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Comparison of readiness for the practice among Bacculerate and Diplomate Pregraduate Nurses – Are there any differences?

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ABSTRACT

Nursing Education in India is undergoing a major transition in i-norder to improve the standards across. Graduate Nurses transition from educational program to clinical practice is a global concern. They often feel insecured, inadequately prepared and it's a time of reality shock. Diplomate and Bacculerate program are the two entry level courses in Nursing in India. There are documented evidence on the differences between diploma and degree nurses in terms of professional competence. However, readiness for practice among pregraduate nursing students are less explored in Indian context. This article will reveal the differences in readiness for practice among bacculerate and pregraduate nurses in South Indian setting.

Keywords: *Bacculerate, Diplomate, Nursing, Readiness for practice*

1. INTRODUCTION

Healthcare environment is constantly undergoing lot of changes. The demand for nursing workforce is still on the higher side. According to 15th Finance commission report during Covid-19 pandemic reveals that every allopathic doctor in India caters to a minimum of 1,511 people, whereas the World Health Organization's norm is one doctor for every 1,000 people. The numbers of trained nurses are much awful with a nurse-to-population ratio of 1:670 against the WHO norm of 1:300. [1] WHO report on Health Workforce in India also highlights that there are 73 districts without nurses having medical qualification and 67.1% of nursing workforce is having a qualification of secondary schooling or less. Among the nurses with medical qualification, 9.3% were diplomates, 22.2% were bacculerates and 1.5% with post graduation. [2]

Nursing Education in India is undergoing major transition inorder to improve the nursing standards across. Indian Nursing Council, the regulatory body of nursing in India recognized 2373 institutes across the states to offer GNM program (Diplomate program) and 1735 institutes to offer BSN program (Bacculerate Program). [3] Indian Nursing Council initially passed a resolution in 2019 to phase out the GNM program by 2021, however the decision is withdrawn in 2020 due to lack of feasibility in the current stage. Hence the diplomate and bacculerate program will continue to be the entry level for nursing.

Though the quantity is more, the quality is still questionable [4]. The hands-on skill in most of the institutes were less and the norms for attaching with the hospital is irregular. The way the nurses are educated today does not match the complexities of health care realities. Academia and Clinical services should work together to improve the educational preparation for better nurses [5]. There need to be an optimal balance between quality and quantity of nurses. Various nursing programs produce nurses who pass the eligibility test conducted by concerned board or universities but are unprepared to work in the complex area of clinical practice [6]. Diplomate and bacculerate program follow varied curricula academically, however they work in the similar setup with almost the same skillset required.

In a study based at US reveals that baccalaureate nurses demonstrated more nursing competencies than associate or diploma prepared nurses. [7] Another study also supports that the bachelors degree group scored significantly higher than the associate degree on the research subtest in the professional performance examination.[8] On the contrary, study based at UK identifies those diplomates scored little higher in the constructs of planning and social participation compared to bacculerates in the professional competence.

[9] Another study from UK also confirms that diplomate nurses were found to have higher scores than bacculerates in leadership and social participation domain of professional competence.[10]

Readiness for taking up the professional role during the pregraduate stage significantly influences professional competencies of nurses. Graduate nurses' transition from an educational program (diplomate or bacculerate) to clinical practice is a persisting concern which is expressed as a time of stress, position change, and reality shock. [11] Fitzgerald in her study on identifying the readiness for practice among three different streams of nursing students enrolled, two year accelerated course pregraduate students were ready to takeup the professional role (3.12) compared to traditional (3.00) and one year accelerated course (2.44) (maximum score-4). [12]

Though there were many published literatures on readiness for practice among pregraduate nurses, very few published data available in Indian context. That too comparing the readiness for practice among diplomate and bacculerate pregraduate nurses were not found in published database. Hence the researcher has taken this research project with the objective of comparing the readiness for practice among bacculerate and diplomate pre-graduate nursing students from South India.

2. METHODOLOGY

A Cross Sectional Survey design was used to compare the readiness for practice among bacculerate and diplomate pre-graduate nursing students studying in a South Indian Nursing college attached to a Quaternary Medical College & Hospital. The survey was carried out once in the month of June/July 2020. All final year students from bacculerate and diplomate program were eligible to participate in the study. Students who were in the delayed batchwere excluded from the study. A cover letter consists of Information sheet with study procedures and informed consent was sent along with the survey. Students were requested to fill the consent form if they were interested in taking part in the study. A total of 192 subjects responded to the survey out of 195 surveys sent. An online survey comprising of Kasey Fink Readiness for Practice tool was sent using Microsoft forms. Casey Fink readiness for practice survey is a standardised tool developed by Casey et al. [13]. Permission was obtained from the authors to use the tool and change the demographic section and few items according to Indian context.

The Casey-Fink Readiness for Practice Survey consists of three sections. The first section asked for demographic data and information related to student's practical experiences. This section was replaced by the demographic profile created by the investigator. Permission for the change is obtained. The second section had two parts that focused on the student's comfort with skill performance both clinical and relational. First part had a list of 18 skills and procedures and students were asked to identify the top three skills they were uncomfortable performing independently. Students had the option of adding items not listed. In the second part, students were asked about their level of confidence in managing multiple patient assignments. The third sections had a list of 20 items for a self- report about comfort/confidence in key practice skills using a Likert scale (1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree). There were four items with negative words for which reverse scoring was done. The tool had three domains: Professional Identity (7 items), Ethical Practice (9 items), Systems of Care (4 items) by the subjects. The overall readiness for practice score was calculated by adding the scores of individual items. The minimum score was 20 and the maximum score was 80. The readiness for practice scores were not categorized. Higher mean score denoted better readiness among pre graduate nurses.

Descriptive statistics (frequency, percentage, Mean, SD) were used to describe the demographic variable and the readiness for practice. Inferential statistics (Student t-test) was used to compare the readiness for practice among bacculerate and diplomate pre-graduate nursing students. The significance level α was set at 0.05. All analyses were performed using SPSS Version 22 (IBM Corp. Released 2013. IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.). Approval was obtained from Institutions' Research Committee and College authorities to conduct online survey among final year baccalaureate and diplomate program nursing students. Participants' anonymity was always maintained. No incentives were offered to participants. Students were assured that this survey is not a part of curricular evaluation but an independent research project. Voluntary participation is encouraged by accepting the consent form.

3. RESULTS

Table 1. Description of Demographic Variables

Variables	Bacculerate		Diplomate	
	Frequency	Percentage	Frequency	Percentage
Gender				
Female	97	53	86	47
Male	0	0	9	100
Religion				
Christian	91	52.6	82	47.4
Hindu	6	31.6	13	68.4
Locality				
Rural	34	40.5	50	59.5
Urban	63	58.3	45	41.7
Theory Percentage in HSE				
80-100	50	65.8	26	34.2
<80	47	40.5	69	59.5
Final Year Theory marks (Nursing)- internal				

80-100	33	29.2	80	70.8
<80	64	81	15	19
Final Year Practical Marks (Nursing)- internal				
80-100	67	52.3	61	47.7
<80	30	46.9	34	53.1

Table 1 reveals that half of the female subjects (53%) belong to bacculerate program. Nearly half of the Christian subjects (47.4%) belong to diplomate program. Majority (59.5%) of the rural subjects were from diplomate program. Among subjects who scored 80-100 percentage in HSE, 65.8% were in bacculerate program. Most of the subjects who scored 80-100 percentage in internal theory and practical were from diplomate (70.8%) and bacculerate program (52.3%) respectively.

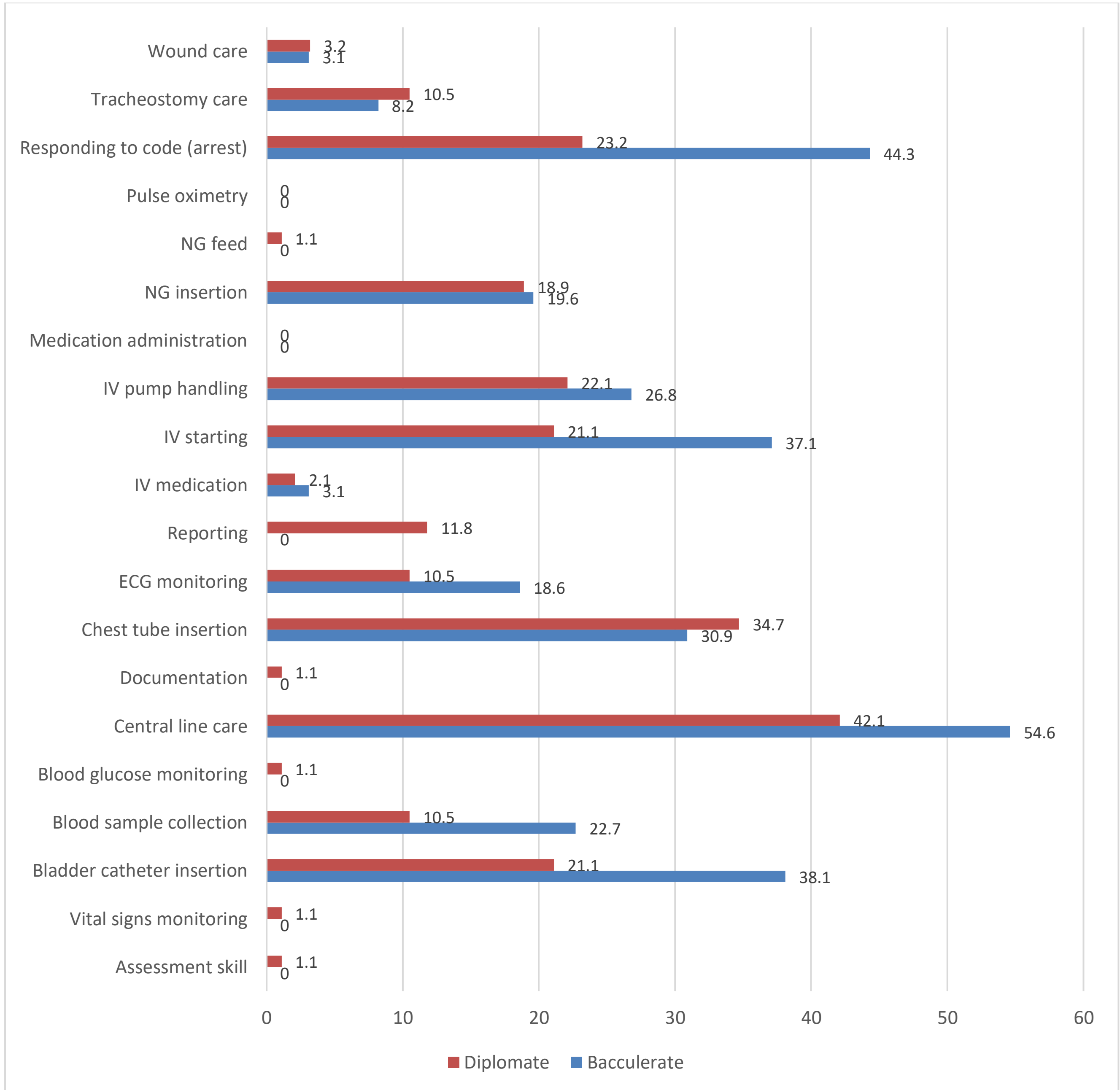

Figure 1. List of clinical competencies difficult to perform as expressed by subjects

Figure 1 infers that the top 3 clinical competencies which were found to be difficult as expressed by bacculerate subjects were Central line care, responding to emergency code and bladder catheter insertion. Whereas diplomate subjects felt central line care, chest tube insertion and responding to emergency code as their top difficult clinical competencies

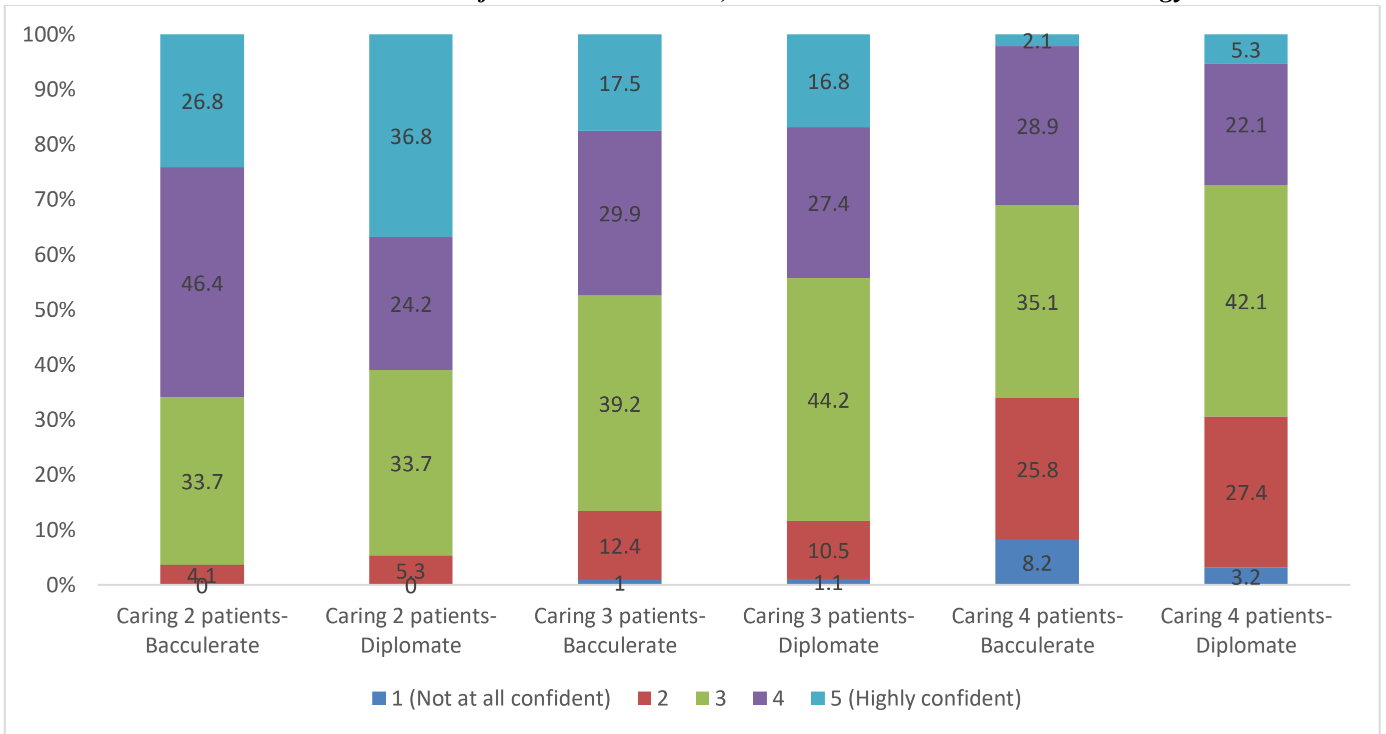

Figure 2. Confidence level of subjects on caring for patients

Figure 2 describes that while caring for two patients, 26.8% of subjects from bacculerate and 36.8% of the subjects from diplomate were highly confident. In contrast, while caring for four patients, the highly confident levels were 2.1% and 5.3% in bacculerate and diplomate subjects respectively.

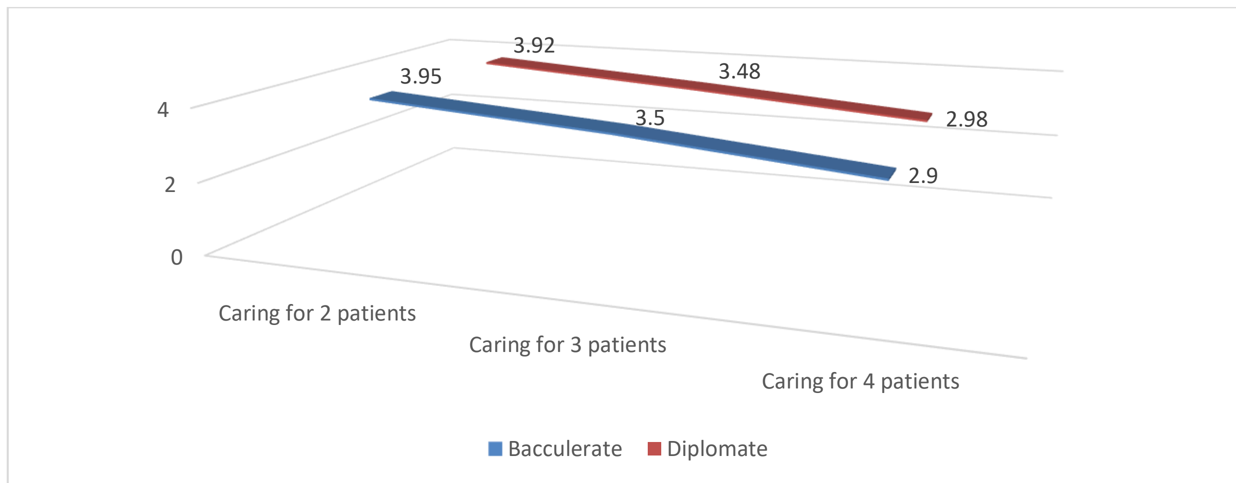

Figure 3. Mean Confidence level of subjects on caring for patients

The mean confidence levels of both bacculerate and diplomate subjects were in the downward trend as the number of patients to be cared were increasing (figure 3).

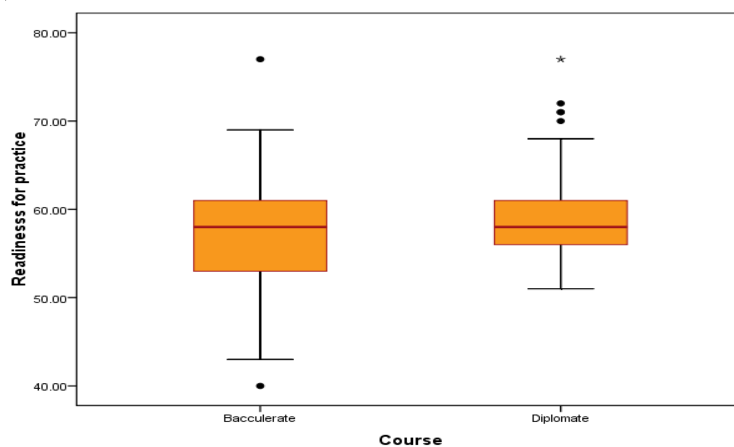

Figure 4. Mean score of Readiness for Practice

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Figure 4 reveals that the mean score of readiness for practice among bacculerate and diplomate pregraduate nurses were 57.68±6.31 and 59.35±4.61 respectively.

Table 2. Distribution of item wise mean score on Readiness for Practice

S. No	Items	Bacculerate		Diplomate	
		Mean	SD	Mean	SD
	Professional Identity				
1.	I feel confident communicating with physicians	2.79	0.67	2.98	0.55
6.	My tutor provided feedback about my readiness to assume an RN role	2.62	0.60	2.75	0.64
7.	I am confident in my ability to problem solve	2.82	0.54	3.08	0.55
10.	I have had opportunities to practice skills and procedures more than once.	2.75	0.75	3.03	0.42
14.	Simulations have helped me feel prepared for clinical practice.	3.04	0.51	3.13	0.40
19.	I am satisfied with choosing nursing as a career	3.24	0.61	3.23	0.70
20.	I feel ready for the professional nursing role.	2.90	0.72	3.29	0.56
	Ethical Practice				
2.	I am comfortable communicating with patients from diverse populations.	3.05	0.58	3.07	0.53
3.	I am comfortable delegating tasks to the nursing assistant.	2.88	0.49	3.04	0.41
8.	I feel overwhelmed by ethical issues in my patient care responsibilities.	2.40	0.60	2.09	0.46
12.	I use current evidence to make clinical decisions	3.01	0.42	3.03	0.42
13.	I am comfortable communicating and coordinating care with interdisciplinary team members.	3.05	0.54	3.02	0.48
15.	Writing reflective journals/logs provided insights into my own clinical decision-making skills.	2.61	0.68	3.14	0.43
16.	I feel comfortable knowing what to do for a dying patient	2.61	0.58	2.84	0.53
17.	I am comfortable taking action to solve problems	2.86	0.58	3.03	0.49
18.	I feel confident identifying actual or potential safety risks to my patients	3.01	0.46	3.06	0.47
	Systems of Care				
4.	I have difficulty documenting care in the patient record.	3.21	0.48	2.84	0.74
5.	I have difficulty prioritizing patient care needs	2.93	0.47	2.83	0.66
9.	I have difficulty recognizing a significant change in my patient's condition.	2.78	0.56	2.71	0.66
11.	I am comfortable asking for help	3.03	0.58	3.09	0.43

Among the baccculerate pregraduate nurses, the higher mean score (3.24) was found in feeling satisfied for choosing nursing as a career and lower score (2.61) was found in writing reflective logs/care notes improving decision making and feeling comfortable in knowing what to do for dying patients. Diplomate pregraduate nurses had a higher mean score (3.29) for feeling ready to take up professional role and the lower socre (2.09) was noted in feeling overwhelmed with ethical issues in patient care responsibilities (Max Score-4).

4. DISCUSSION

This study highlights that the top three clinical competencies which were found to be difficult as expressed by bacculerate subjects were Central line care (54.6%), responding to emergency code (44.3%) and bladder catheter insertion (38.1%). Whereas diplomate subjects felt central line care (42.1%), chest tube insertion (34.7%) and responding to emergency code (23.2%) as their top difficult clinical competencies. On contrary, NG Tube care (52%) [14], venepuncture (50%) [15] was found to be most difficult clinical competence by the pregraduate nursing students. Central line dressing is not a regularly performed procedure for the nursing students as its quite common in critical care units. Hence the students are not confident enough in performing this procedure. It could attribute for their difficulty in central line dressing. Both bacculerate and diplomate pregraduates rated it as most difficult procedure to perform. Supportingly, an Indian study also reveals that only 15.6% of the students were able to performe central venous catheter care independently [16]. Responding to emergency code also expressed as difficult procedure by both diplomate and bacculerate pregraduates. Study by Wray also supports this finding [14].

Similarly, venepuncture was found to be difficult by 37.1% bacculerate pregraduates whereas it was 21.1% by diplomate pregraduates. This could be due to the frequent performance of this procedure during their final year. As the program of their study allows more of clinical exposure which enables them to practice with confidence. Even a study based in India, it was found that 76.3% of students were performing venipuncture independently [16].

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Present study also highlights that 26.8% and 36.8% of bacculerate and diplomate pregraduates respectively felt highly confident while caring for 2 patients. While caring for four patients, 8.2% of bacculerate pregraduates were not at all confident, little higher compared to diplomate pregraduates (3.2%). This could be the fact that the diplomate pregraduates usually spend most of the time in limited clinical areas whereas bacculerate pregraduates will be rotated in super speciality areas as well. Hence the confidence level is bit lower to bacculerate when the patient care assignment increases.

The mean confidence level of caring for two patients were 3.95 and 3.92; four patients were 2.9 and 2.98 for bacculerate and diplomate pregraduates respectively. Though the percentagewise there is a minimal difference, the mean confidence level of caring for two, three or four patients were coherently diminishing for both bacculerate and diplomate pregraduates. Current finding is supported by Wray where the mean score in confidence while caring for two patients is 4.24±0.78 and significantly reduced to 2.48±1.12 if they care for four patients [14]. Thus, it is observed widely that the nursing students' confidence level follows downtrend as the number of patients to care increases. It should also be noted that students do not take full responsibility while caring for a patient as the onus is on the registered nurse assigned. This will significantly influence the confidence level in the initial days of professional nursing role.

The overall mean score of readiness for practice in the current study was found to be 57.68±6.31 and 59.35±4.61 among bacculerate and diplomate pregraduates respectively (Max Score-80). There is a statistically significant difference (p=0.03) in the readiness for practice between these two groups infers that diplomate are more prepared comparatively. Though the difference is miniscule, it can be a relevant finding while orienting the freshmen nurses to professional role. Since readiness comprises of multiple factors, it will be hard to identify one particular factor which could have made the difference. Constant clinical exposure, focused clinical rotation, independence in performing procedures could attribute to this difference. Interestingly comparable findings were observed in few studies where the readiness for practice scores were found to be 57.96±0.52[14] and 57.54±0.64[17]. Although the readiness for practice score was less compared to the overall score, it is almost the same compared to studies across the globe with the available literature findings.

In the domain of Professional identity, Higher level of agreement (3.29±0.56) was seen among the diplomate compared to bacculerate (2.96±0.72) in taking up the professional nursing role. Even in the aspect of opportunities to practice skill more than once, diplomate (3.03±0.42) was agreeing more than bacculerate (2.75±0.75) (Max score- 4). Current finding is also augmented by the higher score among diplomate in the the overall readiness for practice and confidence in caring for four patients. It is a welcoming sign to note that they are confident in taking up the professional role. Opposingly, it was observed by Wray that little lower agreement (2.88±0.68) in taking up the professional nursing role [14]. This could be attributed to the minimal clinical exposure during the student period and hence exhibited in the confidence level of taking up the professional role.

Among the ethical practice domain, higher level of agreement was found among diplomates (3.14±0.43) in writing reflective patient logs for own clinical decision making. However, bacculerates differ in their opinion (2.61±0.68) regarding this aspect. Diplomates have most of their care logs as printed/filling one, whereas bacculerate writes their patient care logs which could have created an untoward effect on writing.

In the systems of care domain, bacculerates (3.21±0.48) felt more difficult in documenting care in patient record compared to diplomates (2.84±0.74). Bacculerates have various clinical area posting which makes them insecure and less confident in performance of activies. On the contrary, diplomates have limited areas to have clinical posting which makes them mastery in performance of procedures.
It is gratifying to note that majority of the bacculerate (92.8%) and diplomate (90.5%) pregraduates are satisfied with choosing nursing as a career. Neverthless, there are variabilities in certain aspects which needs to be addressed.

5. CONCLUSION

This study reveals that both bacculerate and diplomate pregraduates felt that central line dressing and responding to emergency code were difficult to perform. They were also comparable in terms of their perception to increasing assignment. Still a minimal higher statistically significant change in the readiness for practice is noted among diplomates. In majority of the domains of readiness for practice, they showed similarity which is a satisfying inference. In order to address the lower readiness for practice, a bridging program is highly recommended so that the pregraduates will be able to clarify the concepts and gain confidence in taking up the professional role. Though the educational program and curricula makes the difference in pregraduate preparation, it is clinical competence that can create a huge impact. Since Nursing is a profession that requires both theory and practice, it is imperative to maintain that amalgamation.

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