	d) Medical/Nursing/allied Health worker		
		34	34
6	**Number of children**		
	a) 1	36	36
	b) 2	10	10
	c) 3 or more	01	01
	d) None	53	53
7	**Have you been diagnosed with Diabetes mellitus**		
	a) Diabetes Mellitus Type 1		
	b) Diabetes Mellitus Type 2	05	05
	C) Gestational Diabetes Mellitus	00	00
	d) None of the above	30	30
		65	65
8	**Family history of Diabetes Mellitus**		
	a) Yes		
	b) No	46	46
		54	54
9	**Family income per month**		
	a) <Rs. 10,001	10	10
	b) Rs.10,002-29,972	26	26
	c) Rs. 29,973-49,961	15	15
	d) Rs.49,962-74,755	23	23
	e) Rs.74,755-99,930	15	15
	f) Rs. 33,931-199,861	08	08
	g) >Rs.199,862	03	03
10	**Source of information**		
	a) Previous pregnancy	29	29
	b) Relatives	22	22
	c) Social media	15	15
	d) Never heard of it before	34	34

Table 2:- Frequency and percentage distribution of Antenatal Women in terms of knowledge scores regarding Gestational Diabetes Mellitus N=100.

Knowledge Score	Range of Knowledge Score	Frequency	Percentage (%)
Good Knowledge	16-24	49	49
Average Knowledge	8-15	46	46
Inadequate Knowledge	0-7	5	5

Table 3:- Mean, Median and Standard deviation of knowledge score regarding GDM N=100

Area	Score range	Mean	Mean %	Median	Standard Deviation
Knowledge	0-24	15.29	63.71%	15	4.04

Table 4:- Association between knowledge score of Antenatal Women and selected variables N=100.

S.No	Socio-demographic variables	Good	Average	Inadequate	Total	df	Chi-square value	Table value
1	Age							
	a) Below 21 years	0	04	0	04			
	b) 22-27 years	17	22	02	41			
	c) 28-33 years	23	14	02	39	6	8.74^{NS}	12.59
	d) 34 years and above	10	05	01	16			
	Total	50	45	05	100			
2	Gravida							
	a) Primigravida	25	25	03	53			
	b) Multigravida	25	20	02	47	2	0.397^{NS}	5.99
	Total	50	45	05	100			
3	Religion							
	a) Hinduism	41	37	04	82			
	b) Islam	04	07	01	12			
	c) Sikhism	01	01	0	02	8	17.59^{*}	15.57
	d) Christianity	02	01	0	03			
	e) Others	0	0	01	01			
	Total	48	46	06	100			
4	Education							
	a) Illiterate	01	01	0	02			
	b) 10th pass	05	04	01	10			
	c) 12th pass	05	08	01	14	6	2.317^{NS}	12.59
	d) Graduate and above	40	31	03	74			
	Total	51	44	05	100			
5	Occupation							
	a) Housewife	25	21	01	47			
	b) Self employed	04	04	01	09			
	c) Private/ Government service	04	05	01	10	6	2.4151^{NS}	12.59
	d)Medical/Nursing/Allied Health worker	17	15	02	34			
	Total	50	45	05	100			

6	Number of children							
	a) 1	01	15	20	36	6	2.63[NS]	12.59
	b) 2	01	04	05	10			
	c) 3 or more	0	01	0	01			
	d) None	03	25	25	53			
	Total	05	45	50	100			
7	Have you been diagnosed with Diabetes mellitus							
	a) Diabetes Mellitus Type 1							
	b) Diabetes Mellitus Type 2	0	03	02	05	6	3.54[NS]	12.59
	C) Gestational Diabetes Mellitus	0	0	0	0			
	d) None of the above	01	10	19	30			
	Total	04	32	29	65			
		05	45	50	100			
8	Family history of Diabetes Mellitus							
	a) Yes	20	23	03	46	2	1.592[NS]	5.94
	b) No	30	22	02	54			
	Total	50	45	05	100			
9	Family income per month							
	a) <Rs. 10,001	0	10	0	10	12	24.99[*]	21.03
	b) Rs.10,002-29,972	07	16	03	26			
	c) Rs. 29,973-49,961	07	07	01	15			
	d) Rs.49,962-74,755	14	09	0	23			
	e) Rs.74,755-99,930	06	09	0	15			
	f) Rs. 33,931-199,861	05	02	01	08			
	g) >Rs.199,862	03	0	0	03			
	Total	42	53	05	100			

*significant at $p < 0.05$ level of significance
NS- Not significant at $p < 0.05$ level of significance

Development of pamphlet
The pamphlet was developed after content validation by the experts in the field of Obstetrics and Gynaecology, Endocrinology and Dietetics. The pamphlet was developed and was approved by the administration.

Observations of contemporary and past annotations on the topic
The discussion has been presented in context with the objective and findings of the study conducted in the context with the findings revealed by the other researches.

In the present study, most (49%) of the antenatal women had good knowledge regarding GDM which was similar to the study conducted by R. Oguwhoconducted a descriptive cross-sectional household survey involving 2595 women of reproductive age residing in five local government areas in the state. The majority (2,351;90.6%) had heard about Gestational Diabetes Mellitus.

A study was conducted in 2013 by Shriraam V to assess the awareness of Gestational Diabetes Mellitus among antenatal women in a Primary Health Center in South India. A pretested questionnaire was administered to all women attending the antenatal clinic. The sample size was 120. The findings of the study revealed that 17.5% women had good knowledge, 56.7% had fair knowledge, and 25.8% women had poor knowledge about GDM. This study is contrary to the present study as most of women had fair and poor knowledge.

In the present study, 41% were in the age group of 22-27 years, 53% are primigravida, 82% are following Hinduism, 74% were educated(graduate & above), 47% are Housewives, 54% had no any family history of Diabetes mellitus, 65% had no previous history of diabetes mellitus, 26% had family income(per month) between Rs.10,002-29,972, 34% had heard it for the first time during the data collection. It was similar to the study conducted by D. Lakshmiin Urban Chidambaram which stated that majority 49.2% were in the age group of 21–25 years, 93.7% of them were housewives, 56.0% of them have studied up to higher secondary level.

Limitations
1. The study was conducted on a small sample and in the selected hospital of Delhi which limits the generalization of the findings of the study.
2. The findings of the study were purely based on the written responses of study subjects and were subject to response set bias from the respondents.

Recommendations:-
1. A similar study can be replicated on a larger sample to help validate and generalize the findings to the entire population of a region or a part of the country.
2. A comparative study can be conducted to ascertain the prevalence, causes and effects of GDM in rural and urban populations.

Implication of the study
1. The study throws light on the need to educate women and family members regarding Gestational Diabetes Mellitus.
2. Itisthedutyofacommunityhealthnursetomotivatetheantenatalwomentotakehealthy diet, regularly eat iron and folic acid supplements, check her weight and fetal heart movements and came for regular followup.
3. Nursing administrators can conduct workshops and conferences to increase awareness among nurses and nursing students about the Gestational Diabetes Mellitus and its prevention among antenatal women visiting antenatal OPD.

References:-
1. Mumtaz M.(2002): Gestational Diabetes Mellitus. Malaysia Journal of Medical Science. Vol 7(1):4-9.
2. https://www.hopkinsmedicine.org/health/conditions-and-diseases/diabetes/gestational-diabetes
3. Ogu RN, Maduka O, Agala V. Gestational Diabetes Mellitus Knowledge Among Women of Reproductive Age in Southern Nigeria: Implications for Diabetes Education. International Quarterly of Community Health Education. 2020;40(3):177-183. doi:10.1177/0272684X19876526
4. Varghese R, Thomas B, Hail MA, Rauf A, Sadi MA, Sualiti AA, Yadav V.(2012):The Prevalence, Risk actors, Maternal and Fetal outcomes in Gestational Diabetes Mellitus. International Journal of Drug Development& Research, Vol, 4(3): 356-368.
5. Thomas, S., Pienyu, R., & Rajan, S. K. (2020). Awareness and knowledge about gestational diabetes mellitus among antenatal women. Psychology, Community & Health, 8(1), 237-248. https://doi.org/10.5964/pch.v8i1.287D.
6. Lakshmi D, Felix AJW, Devi R, Manobharathi M. Study on knowledge about gestational diabetes mellitus and its risk factors among antenatal mothers attending care, urban Chidambaram. Int J Community Med Public Health 2018;5:4388-92.
7. Shriraam V, Rani MA, Sathiyasekaran BW, Mahadevan S. Awareness of Gestational Diabetes Mellitus among antenatal women in a primary health center in South India. Indian Journal of Endocrinology andMetabolism. 2013 Jan;17(1):146-8. doi: 10.4103/2230-8210.107861. PMID: 23776868; PMCID: PMC3659882.

An Exploratory Study To Assess The Level Of Stress And Associated Stressors During Covid-19 Pandemic Among Nursing Students Attending Virtual Classes From Home In A Selected College Of Nursing, Delhi, With A View To Disseminate Stress Management Techniques

Ms. Sheljy Shajan, Ms. Karthika Krishnan, Ms. Himanshi Sharma, Ms. Himanshi Bhirani, Ms. Tanu Singh, Ms. Archana Mishra, Ms. Niharika, Ms. Yuvika Khatri

Abstract— An Exploratory study was conducted to assess the level of stress and associated stressors during Covid -19 pandemic among nursing students attending virtual classes from home in a selected college of nursing, Delhi, with a view to disseminate stress management techniques. The main objectives of the study were to assess the level of stress among nursing students attending virtual classes from home during Covid-19 pandemic, to explore the stressors associated with virtual classes during Covid-19 pandemic, to determine the association of the level of stress of nursing students with the selected demographic variables and to disseminate Stress Management techniques. A quantitative research approach with exploratory research design was used to achieve the objectives of the study. The study was conducted at St. Stephen's Hospital College of Nursing, Tis Hazari, Delhi-110054. Total enumerative sampling technique was adopted to select 200 students belonging to B.Sc. and G.N.M. 2nd and 3rd year classes. A Standardized rating scale by Sheldon Cohen and a structured rating scale was used to assess the level of stress and associated stressors, respectively, during Covid-19 pandemic among nursing students attending virtual classes. The tool was validated by 5 experts from the field of Psychiatry, Psychology, Medical –Surgical Nursing and Child health Nursing. The reliability of tool was established at 0.75 by split half method. The data gathered was analyzed and interpreted using descriptive and inferential statistics. In the present study, it was observed that majority of the nursing students 154(77%) have moderate level of stress, 37(18.5%) have high level of stress and remaining 9(4.5%) have low level of stress. The study showed that the maximum amount of stress was due to academic factors while they had minimal stress due to financial factors. The results of the analysis showed that there was an unreasonable academic overload, insufficient time to study due to the vast content of courses covered, high family expectations and low levels of motivation were some of the reasons for the stress. Fear of failure was the primary cause of stress. Findings related to association of level of stress with demographic variables reveals that there was significant association between level of stress and family monthly income and father's employment at 0.05 level of significance. There was no significant association between level of stress and the year of course, type of family, no. of sibling, father's education, mother's education and mother's employment at 0.05 level of significance. As the academic stress was the most experienced stress among nursing students studying in selected College of Nursing, Delhi, so framing the academic curriculum, examination patterns and establishment of counselling cells about coping and adapting strategies to cope up with stress and associated stressor experienced during Covid -19 pandemic is needed.

Index Terms— Stress, Stressors, Virtual Classes, Stress Management Techniques.

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I. INTRODUCTION

Stress is a common feature in all our lives. It is often seen as a negative emotion, but stress plays an important role in the survival. It helps to face threats and dangerous situations, makes the individual to get motivated and can even make the performance better. Covid-19 is a newly discovered infectious corona virus that spreads from one person to another through droplets. The stress level of students are augmented by many of the factors pertaining to Covid-19 Pandemic. Due to Covid-19 outbreak, in a short period of time, college students' lives had dramatically changed as they had been asked to leave campus, adjust to new living circumstances, and adapt to online learning platforms. Courses designed to include high levels of interaction and hands-on experiences such as practicum, labs, and/or artistic performance had a clear disadvantage in regards to evaluation of students. Some students had difficulties with access to computers and the internet at home. Additional challenges included concerns about their health, health of family members, and worry about finances, particularly among those who supported themselves by working in industries severely impacted by prolonged closures such as retail or the service industry. [1]

A. Problem statement

An Exploratory Study to Assess the Level of Stress and Associated Stressors during Covid-19 Pandemic among Nursing Students attending Virtual Classes from Home in a Selected College of Nursing, Delhi, with a view to disseminate Stress Management Techniques.

B. Objectives

• To assess the level of stress among nursing students attending virtual classes from home during Covid-19 pandemic.

• To explore the stressors associated with virtual classes during Covid-19 pandemic.

• To determine the association of the level of stress of nursing students with the selected demographic variables.

• To develop and disseminate Stress Management Techniques.

C. Assumptions

• Nursing students attending online classes from home will be experiencing stress.

• Nursing students with stress have poor knowledge regarding Stress Management Techniques.

• Stress Management Techniques will help to improve coping strategies against Stress and associated Stressors.

D. Delimitations

• The study is limited to Nursing Students in a selected College of Nursing.

• Nursing Students who are interested and willing to participate in the study.

• The study includes students who are attending virtual classes from home.

E. Operational Definitions

• Assess: It refers to evaluating the level of stress and the associated stressors among nursing students.

• Stress: It refers to nursing student's response to an adverse change in external circumstances while attending virtual classes from home during Covid-19 pandemic as evidenced by Perceived level of Stress ranging from 0-40, categorized as (0-13) : low stress, (14-26) : moderate stress, & (27-40) : high perceived stress as assessed by Perceived Stress Scale by Sheldon Cohen.

Stressors: Any academic, intrapersonal, interpersonal and financial factor that disturb the normal functioning of a nursing student attending virtual classes from home during Covid-19 pandemic as assessed by Structured Stressor Assessment Scale.

•Virtual Classes: It is an online medium of instruction that allows the exchange of knowledge and information between teachers and nursing students during Covid-19 pandemic.

• Stress Management Techniques: It is a set of techniques and programs intended to help nursing students to deal more effectively with stress by analyzing the specific stressors due to virtual classes during Covid-19 pandemic.

F. Conceptual Framework

Conceptual framework of the present study is based on **Stuart Stress Adaptation Model**. Stuart Stress Adaptation Model is a model of psychiatric nursing care, which integrates biological, psychological, socio-cultural, environmental and legal-ethical aspects of patient care into a unified framework for practice. The Stuart Stress Adaptation Model of health and wellness provides a consistent nursing-oriented Framework.[2]

II. RESEARCH METHODOLOGY

A. Research Approach

Quantitative approach was considered to be appropriate to accomplish the objectives of the present study

B. Research design

For the present study, an exploratory research design was used to assess the level of stress and the underlying factors of it.

C. Variables under study

• Socio-demographic variables- Year of nursing program, Type of family, Number of siblings, Family monthly income, Father's education, Mother's education, Father's pattern of employment, Mother's pattern of employment

• Research variables - Level of stress and associated stressors while attending virtual classes during Covid-19 Pandemic.

D. Setting of the study

• The study was conducted in St. Stephen's Hospital College of Nursing, Delhi.
Population
The target population in the present study consisted of nursing students of St. Stephen's Hospital College of Nursing.

E. Sample & Sampling Technique

For the present study, sample consisted of second- and third-year nursing students studying in St. Stephen's Hospital College of Nursing. Sampling technique adopted for the present study was total enumerative sampling technique.

F. Sample Size

Sample size for the study was 200 Second and Third year Nursing students studying in St. Stephen's Hospital College of Nursing.

G.Criteria for sample selection

Inclusion criteria

• Students of College of Nursing.

• Second and Third year nursing students .

• Students who were willing to participate in the study.

Exclusion criteria

• Students who were included in the pilot study.

• Students who were not available at the time of data collection.

H. DESCRIPTION OF THE TOOL

Tool 1
Section A: Socio- Demographic Data

It consists of socio-demographic details of the subjects such as year of nursing program, type of family, number of siblings, monthly family income, father's education, mother's education, father's pattern of employment and mother's pattern of employment.

Section B: Perceived Stress Scale by Sheldon Cohen

The Perceived Stress Scale (PSS) is the most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. In each case, respondents are asked how often they felt a certain way.[3]

TOOL 2
Structured Stressor Assessment Scale

It consists of items to explore factors causing stress i.e., stressors among nursing students attending virtual classes from home during Covid -19 pandemic.

The self-structured rating scale is divided into 4 domains with 7 items each, namely academic factors, social and interpersonal factors, intrapersonal factors and financial factors.

I.CONTENT VALIDITY AND RELIABILITY OF TOOL

Content validity was determined by 5 experts from the field of Psychiatry, Psychology, Medical Surgical Nursing and Child health Nursing. The reliability of the Structured Stressor Assessment Scale was computed by Split Half method and Reliability Coefficient was found to be 0.75. Hence, the tool was reliable.

J. Ethical Consideration

The study was conducted after receiving approval from the ethical committee of St. Stephen's Hospital College of Nursing. Before conducting the study, the students were explained about the purpose of the study and a written consent was obtained from them for their participation. Anonymity and confidentiality of subjects were assured. They were also informed about their rights to refuse their participation in the study.

K. Pilot Study

After obtaining the ethical clearance from the ethical committee and formal administrative approval from St. Stephen's Hospital College of Nursing, the pilot study was conducted on 8th February, 2021 among 20 Fourth year Nursing students of St. Stephen's Hospital College of Nursing, who were selected using Simple Random Sampling technique. The pilot study was conducted to determine the feasibility of conducting the final study and to decide the appropriate plan for statistical analysis. The duration for administration of tool was 20-30 minutes. The findings of the pilot study revealed that it was feasible to conduct the study.

L. Final Data Collection Procedure

After obtaining ethical clearance from ethical committee of St. Stephen's Hospital College of Nursing, the final study was conducted from 1st February, 2021 to 6th February, 2021 on 200 Second and Third year nursing students of St. Stephen's Hospital College of Nursing. Subjects were selected using Total Enumerative Sampling technique. The investigators introduced themselves to the respondents and the purpose of study was explained to them. Confidentiality of their response was assured. Formal informed consent was obtained from the sample who met the inclusion criteria. Good rapport was established with the respondents.

III. ORGANIZATION AND INTERPRETATION OF DATA

The obtained data and findings have been organized and presented under the following sections:

Section I: Findings related to socio-demographic data obtained from nursing students.

Frequency and percentage distribution of socio-demographic data of the nursing students.

Section II: Findings related to level of stress among nursing students.

Section III: Findings related to stressors associated with virtual classes during covid-19 pandemic among nursing students.

Section IV: Findings related to association of the level of stress with the selected demographic variables among nursing students.

SECTION I

Findings related to Socio Demographic Data of Nursing Students
TABLE 1 : Frequency and Percentage distribution of Socio Demographic Data of Nursing Students
N=200

S.No.	Demographic characteristics	Frequency	%
1	Year of nursing programme: a)Second year b)Third year	100 100	50% 50%
2	Type of family: a)Nuclear b)Joint c)Extended	156 40 4	78% 20% 2%

3	Family monthly income: a)≥199,862 b)99,931-199,861 c)74,755-99,930 d)49,962-74,754 e)29,973-49,961 f)10,002-29,972 g)≤10,001	17 18 24 37 31 46 27	8.5% 9% 12% 18.5% 15.5% 23% 13.5%
4	Number of siblings: a)None b)One sibling c)Two siblings d)Three siblings or more	12 90 67 31	6% 45% 33.5% 15.5%

Chi-square test to establish the association between the level of stress with the selected demographic variables among nursing students.

5	Father's education: a)No formal education b)Up to 10th standard c)Higher Secondary education d)Diploma e)Graduation and above	13 48 42 22 75	6.5% 24% 21% 11% 37.5%
6	Mother's education: a)No formal education b)Up to 10th standard c)Higher Secondary education d)Diploma e)Graduation and above	19 48 52 21 60	9.5% 24% 26% 10.5% 30%
7	Father's pattern of employment: a) Covid warriors (healthcare professionals and policemen) b) Professionals working from home c) Self employed and working d) Self employed and not working	27 30 120 23	13.5% 15% 60% 11.5%
8	Mother's pattern of employment: a) Covid warriors (healthcare professionals and policemen) b) Professionals working from home c) Self employed and working d) Self employed and not working	30 24 70 76	15% 12% 35% 38%

SECTION II

Findings related to Perceived Level of Stress among Nursing Students

The data was obtained through Perceived Stress Scale by Sheldon Cohen, in which the nursing students had to mark according to their feelings and thoughts while attending virtual classes during Covid-19 Pandemic.

TABLE2: Frequency and Percentage distribution of the Nursing students according to Level of Stress.

N=200

S. No.	Level of Stress	Frequency (%)
1	Low Stress (0-13)	9(4.5%)
2	Moderate Stress (14-26)	154(77%)
3	High Perceived Stress (27-40)	37(18.5%)

SECTION III
Findings related to Stressors associated with Virtual Classes during Covid-19 Pandemic among Nursing Students.

The structured stressor assessment rating scale consisted of items to explore factors causing stress among nursing students attending virtual classes from home during Covid – 19 pandemic
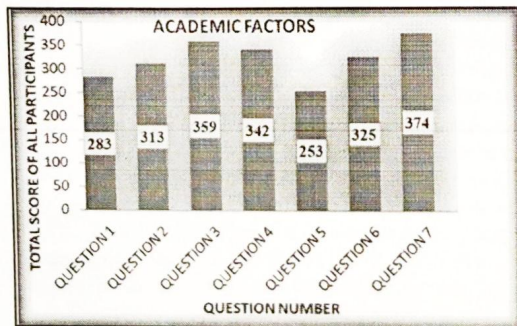
Figure 1: Bar Graph depicting Total Score of Nursing Students according to academic factors.

- MAXIMUM SCORE: 374 (QUESTION 7)
- ➢ How often have you felt anxious that you have missed the practical attendance and bedside nursing skills?
- MINIMUM SCORE:253 (QUESTION 5)
- ➢ How often have you missed the classes because of network issues?
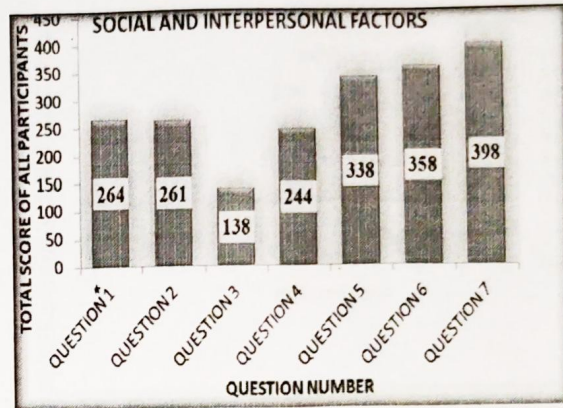
Figure 2: Bar Graph depicting Total Score of Nursing Students according to Social and Interpersonal factors.

- MAXIMUM SCORE:398 (QUESTION7)
- ➢ How often have you felt anxious and scared after listening to incidence rates and death toll pertaining to Covid-19, from mass media?

- MINIMUM SCORE:138 (QUESTION 3)
- ➢ How often have you felt that your family members are not supporting you in your studies during the Covid-19 pandemic?
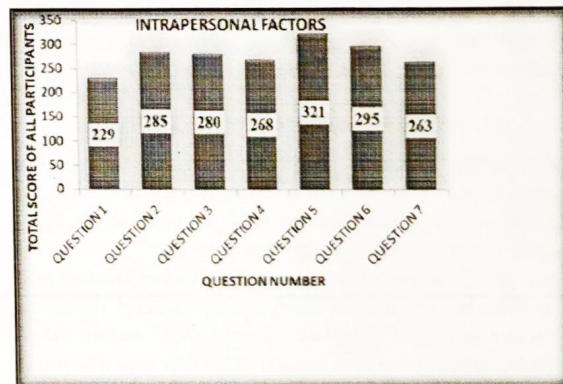

Figure 3: Bar Graph depicting Total Score of Nursing Students according to Intrapersonal factors.

- MAXIMUM SCORE:321 (QUESTION 5)
- ➢ How often have you experienced the fear of your family members getting infected with Covid-19 infection?
- MINIMUM SCORE:229 (QUESTION 1)
- ➢ How often have you experienced periods of low self- esteem during Covid-19 pandemic?
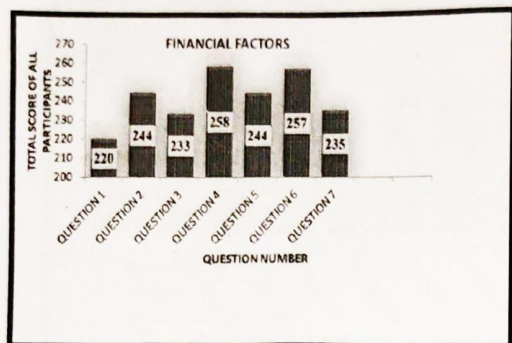
Figure 4: Bar Graph depicting Total Score of Nursing Students according to Financial Factors.

SECTION IV

Chi-square test was used to determine the association of the level of stress among nursing students with selected demographic variables.

There is a significant association between the level of stress of nursing students with fathers' pattern of employment and family monthly income as calculated Chi-square test value, 40.059 and 25.575 respectively, were higher than the table value, 12.59 and 21.03 respectively at $p<0.05$.

No significant association exists between the level of stress of nursing students and year of course, no. of siblings, type of family, father's education, mother's education and mother's pattern of employment as calculated. Chi-square test value was found non-significant at $p<0.05$.

IV. IMPLICATIONS OF THE STUDY

A. Nursing Education

• Nurse educator should have responsibility in updating coping and adapting strategies to cope up with stress and associated stressors, its prevention and control.

• Regular updation of stress management techniques can be done in order to disseminate them among nursing students studying in a selected College of Nursing, Delhi so that they are updated about social and mental problems due to stress which requires preventive interventions.

B. Nursing Practice

• The study helps the nurses to identify the level of stress and associated stressors experienced by nursing students while attending virtual classes and thereby providing effective stress management techniques to cope up with stress.

C. Nursing administration

• The administrator should plan nursing education programmes for nursing students which can include topics such as, adaptive techniques to stress and stress management.

- MAXIMUM SCORE:258 (QUESTION 4)
- ➢ How often have you felt the shortage in getting your educational needs fulfilled during Covid-19 pandemic?
- MINIMUM SCORE: 220 (QUESTION 1)
- ➢ How often have you feared that the earning member of your family will loose their job due to Covid-19 pandemic?

The administrator can plan counselling sessions to identify the level of stress and associated stressors experienced by nursing students while attending virtual classes.

D. Nursing research

• More research studies can be planned to explore and identify the associated stressors and level of stress among nursing students while attending virtual classes from home.

• The study will be a pathway for further researches.

V. CONCLUSION

The main aim of this study was to assess the level of stress among nursing students attending virtual classes, to explore the stressors associated with virtual classes and to determine the association of level of stress with selected demographic variables. Among the 200 selected samples 154 (77%) had moderate level of stress, 37 (18.5%) had high level of stress and remaining 9 (4.5%) had low level of stress. There was significant association between the level of stress of nursing students with fathers' pattern of employment and family monthly income.

VI. RESEARCH EVIDENCE

Sheroun D, Wankhar DD, Devrani A, Lissamma PV, Chatterjee K. .[4] conducted a cross – sectional online study in Pune using Perceived Stress Scale and Coping Strategies Scale. The objectives of the study were to assess the perceived level of stress and coping strategies amidst Covid-19 lockdown among the B.Sc. nursing students and to determine the association of stress and coping with selected demographic variables. 427 B.Sc. nursing students were selected by random sampling technique. The study revealed that the maximum perceived stress score (22.56) was among fourth year students and low level of perceived stress score (20.20) was among second year students. On the whole, the maximum mean coping score (78.45) was found among first years and least coping score (71.23) was found among fourth year B.Sc. nursing students. The fourth-year nursing students had the highest stress score with a mean of 22.56± 4.207. The study concluded that there is a need to take appropriate measures by the authorities to reduce the level of stress among the nursing students

REFERENCES

[1] Diksha Munjal.COVID-19 pandemic in India [Internet]. India:2020[cited 2021 Jan 19]. Available from: https://en.wikipedia.org/wiki/COVID-19_pandemic_in_India.

[2] Stuart G.W. Principles and practice of psychiatric nursing.10th ed . Elsevier ,2013.

[3] Cohen S, Kamarck T, Mermelstein R. A global measure of perceived stress: J Health Soc Behav;1983.p.385-386 .

[4] Sheroun D , Wankhar D D , Devrani A, Lissamma P V, Chatterjee K. A study to assess the perceived stress and coping strategies among B. Sc. Nursing students of selected colleges in Pune during COVID-19 pandemic lockdown : International Journal of Science and Healthcare

Research;2020[cited 2021 Feb 09]. Available from:https://ijshr.com/IJSHR_Vol.5_Issue.2_April2020/IJSHR0038.pdf

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A study to assess the effect of Structured Teaching Programme on knowledge regarding ICDS among Anganwadi Workers in a selected District of Delhi

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ABSTRACT: Background: In India, Integrated Child Development Services were first implemented in October 1975. Integrated Child Development Services are provided in Anganwadi Centers through the Anganwadi Workers. Anganwadi Worker's knowledge about ICDS is directly linked to the ultimate outcome of the ICDS scheme. Therefore, the aim of the study was to assess the effectiveness of Structured Teaching Programme in terms of knowledge regarding ICDS among Anganwadi Workers.

Materials and methods: A Pre-experimental one group pre-test post-test design was adopted in quantitative approach. A total of 100 AWWs working in ICDS-Prem Nagar Project were selected using total enumerative sampling technique. Data was collected through structured knowledge questionnaire (KR20 - 0.8) in June-2022. On Day-1, Pre-test followed by Structured Teaching Programme on ICDS was administered. On Day-7, Post-test was conducted.

Results: Pre-test study results showed that only 3% AWWs had excellent knowledge, 45% had good knowledge, 40% had average knowledge and 12% had below average knowledge regarding ICDS. After intervention, Post-test scores improved significantly. Pre-test mean$\pm$SD was 16.82$\pm$4.085 and Post-test mean$\pm$SD was 24.29$\pm$3.586. The mean post-test knowledge score was higher than the mean pre-test score with mean difference of 7.47, which was found to be statistically significant ($Z = 13.739$) at $p<0.05$. No significant association was found between the pre-test knowledge level of the AWWs and selected socio-demographic variables at $p<0.05$.

Conclusion: Based on the findings of the study it can be concluded that structured teaching programme on ICDS was significantly effective in enhancing the knowledge among Anganwadi workers.

Keywords: *Effectiveness, STP, AWWs, ICDS, Knowledge*

Abbreviations: *AWWs - anganwadi workers, ICDS- Integrated Child Development Services, STP- Structured Teaching Programme*

I. INTRODUCTION

Growth of nation depends upon the health of children. One of the crucial elements in determining a child's health is the pattern of his growth and development, which extends throughout their life cycle [1].

Integrated child development services program is a centrally backed scheme of Government of India and one of the world's biggest community based programme to deal with the gaps and demanding situations associated with malnutrition amongst children of 0-6 years of age with unique cognizance on children younger than three years, pregnant ladies and lactating women [2].

It is the foremost image of country's commitment to its children and nursing women, as a response to the mission of providing pre-school non-formal education on one hand and breaking the vicious cycle of malnutrition, morbidity, decreased gaining knowledge of capability and mortality on the other [3].

Objectives of the Scheme are:

- to improve the nutritional and health status of children in the age group 0-6 years
- to lay the foundation for proper psychological, physical and social development of the child
- to reduce the incidence of mortality, morbidity, malnutrition and school dropout
- to achieve effective co-ordination of policy and implementation amongst the various departments to promote child development and
- to enhance the capability of the mother to look after the normal health and nutritional needs of the child through proper nutrition and health education [2].

The ICDS Scheme offers a package of six services, viz

- Supplementary Nutrition
- Pre-school non-formal education
- Nutrition & health education
- Immunization
- Health check up and
- Referral services

Anganwadi worker functions at the grass root level and she is the first contact to the community from the health sector. Her trustworthiness is important to provide comprehensive care to the target group [4].

Anganwadi Worker's level of knowledge about the various services like proper nutrition, immunization etc. plays an important role related to her performance in the Anganwadi centres. Being a key functionary, her performance and profile (level of educational qualifications, training, skills etc.) is linked to the ultimate outcome of the ICDS scheme [5].

Though government is spending lot of money on ICDS programme but impact is very ineffective. Most of the studies were concentrated on the nutritional and health status of the beneficiaries of ICDS. Less focus was shifted over to assess the knowledge and awareness among anganwadi worker regarding recommended ICDS programme, who are actually the main resource person. The output or the ICDS scheme is to a great extent dependant on the profile of the key functionary i.e. the anganwadi worker, her qualification, experience, skills, attitude, training etc. The Anganwadi Worker should be self-sufficient to deliver services under Integrated Child Development Programme [6].

Once we ascertain the level of knowledge of anganwadi workers, we will be able to devise comprehensive strategies to improve knowledge of anganwadi workers. Based on the specific knowledge deficiencies, effective interventions like educational program for imparting knowledge regarding ICDS among anganwadi workers can be developed.

OBJECTIVES OF THE STUDY

1. To assess the pre-test knowledge regarding Integrated Child Development Services among anganwadi workers.
2. To develop and administer structured teaching programme on knowledge regarding Integrated Child Development Services to anganwadi workers.
3. To assess the post-test knowledge regarding Integrated Child Development Services among anganwadi workers.
4. To evaluate the effectiveness of structured teaching programme on knowledge regarding Integrated Child Development Services among anganwadi workers.
5. To determine the association of pre-test knowledge of the anganwadi workers with selected socio-demographic variables.

RESEARCH HYPOTHESIS:

- H_1- The post-test knowledge score of anganwadi workers regarding Integrated Child Development Services will be significantly higher than the pre-test knowledge score after the administration of structured teaching program, as assessed by the structured knowledge questionnaire at 0.05 level of significance.
- H_2- There will be significant association between the pre-test knowledge score of anganwadi workers regarding Integrated Child Development Services and selected demographic variables at 0.05 level of significance.

DELIMITATIONS

The study was delimited to:
1. anganwadi workers who were present during the data collection time.
2. anganwadi workers who were working in the anganwadi centers of ICDS-Prem Nagar Project only.
3. components of Integrated Child Development Services only.

II. METHODOLOGY

For the study, quantitative approach and one group pre-test post-test research design was adopted to achieve the objectives of the study.

Independent variable: Structured teaching programme on knowledge regarding Integrated Child Development Services.

Dependent variable: Knowledge level of anganwadi workers regarding Integrated Child Development Services.

Extraneous variables: Age, educational level, marital status and years of experience as an anganwadi worker.
Setting of the study: Anganwadi Centers of Prem Nagar ICDS Project, North-West District, Delhi
Population, Sample, and Sampling Technique
100 Anganwadi workers working in Anganwadi centers of Prem Nagar ICDS project, North West District, Delhi were selected using non probability, total enumerative sampling which is also known as, consecutive sampling
Sample size for the present study was calculated using Cochrane's Formula at 95% of C.I. and 10% of sampling error.

Inclusion criteria
The study sample included anganwadi workers
1. who were available during the period of study
2. working in anganwadi centers of ICDS Prem Nagar Project, Delhi.

Selection of the tool
For the present study, tool for the data collection was a Structured Knowledge Questionnaire to assess knowledge regarding Integrated Child Development Services among anganwadi workers. Paper and pencil method was used to administer the tool
The tool was divided into two sections.
Section I: Demographic variables such as age, marital status, educational status and years of experience as an anganwadi worker

Section II: Structured knowledge questionnaire consisting of 30 questions related to assessment of knowledge regarding Integrated Child Development Services.
- Every question with correct answer was given 1 mark and wrong answer was given 0 mark.
- Maximum score - 30
- Minimum score – 0

Interpretation of scores:

Level of knowledge	:	Range of scores
Excellent	:	24 - 30
Good	:	18 - 23
Average	:	12 - 17
Below Average	:	0 - 11

To ensure the validity of the tool, it was given to 11 experts selected from the fields of Community Health, Pediatrics Nursing and Medical Surgical Nursing. The experts were chosen on the basis of their clinical expertise, experience, qualification and interest in the problem area. Their suggestions were incorporated in the tool. Final tool consisted of 30 items.
The reliability of the tool was established using Kuder-Richardson Formula 20 (KR-20) and it was found to be 0.80 (80%).

Ethical Considerations
Ethical permission was obtained from the ethical committee of St. Stephen's Hospital and administrative approval for the final study was obtained from the Competent Authority, Department of Women and Child Development, Govt. of NCT of Delhi. Written informed consent was also obtained from the subjects after explaining the purpose of the study. The confidentiality of their responses and anonymity was assured throughout the study.

Procedure for final data collection
Study was conducted from 13/06/2022 to 02/07/2022 on 100 anganwadi workers of ICDS-Prem Nagar project, North-West District, Delhi. Self introduction was given and purpose of the study was explained to anganwadi workers. Confidentiality of their response was assured. Formal informed consent was obtained from the subjects who met the inclusion criteria. On day 1, pre-test was administered using a structured knowledge questionnaire on Integrated Child Development Services. Subjects took around 25-30 minutes to fill the questionnaire. A Structured Teaching Programme on Integrated Child Development Services was administered to the subjects immediately after the pre test, followed by the post test on the 7th day using the same structured knowledge questionnaire.

III. RESULTS
The findings reveal that, majority 61% of AWWs were in the age group of 26-40years, 52% were educated upto graduation and above, 91% were married and 81% were having experience of 11-15years as AWW.
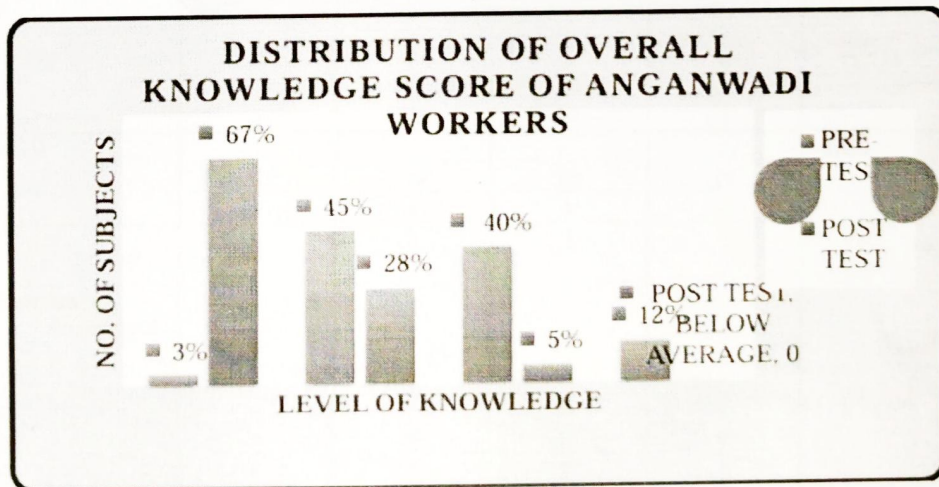

Figure 1: Bar graph depicting Percentage Distribution of Pre-test and Post-test knowledge scores of the Anganwadi Workers.

Figure 1 showing the analysis data related to knowledge of Anganwadi Workers suggested that the maximum 45% scored between 18-23 in the pre test of knowledge regarding ICDS and post test scores show that 67% scored between 24-30 in the post test of knowledge regarding ICDS.

Table 2 Pre-test & Post test knowledge score

N=100

Group	Observed Score range	Mean	Mean Difference	Median	Standard Deviation	'Z' Value at p<0.05	Critical 'Z' value at p<0.05
PRE TEST	04-25	16.82	7.47	17	4.085	13.739*	2.00
POST TEST	15-30	24.29		25	3.586		

The table 2 shows the summary of statistical results that pre-test knowledge mean is 16.82 and after structured teaching programme post test mean rises to 24.29 to check whether this rise in Mean knowledge score is statistically significant or not, researcher applied 'Z' test. Since calculated z value is more than the table value at $p<0.05$ level of significance, there is significant increase in Mean Knowledge score after intervention. Therefore, the researcher can conclude that structured teaching programme was effective. Hence, H_{01} is rejected and H_1 is accepted.

Table-3 Association with demographic variables

N=100

S.no.	Selected Variables	Excellent Knowledge Frequency (f)	Good Knowledge Frequency (f)	Average Knowledge Frequency (f)	Below Average Knowledge Frequency (f)	Chi Square value (χ^2)	Df	Table Value
1.	Age (in years):							
	18-25 years	0	2	0	0	9.761 NS	9	16.92
	26-40 years	3	29	24	5			
	41-50 years	0	11	16	6			
	51-60 years	0	3	0	1			
2.	Education: Upto 8th							
	Upto 10th	0	3	6	6	11.738 NS	6	12.59
	Upto 12th	1	16	14	2			
	Graduation and above	2	26	20	4			
1.	Marital Status:							
	Married	3	39	38	11	3.096 NS	6	12.59
	Unmarried	0	4	1	0			
	Widow	0	2	1	1			
	Divorcee							
2.	Years of Experience as an Anganwadi Worker:							
	≤5 years	0	2	3	1	6.131 NS	9	16.92
	6-10 years	0	7	3	1			
	11-15 years	3	36	33	9			
	16-20 years	0	0	1	1			
	20 years and above							

*NS-Not Significant

Since calculated chi square value is less than table value at $p<0.05$ level of significance so there was no significant association between pre-test knowledge score and demographic variable found. Hence, H_2 is rejected and H_0 is accepted.

IV. DISCUSSION

The findings of the present study have been discussed in relation to the observation made by other studies which the investigator reviewed.

The findings of the present study were found similar to the study findings of **Sharma KK.(2021)** who conducted a study to assess the effectiveness of self-instructional module regarding assessment and prevention of protein energy malnutrition in children under five years of age among anganwadi workers at selected ICDS centre at Jaipur using pre-experimental pre-test post-test research design approach in 2021. 50 anganwadi workers were selected for the study using non-probability convenient sampling technique. Demographic scale and structured interview schedule were formulated to assess the effectiveness of self-instructional module. The findings of the study showed that overall mean post test knowledge score was significantly higher than the pre-test knowledge score with a mean difference of 11.29. Hence, the self-instructional module was effective[7]. In the present study also, post test mean score was more than the pre-test mean score with a mean difference of 7.47 and the structured teaching programme was also found effective.

Similar findings were also found in the study conducted by **Sivadas S.(2020)** which was aimed to assess the effectiveness of planned teaching programme on knowledge regarding national nutritional programme for children among 40 anganwadi workers from selected Anganwadi centre at Mangalore rural area in 2020. One group pre-test and post-test pre-experimental design was used. Study results revealed that the overall mean post test knowledge score regarding national nutritional program for children (30.25±5.88) was significantly higher than overall mean pre-test knowledge score regarding national nutritional program for children (16.95±4.66) and the obtained 't' value was 22.96, which was higher than the table value and there was no significant association between the pre-test knowledge score with the demographic variables of anganwadi worker[8]. These results coincide with the findings of the present study.

However, some researchers were able to find out association between the knowledge score and the demographic variables which are in contrary to this study. **Parmar M, Patel S, Rathod S, Patel N, Ninama K.(2014)** conducted a study aimed to assess the knowledge of anganwadi workers regarding ICDS in September 2014. Study results showed that educational level of anganwadi workers was positively associated with the correct knowledge score about ICDS scheme [9].

Similarly, **Ranjan R, Das M, Das S.(2018)** conducted a study to assess the level of knowledge among anganwadi workers regarding services of ICDS in Sitamarhi, Bihar during the period 18th December 2017 to 30th March 2018. Results showed that education level and training of anganwadi workers showed significant association with the knowledge regarding ICDS components [10].

Many other researchers also found the similar results which showed that teaching programmes are effective in increasing knowledge of anganwadi workers regarding ICDS. Some were able to find association between knowledge and demographic variable especially with education level.

V. CONCLUSION

The conclusions drawn from the study are as follows:-

The main objective of the study was to assess the effectiveness of structured teaching programme on knowledge regarding Integrated Child Development Services among anganwadi workers. Mean post-test knowledge score of the samples was significantly higher than the mean pre-test knowledge score with a mean difference of 7.47. The calculated 'Z' value of 13.739 was greater than the table value 2.000 at p<0.05 level of significance, which showed that structured teaching programme was found to be effective in increasing the knowledge level of anganwadi workers regarding ICDS. No significant association was found between the pre-test knowledge score of anganwadi workers regarding Integrated Child Development Services and the selected demographic variables as calculated Chi Square value was lower than the table value at p<0.05.

Hence, it is concluded that Structured teaching programme is effective in increasing knowledge of anganwadi Workers regarding Integrated Child Development services.

REFERENCES

1   Gauri N. Assessment of the effectiveness of structured teaching programme on knowledge regarding ICDS scheme among mothers of children in selected rural area. Int J Sci Res (Raipur).2020 Feb;9(2). Available from: https://www.ijsr.net/archive/v9i2/SR20216070627.pdf.

2   Government of India. INTEGRATED CHILD DEVELOPMENT SERVICES (ICDS) SCHEME. Nic.in. Available from: http://icds-wcd.nic.in/icds.aspx

3   Priority To Malnutrition Issues.Gov.in. Available from: https://pib.gov.in/Pressreleaseshare.aspx?PRID=1809708

4   Kapil U, Pradhan R. Integrated child development services scheme (ICDS) in India: its activities, present status and future strategy to reduce malnutrition. J Indian Med Assoc. 2000; 98(9):559-60, 562-6, 571. Available from: https://www.ncbi.nlm.nih.gov/pubmed/11291790

5   Baliga SS, Walvekar PR. A study on knowledge of anganwadi workers about integrated child development services at three urban health centers. Int J Community Med Public Health. 2017;4(9):3283. Available from: http://dx.doi.org/10.18203/2394-6040.ijcmph20173829 DOI: 10.18203/2394-6040

6   Choudhary A, Sharma S. Assessment of the extent of the knowledge of anganwadi workers regarding maternal, child nutrition and health and problems faced during job fulfillment: A study of urban and rural areas of Jaipur district of

5

Rajasthan. International Journal of Trend in Scientific Research and Development. 2017 Dec; 2(1). Available from: https://www.ijtsrd.com/papers/ijtsrd5971.pdf.

7   Sharma KK. A study to assess the effectiveness of self-instructional module regarding assessment and prevention of protein energy malnutrition in children under five years of age among anganwadi workers at selected ICDS centre at Jaipur. Vol. 10. International Journal of Creative Research Thoughts; 2022. Available from: https://ijcrt.org/papers/IJCRT2202390.pdf

8   Sivadas S. Effectiveness of planned teaching programme on knowledge regarding national nutritional programme for children among anganwadi workers from selected anganwadi centres at Mangalore rural area. International Journal of Pediatric Nursing. 2020; 6(2):24–30.
Available from: https://nursing.journalspub.info/index.php?journal=IJPN&page=article&op=view&path%5B%5D=1624.

9   Parmar M, Patel S, Rathod S, Patel N, Ninama K. Knowledge of Anganwadi Workerabout integrated child development services (ICDS): A study of urban blocks in Ahmedabad district of Gujarat. International Journal of Multidisciplinary Research   and   Development.   2015;2(8):170–4.   Available   from: http://www.allsubjectjournal.com/archives/2015/vol2/issue8/26.1.

10 Ranjan R, Das M, Das S. Knowledge of anganwadi workers about integrated child development services: a study in Sitamarhi district of Bihar, India. Int J Res Med Sci . 2019;7(11):4194.
Available from: https://www.msjonline.org/index.php/ijrms/article/view/7150/5199.

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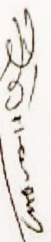## In recognition the publication of the paper entitled

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