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Faculty Perception on Simulation Based Learning

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ABSTRACT

Introduction: Simulation is an active teaching learning method performed in a controlled, protected and safe environment. The study was aimed to assess the the perception of simulation-based learning among Nursing faculties. **Methodology**: A descriptive study was conducted at selected college of nursing, Chennai among 63 nursing faculties selected through purposive sampling technique. Data was collected through Google forms using background variables Proforma and rating scale on perception of simulation-based learning through online mode. **Results:** Around half of the faculties (44.4%) were aged between 36 to 45 years, Post graduates (55.6%) and 49.2% had more than 10 years of teaching experience. Most of them (86%) had positive perception whereas 14% had neutral perception regarding simulation learning, with the domain wise mean score of Clinical skills & Experience (27.1$\pm$9.2), communication and patient safety (21.5$\pm$7.4), Curriculum Replacement (11.1$\pm$2.5), Confidence and Satisfaction of Students (13.5$\pm$3.1). **Conclusion:** Implementation of SBL in Nursing education has been perceived favorably by a large number of Faculties. Faculty development Programme is needed to strengthen the nursing faculties in implementing simulation in a nursing education curriculum.

Keywords: Confidence, Faculty, Perception and Simulation Based Learning.

INTRODUCTION

Simulation is rapidly penetrating the terrain of health care education and has gained growing acceptance as an educational method and patient safety tool. The training of a competent health care professional is a complex multidimensional process, as in any learning process, educational activities must address objectives in the cognitive, affective, and psychomotor domains.

Nursing education is skill-based profession. COVID pandemic has challenged nursing education to rewire the teaching strategies, in order to facilitate clinical education. Simulation is one of the best teaching strategies that bridge gap between theory and practice. It is a technique for replacing or completing real life experiences with guided experiences with faithful imitation of the real world in a fully interactive way [1].

Simulation is an instructional process that substitutes real patient encounters with artificial models created by screenbased

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computer simulations, partialtask simulators and high-fidelity whole body mannequins. Simulators replicate patient care scenarios in a realistic environment and also have the benefit of enabling repetition of the same scenario in a controlled environment. This allows practice without risk to the patient thereby minimizing chances of medical error. Furthermore, the recording and feedback options in modern simulators make them a useful tool for student assessment[4].Simulation provides platform for the nursing students to learn and acquire clinical skills through trial and error that enhances their clinical performance and patient safety by reexamining and reflecting their performance.

A cross sectional observational study to evaluate the perception of medical teachers towards integration of simulation based medical education in undergraduate curriculum. Teachers think that simulation should be part of the curriculum and not stand-alone one-time activity. Lack of teachers' training, time, resources and the need to integrate in medical curriculum are major perceived barriers for effective SBME[2].

According to the National Council of State board of Nursing (NCSBN) national simulation study: "A longitudinal, randomized, controlled study replacing clinical hours with simulation in pre-licensure nursing education," "up to 50 percent of clinical hours in a pre-licensure RN program may be replaced by simulated experiences without negative impacts on learning outcomes.[3]" According to Indian Nursing Council Revised B.Sc. Nursing Curriculum 2021 has included simulation as a part of clinical teaching method along with skill lab procedures, which intended the researcher to conduct this study to identify the perception of nursing faculties on Simulation based learning.

Statement of Problem

A descriptive correlational study to assess the perception of simulation-based learning among Nursing faculties at Selected college of Nursing, Chennai.

OBJECTIVES

1. To assess the perception of Simulation based learning among Nursing Faculties.
2. To find out the association between the background variables and perception of Simulation-based learning among Nursing faculties.

Null Hypothesis

- **H01:** There will be no significant association between the background variables and perception of Simulation-based learning among Nursing faculties.

MATERIALS AND METHODS

A descriptive study was conducted at selected college of nursing, Chennai among 63 nursing faculties selected through purposive sampling technique. Ethical clearance was obtained from IEC, Apollo College of Nursing. Predetermined and pretested tools were shared to the participants through Google forms along with informed consent and brief description of study. Data was collected using background variable proforma that includes age, education, designation, years of experience and Previous knowledge on simulation and Rating scale to assess the perception of simulation-based learning. Rating scale consists of 4 components like clinical skills and experience, communication and patient safety, curriculum replacement and confidence and satisfaction of students with 30 items in 5-point rating scale (Strongly Disagree, Disagree, Neutral, Agree and strongly Agree). The collected data was analyzed in SPSS-21 and presented in tables and diagrams.

RESULTS

The percentage distribution of the background variables denotes 44.4% of the faculties were aged between 36-45 years, 55.6%were post graduates, 60.8% were working as tutors, 49.2 % had more than 10 years of teaching experience and 79.4% had previous knowledge on simulation.

The perception of simulation-based learning (SBL) implicates that most of them considered SBL support development of clinical skills (82%), helps to manage rarest cases (80%), improves student performance by repeated practice (81.5%). SBL can be integrated into nursing curriculum (80.9%), increases confidence (79%), critical thinking and decision-making skills (75.5%).

Most of them noted that SBL can replace live patients (64.4%), minimize the role of teacher (53.9%), empathy of staff nurses (66%), feedback provided by SBL at the end is better than that of bedside teaching (68.5), time consuming for preparation, prebriefing and debriefing (73%)

Table 1 denotes the global mean score of perception of simulation (M=110.66 ± 1.41) and its components like clinical skills and Experience (M=34.57± 3.98), Communication & Patient Safety (M=21.96± 3.37), curriculum replacement (M=21.96± 3.37) and confidence and satisfaction of students (M=18.88± 2.3). Percentage distribution on level of perception shows that, 86% of the faculties had positive perception and 14% had neutral Perception on simulation-based learning.

Table 2 depicts that, no association between background variables like age, education status, designation, years of experience with the level of perception on simulation-based learning. Hence Null hypothesis "There

Table 1. Mean & Standard Deviation of Perception on simulation learning among Nursing Faculties

(N=63)

Components	*Obtainable Score*	*Obtained Score*		*Mean*	*Mean %*	*SD*
		Min	*Max*			
Clinical Skills & Experience	9-45	19	41	34.57	76.82	3.98
Communication and patient safety	7-35	9	27	21.96	62.74	3.37
Curriculum Replacement	10-50	9	27	21.96	43.92	3.37
Confidence and Satisfaction of Students	5-25	14	24	18.88	75.52	2.3
Global Score	150	79	135	110.66	73.77	11.41

Table 2. Association between background variables and level of Perception of Simulation among faculties

(N=63)

Background Variables	*Levels of Perception*		*χ2 and P value*
	Up to Mean	*Above Mean*	
Age in years			
<35	13	15	0.71
> 35	20	15	0.39
Educational status			
B.Sc	9	9	1.48
M.Sc	17	18	0.47
PhD	7	3	
Designation			
Tutor	16	16	
Lecturer & Asst. Professor	6	7	0.82
Reader & Professor	11	7	0.66
Year of Experience			
< 5 years	8	12	
5 to 10 years	9	3	3.69
>10 years	16	15	0.157

will be no Significant association between the background variables and perception of Simulation-based learning among Nursing faculties" was retained.

DISCUSSION

Result of the study explored the perception of faculties on simulation-based learning that most of them considered SBL support development of clinical skills (82%), helps to manage rarest cases (80%), improves student performance by repeated practice (81.5%). SBL can be integrated into nursing curriculum (80.9%), increases confidence (79%), critical thinking and decision-making skills (75.5%).

Similar study emphasized that SBE contributes to the learning of health care–profession students and clinicians in areas of clinical decision-making, interprofessional communication, communication with patients, teamwork, and clinical and procedural skills. They elucidated that learning experience with a real patient is fundamental for acquiring clinical expertise, but simulation provides an opportunity for practice in minimizing chances of error. They further clarified that SBE ensures a high degree of confidence and competence among students before they are exposed to real patients. SBE requires curriculum integration, adequate infrastructure, and trained faculty clearly explaining it[5]. Validity of evaluation is the invaluable in influencing quality of education[6].A study aligns with our results said that simulation is going to be increasingly used for assessment[7].

Most of them noted that SBL can replace live patients (64.4%), minimize the role of teacher (53.9%), empathy of staff nurses (66%), feedback provided by SBL at the end is better than that of bedside teaching (68.5), time consuming for preparation, prebriefing and debriefing (73%). The study results are concurrent with a study were all students (90.7%) agreed that simulation supports the development of clinical skills and 29.6% agreed that real patients might be replaced with simulated patients in practical examinations[8]. Simulation based learning has demonstrated the positive impact in enhancing self-confidence, critical thinking and decision-making ability. As the students acquire their clinical experience and skills in a controlled, reproducible and reliable environment in simulation with an advantage of patient safety from possibility of mistakes and repeating the actions many times without harm to patients until they achieve confidence and skills. Faculties underlined their valuable perception of integrating simulation in Nursing curriculum even if they consider it as time consuming process that has leeway of reflective practice through feedback at the end of simulation.

Figure 1 shows that, 86% of the faculties had positive perception on simulation-based learning. Similar findings are in line with the study where faculties considered simulation an effective tool in health care program and maintain that the main obstacle faced by them is logistical demand[9]. Another study highlighted the positive perception and attitude of medical teachers towards

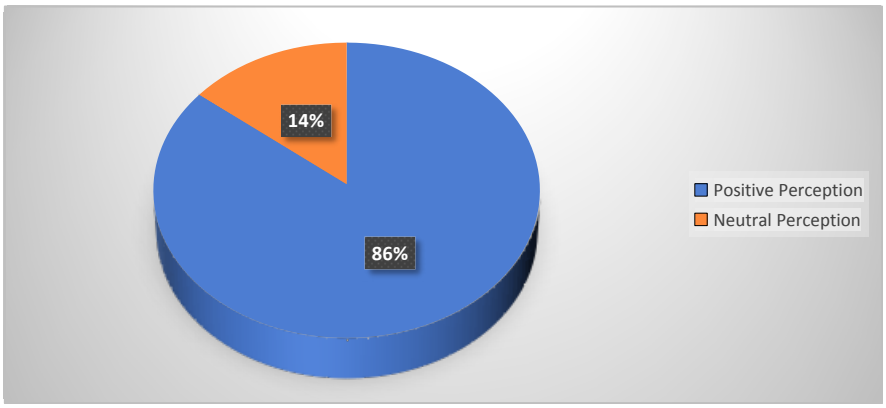

Fig. 1: Percentage Distribution of Level of Perception on Simulation-Based Learning

integration of simulation based medical education in undergraduate curriculum[2]. Thus, the nursing faculties Perceived brighter aspect of the simulation-based learning as it could be helpful in improving clinical skills and experience, ensures the patient safety and communication skill of students along with these it boost the confidence and satisfaction of students in clinicals. However, few faculties had neutral perception as it needs simulation resources, time consuming process and integration into nursing curriculum.

Implication for Nursing Education

- Educators can create their own simulation scenario with the help of simulators, to teach students skill, confidence and critical thinking.
- Educators can customize the simulation learning in par with the level of the students.

Implication for Nursing Practice

- Nurse Administrators can assess competency of novice nurses through simulation.
- Nurse educators in hospital can plan for simulation training for interprofessional team training and Drills.

CONCLUSION

Simulation based learning also can be used as tele simulation, gamificial online learning allow for the combination of hands -on training as well as self-directed, knowledge based learning[10]. Health care Simulation based education was introduced in India around 2010, whereas many Nursing institution felt its necessity with the Indian Nursing council with revised B.Sc Curriculum. The training of simulation instructors is still in preliminary stages. Indeed, most of the nursing faculties were post graduates exposed to simulation but formal hands- on learning simulation activities with expert's feedback to help faculties in enhancing competencies required for simulation teaching.

RECOMMENDATION

- A descriptive study to assess the perceived benefits and barriers in simulation-based learning
- A descriptive study to assess the simulation and skill training facilities.
- A Study to assess the future of simulation in Nursing.
- A Study to evaluate the utilization of simulation methods

LIMITATION

- The study had a relatively limited number of participants, and the targeted population were from selected college of Nursing thus preventing from generalization of findings.

Conflict of Interest: The authors had no conflict of interest regarding the study.

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