



Readiness to care and factors influencing readiness to care for patients in the intensive care units among novice nurses

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ABSTRACT

Problem considered: Nurses are the heart and soul of any healthcare institution. A skilled, qualified nurse with the readiness to care for patients in critical care setting is the dire need for today's world.

Methods: A cross-sectional descriptive survey was conducted among novice nurses working in the selected tertiary care hospitals to assess the readiness to care for patients in the intensive care unit (ICU) and the factors influencing readiness to care. The sample were selected using purposive sampling technique.

Results: The majority 157 (52.4%) had moderate readiness, 143 (47.6%) novice nurses had high readiness to care for patients in ICUs. The top six factors expressed by the participants were: knowledge of the fundamental subjects 292(97.3%), continuing nursing education 278(92.7%), feedback by peers and superiors 283(94.3%), internal motivation 277(93.3%), communication skills 277(92.3%), and proper documentation of care given 278 (92.7%). There was a statistically significant association between readiness to care and gender ($\chi^2 = 9.060$; $p = .011$), area of work ($\chi^2 = 10.009$; $p = .040$), duration of clinical exposure in ICUs during the course of study ($\chi^2 = 18.301$; $p = .011$), duration of clinical experience during final year of training ($\chi^2 = 10.315$; $p = .016$), specific ICU related training ($\chi^2 = 6.511$; $p = .011$), and duration of induction programme ($\chi^2 = 50.23$; $p = <.001$)

Conclusion: The novice nurses had moderate readiness to practice in ICUs. The nursing educational sector and the nursing service sector can devise certain structures which can help increase the readiness of novice nurses to work in ICUs by focusing on the factors identified.

1. Introduction

Nurses are the heart and soul of any healthcare institution. With the increase in life expectancy, the burden of non-communicable disease has been increasing globally as well as nationally. They play a major role nationally as well as internationally in achieving the health targets and contributing to the universal health coverage.¹ Therefore, it comes upon the educational institution to fulfil the expectation of the healthcare sector by producing skilled nurses.

According to the Indian Finance Commission Report in COVID Times, the nurse to population ratio is 1:670 against the norm of 1:300.² Therefore, for meeting the health care needs, especially amid the pandemic, skilled, qualified, and motivated nurses are the dire need to bear with the increasing strain on health care services.

The transition from a student nurse to a professional nurse has been described as a term "reality shock".³The complexities of the health care

system along with the dearth of coaching and mentorship bring many challenges to the new graduate nurses during the transition period.⁴ However, there are studies which highlight that induction training helps to increase job satisfaction and reduce stress and anxiety. New graduate nurses' readiness to care has been a debatable area ever since. The theoretical knowledge along with the clinical expertise acquired through proper mentoring is essential to provide care for critically ill patients.⁵

With the increasing COVID 19 cases, the world plunged into an era of a public health crisis. The ripples of its effect were seen in all the spheres of life. The educational institution was also affected by these crises. A cross-sectional study was conducted among students of Bachelor of Science in Nursing (N = 286) to study the effect of COVID19 on educational performance and professional competency. The findings revealed that the students who expressed confidence in their ability for success, and patient care delivery during the pre-

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COVID pandemic, retained that confidence. However, overall, the participants felt less confident after the transition.⁶

With the increasing adversity of the pandemic, the nursing colleges in India shifted from face-to-face classes to online mode. The clinical placement of the students was either restricted or suspended till the cases came down, which affected their clinical experience and clinical learning. This may have led to a decrease in confidence for readiness among the final year students to work in intensive care units as novice nurses.

In the context of the above studies and the global crisis, the below-mentioned study was planned. The purpose was to assess the readiness to care for patients in intensive care units and the factors influencing readiness among novice nurses. The findings of the study may help to devise a strategy to ensure adequate retention of critical care knowledge and boost the readiness and caring attitude among novice nurses. The objectives were to assess the readiness to care for patients, determine factors influencing readiness to care for patients, and find the association between readiness to care for patients in intensive care units and the demographic variables.

2. Methods

A cross-sectional survey design was employed to assess the readiness to care for patients in ICU(s) and the factors influencing readiness. The study was conducted in four selected tertiary care hospitals of Karnataka from 1st February to 10th March 2022. The novice nurses working in four tertiary care hospital were the participants of the study. The inclusion criteria were nurses with less than one year of experience and nurses working in tertiary care hospitals of Karnataka. The exclusion criteria included nurses who were working in the Intensive Care Unit. The purposive sampling technique was used to select the tertiary care

Hospitals and then enumerative sampling of the participants was undertaken to obtain the desired sample size.

The key research variable of the study is the readiness to care, which is defined as novice nurses' state of being ready and prepared to care for patients in intensive care units which is assessed by the Self-structured Readiness to Care Scale. The demographic variable in the study was age, gender, educational qualification, area of work, clinical experience during the final year of training, clinical exposure in ICUs during the course of study, and duration of the induction program. The sample size was estimated using the formula, $(Z_{1-\alpha/2})^2 (p)(q)/d^2$ with an absolute error of 5%, confidence interval of 95% and above, and readiness to practice (77%), the estimated sample size was 270 participants and considering 10% non-respondent rate the total sample size was estimated 300.⁷

Administrative permission was obtained from the head of the selected institutions. Institutional Ethics Committee clearance (IEC: 729/2021) was also obtained. For ensuring transparency and enhance visibility; the study was registered with the Clinical Trials Registry of India (CTRI/2022/01/039356). Before enrolling the participants in the study, written informed consent was ensured. Participants were briefed regarding the study objectives and provided subject information sheet.

The data was collected by self-administering the tools to the participants after obtaining the informed consent. Structured questionnaires were used to assess the readiness and factors influencing readiness among novice nurses. The data collection instruments were, Demographic proforma, Readiness to Care Scale, and Questionnaire on factors influencing readiness to care. The demographic proforma consisted of a total of 8 items such as age, gender, educational qualification, area of work, clinical experience during the final year of training, clinical exposure in ICU's during the course of study, and duration of the induction program.

Readiness to Care Scale is, a self-structured five-point Likert scale ranging from strongly agree to strongly disagree which consisted of 43 items, under the components of clinical knowledge, technical skills, clinical reasoning, communication skills, provision of safe care,

Table 1

Socio demographic characteristics of sample in frequency and percentage.

Variables	Frequency (f)	Percentage (%)
Age in years		
20 to 25	257	85.7
25 to 30	43	14.3
Gender		
Female	213	71
Male	87	29
Educational Qualifications		
Diploma in Nursing and Midwifery	115	38.3
B.Sc. Nursing	163	54.3
Post Basic B.Sc. Nursing	22	7.4
Area of work		
General Ward	212	71
Special ward	51	17
Emergency	18	6
OBG	19	6
The effect of COVID-19 on clinical experience during the final year	157	52
Yes	143	48
No		
If yes, affected areas of posting		
Clinical Exposure	82	27.3
Internship	37	12.3
OBG	23	7.7
Community	15	5.0
The duration of clinical exposure in ICUs during the course of the study		
1-2 weeks	92	31.0
2-3 weeks	82	27.3
3-4 weeks	78	26.0
More than 4 weeks	48	15.7
Duration of clinical experience during the final year of training		
Nil	35	11.7
1-3 months	51	17.0
3-6 months	33	11.0
More than 6 months	181	60.3
Undergone induction programme		
Yes	300	100
No	0	0
Duration of induction programme		
1-3 days	35	11.7
4-7 days	113	37.7
More than 1 week	152	50.6
Specific ICU related training		
Yes	89	29.7
No	211	70.3

professionalism, and management skills. A questionnaire on factors influencing readiness to care was developed to assess the factors influencing readiness to care for patients in intensive care units. It is divided into two sections: general and ICU related factors. It consisted of 24 items under the components of academic factors, organizational factors, personal factors, skill-related factors, communication factors, and work-related factors.

For establishing the content validity all the tools were given to three experts from the Department of Nursing Services and four experts from the College of Nursing. The Content Validity Index of the three tools were 0.88, 0.97 and 0.94 respectively. The reliability was obtained using Cronbach's alpha for Readiness to Care Scale and Test- Retest method for the Questionnaire on factors influencing readiness to care. The reliability was $r = 0.97$ and $r = 0.77$ respectively for the Readiness to Care Scale and Questionnaire on factors influencing readiness to care.

The data was analysed using Statistical Package for Social Sciences (SPSS 16.0 version). Descriptive and inferential statistics were used for data analysis. Descriptive statistics was used to present frequency and percentage of sample characteristics, readiness to care and factors affecting readiness to care for patients in ICUs. Association between selected demographic variable with readiness to care was analysed using Chi Square.

Table 2

Levels of readiness to care for patients in intensive care units in frequency and percentage.

Level of Readiness to Care	f (%)	Mean	SD
High readiness (172–215)	143(47.6%)	168.3	21.1
Moderate readiness (86–172)	157(52.4%)		
Low readiness (less than 86)	0		

Maximum score: 215 Minimum score: 43.

3. Results

The majority of 257 (85.7%) participants belonged to the age group of 20–25 years, 213 (70.3%) were females. Most 163(54.3%) of the participants were BSc(N) qualified. The majority 212 (70.7%) of the participants had the experience of working in general wards.

About 157 (52%) participants expressed that their clinical experience during the final year of training was affected due to the COVID19 pandemic and 82 (27.3%) of them were affected in the area of clinical exposure. Most 92 (30.7%) of the participants had 1–2 weeks of clinical postings in ICUs during the study. The majority 181 (60.3) had more than 6 months of clinical experience during the final year of their training. All the participants had undergone an induction programme and the majority 152 (50.7%) of the participants had less than 1 week of induction training. The majority 211(70.1%) of the participants expressed that they had not received any special training related to ICU care (Table 1).

Readiness to care for patients in Intensive Care Units were analysed by using descriptive statistics. The majority 157 (52.4%) had moderate readiness, and 143 (47.6%) of the novice nurses had high readiness to care for patients in Intensive Care Units (ICUs). The overall mean score was 168.3 with SD \pm 21 (Table 2).

The top six factors expressed by the participants as factors influencing their readiness were: knowledge of the fundamental subjects 292 (97.3%), continuing nursing education 278(92.7%), feedback by peers and superiors 283(94.3%), internal motivation 277(92.3%), Documentaion of care given 278(92.7%), and communication skills 277(92.3%),

communication skills 277(92.3%), and continuity in care provided through proper documentation of all the care given 278(92.7%). Fear of contracting COVID 19 infection 119 (39.7%) and fear of spreading it to their family members 121 (40.3%) were expressed by the novice nurses as the factors hindering their readiness to care for patients in ICUs (Fig. 1).

There was a statistically significant association between gender ($\chi^2 = 9.06$; $p = 0.011$), area of work ($\chi^2 = 10.01$; $p = .040$), duration of clinical exposure in ICUs ($\chi^2 = 18.30$; $p = .001$), duration of clinical experience during final year of training ($\chi^2 = 10.32$; $p = .016$), duration of induction programme ($\chi^2 = 50.23$; $p = <.001$), specific ICU related training ($\chi^2 = 6.51$; $p = .011$) with readiness to care. However, the readiness to care was independent of age, educational qualification, and effect of COVID-19 on clinical experience (Table 3).

4. Discussion

The findings of the current study can be supported by a study conducted on the newly graduated nurses which concluded that the majority 112 (63.3%) of qualified nursing students were not ready and 64 (36.3%) of them were ready for clinical practice. Among the perceived barriers 153 (86.9%) have perceived inadequate sleep, low remuneration 145 (82.4%), insufficient time 142 (80.7%), time for documentation 125 (79%), and fear of being blamed 135 (75%).⁸(1) Similarly, a study conducted among the final year nursing students of an Australian university identified that 259 (75%) participants were willing to work in intensive care units after attaining clinical experience as a registered nurse and 193 (54%) said that they were interested to work in critical care as new graduate nurses. Among the barriers identified three most common ones were: lack of knowledge 58 (16%), lack of psychometric skills 57 (16%), and interest in another specialty 26 (7%).⁹

In a cross-sectional online descriptive study conducted to investigate the preparedness of nursing students to resume clinical practice after COVID 19 in Nigeria, 61.7% had high readiness and 38.3% had a low level of readiness. About 92(30.7%) responded that they were ready to work with patients infected with the coronavirus.¹⁰ A study conducted

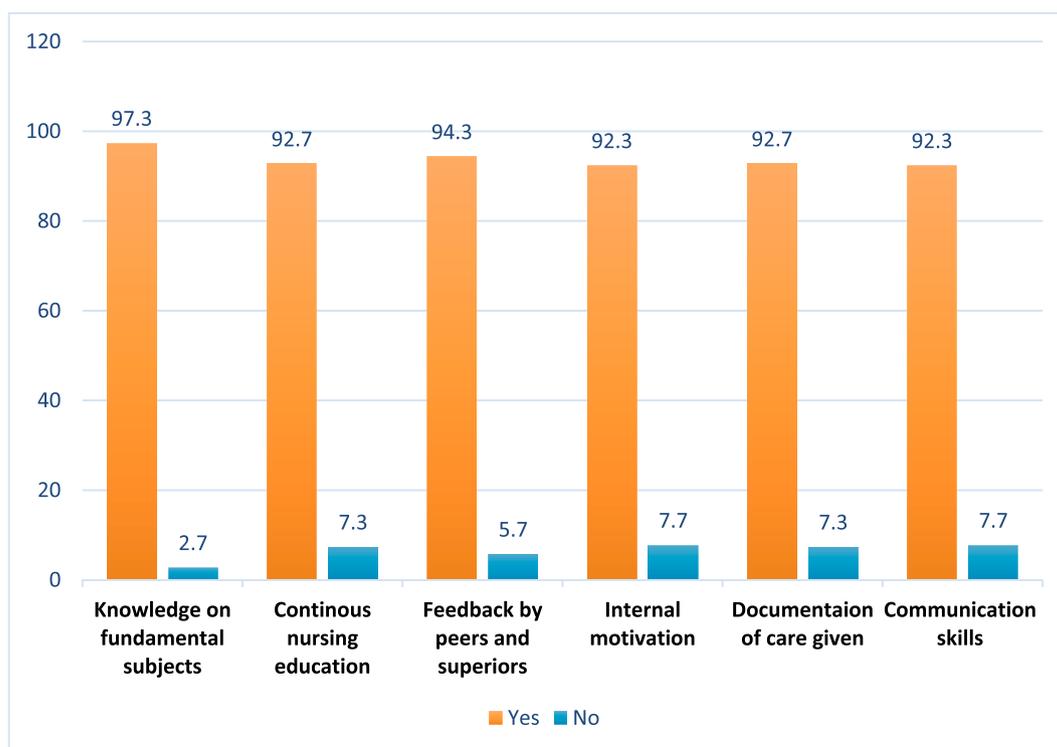


Fig. 1. Top six factors influencing readiness to care for patients in intensive care unit.

Table 3

Association between readiness to care for patients in intensive care units with selected demographic variables.

Demographic Variables	Readiness		$\chi^2_{(df)}$	p value
	Moderate readiness (85–168) f (%)	High readiness (169–210) f (%)		
Age in years	125(41.66)	16(5.33)	2.95 (1)	.086
20 to 25	132(44)			
25 to 30				
Gender	118(39.33)	94(31.33)	9.06(2)	.011*
Female	34(11.33)	53(17.66)		
Male				
Educational Qualifications	61(20.33)	54(18)	5.96(2)	.051
Diploma in Nursing and Midwifery	75(25)	88(29.33)		
B.Sc Nursing	16(5.33)	6(2)		
Post Basic B.Sc. Nursing				
Area of work	117(39)	95(31.66)	10.01(3)	.040*
General Ward	17(5.66)	34(11.33)		
Special ward	10(3.33)	8(2.66)		
Emergency	8(2.66)	11(3.66)		
OBG				
Effect of COVID 19 on clinical experience	81(27)	76(25.33)	2.05(1)	.562
Yes	72(24)	71(23.66)		
No				
Affected areas	69(23)	74(24.66)	5.64(4)	.228
Nil	40(13.33)	42(14)		
Clinical Exposure	19(6.33)	18(6)		
Internship	12(4)	11(3.66)		
OBG	12(4)	3(1)		
Community				
Duration of clinical exposure in ICUs	40(13.33)	52(17.33)	18.30(4)	.001*
1–2 weeks	50(16.66)	32(10.66)		
2–3 weeks	48(16)	30(10)		
3–4 weeks	15(5)	33(11)		
More than 4 weeks				
Duration of clinical experience	16(5.33)	19(6.33)	10.31(3)	.016*
Nil	22(7.33)	29(9.66)		
1–3 months	10(3.33)	23(7.66)		
3–6 months	104(34.66)	77(25.66)		
More than 6 months				
Specific ICU related training	35(11.66)	54(18)	6.51(1)	.011*
Yes	117(39)	94(31.33)		
No				

p < .05.

in Australia showed that graduates gradually develop practice readiness, and that practice readiness is influenced by elements in both the educational and employment environments. Clinical experience in the healthcare setting that gives 'enough of practice' was identified as the foundation for improving practice readiness. A workplace environment that helps graduates in putting their learning into practice and evolving as registered nurses were described as one that allows them to develop, demonstrate, and improve their practice.

4.1. Readiness.¹¹

Contradicting the present finding, the study done in Nigeria found that there was a significant difference between nursing institutions and

readiness ($\chi^2 = 21.0$, $p = >.001$) and no significant difference between years of clinical exposure and readiness for clinical practice ($\chi^2 = 1.89$, $p = .594$).¹⁰ A study conducted on Turkish students' preparedness to work in clinical, revealed similar findings where age ($\chi^2 = 4.286$, $p = .040$), gender ($\chi^2 = 5.22$, $p = .020$), and educational qualification ($\chi^2 = 14.52$, $p = >.001$) was found to be statistically significant.¹²

The purposive sampling technique used in the study limits the generalizability of the

findings, a probability sampling technique could have yielded better representation of the

participants and the ICU nurses were not included in the data collection.

5. Conclusion

The novice nurse's readiness to practice in the clinical field is an area that has not been explored, especially in the Indian context. This study has focused on novice nurses' readiness to care for critically ill patients and the factors influencing their readiness. The majority of the novice nurses had moderate readiness as revealed in this study. Understanding the factors influencing readiness will empower the nurse managers to increase job satisfaction, efficiency and in long term decrease in the nurse turnover in the clinical settings. The research in this area would help the nursing educational sector and the nursing service sector to devise certain programs which can help to increase the readiness of novice nurses to work in the Intensive Care Units thereby contribute to the quality of patient care.

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Declaration of competing interest

Nil.

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