



## Perception of faculties regarding improvement of nursing education system in Bangladesh

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### ABSTRACT

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The fundamental focus of nursing education programme is to produce nursing professionals that are clinically competent and can contribute widely to the provision of quality and safe nursing care. Multifaceted strategies are needed for up to date and up to international standards. This research work will shed light on the direction of these strategies. A cross sectional study was design to determine faculty's perception regarding improvement of nursing education system in Bangladesh. From 14 nursing educational institutions 195 faculty members were selected for this study using multistage sampling. The study was carried out from January to December, 2020. A pretested semi structured questionnaire based on study objectives were used to collect data. Distributions of the socio demographic status of the respondents were females 92.8% (n-181) and males 7.2% (n-14). Their mean age was 48.2 years, SD= ± 5.89. In educational level 94.4%, (n-184) of the respondents were post graduates, 4.6% (n-11) were graduates. This study reveals 92.3% respondents recommended for improvement of admission criteria, 99% were recommended for development of PhD programme and 100% were mentioned to establish a nursing university, 97.9% of the respondents had mentioned to developed a curriculum that reflect more technology oriented, 99.5% for patient safety and professionalism, 97.9% had mentioned for international accreditation. Among all respondents 69.2 % mentioned about lacking of clinical teacher, 99% had mentioned to establish a teacher's training college, 96.4% faculty perceived that periodic faculty appraisal should initiate. Educational qualification of the faculty members showed significant relations with maintaining of teacher student ratio according to world health organization (WHO) guideline (p-value=0.026), designation of the respondents showed significant relations with faculty development programme (p-value=0.039), age of the respondents showed significant relation in health information technology (p-value=0.03), supportive staff (p-value=0.01), shortages of faculty (p-value=0.03). We need for reviewing and guiding nursing education system. It will also help the policy makers to evaluate the perception of faculties and take necessary steps to optimize nursing education system. This study concluded that many of the fields of nursing education system need improvement to strengthen nursing education to produce more competent nursing workforce which will be an important part of health system in Bangladesh.

## 1. Introduction

Nursing education consists of the theoretical and practical training provided to nursing student with the purpose to prepare them for their duties as nursing care professionals. In Bangladesh there are two forms of pre-service education in nursing: one is diploma in nursing and another is bachelor of science in nursing. In addition to pre-service education, the scope of in-service (post-basic) education for building the capacity of nurses as nurse manager; nurse teacher, nurse administrator and nurse leader is available in five colleges. In pre-service education 46 government nursing

institutes with 2730 seats are operationalized and providing 3-years diploma in nursing science and midwifery course since 2008. Beside these 50 seats are available in armed forces nursing institute, Dhaka. In bachelor courses, 20 governments nursing colleges are operationalized and 4 year bachelor in nursing courses with 1535 seats are available for the candidates having H.Sc with science background. In post-basic (in-service) education, college of nursing, mohakhali, Dhaka with 125 seats was established in 1970. It has been affiliated with the Dhaka University under the faculty of medicine in 1977 as a constituent college for the B.Sc in nursing and

BSc in public health nursing degrees. There are other colleges at Bogura, Khulna, Fowzderhat and Kapasia-Gazipur with 625 seats. Beside these 25 seats are available in armed forces nursing institute, Dhaka. National institute of advanced nursing education and research, Dhaka provide masters in nursing degree under Bangabandhu Sheikh Mujib Medical University with the capacity of 60 seats (Council, 2020).

The nursing profession plays an important role in health promotion and care services and works with other healthcare disciplines. In the year of 2020 was of great significance to nurses globally because it marks the 200<sup>th</sup> birthday of Florence Nightingale, the founder and pioneer of modern nursing. To recognize nursing's contribution to and impact on the international community, the World Health Organization (WHO) designated 2020 as the "International year of the nurse and the midwife" with goals set to further promote nursing as a profession with a global vision and strengths for growth and internationalization (Tsai, 2020).

Bangladesh is the country that appears to have a higher physician-nurse ratio. (Khalidi, 2018; Ahmed, 2019). The nurses in Bangladesh are facing a lot of problems including their status, dignity, work benefits, working environment, service guaranty and social stigma (Forazy, 2016). WHO through a resolution at world health assembly urged member states to strengthen nursing and midwifery by establishing comprehensive programs to train nurses and midwives (Bvumbwe and Gloria, 2018).

WHO emphasized vision as a key requirement for the quality of nursing education as part of the global standards for the education of professional nurses. Quality of nursing education programme can be viewed as a long-term contributor to attaining quality universal health coverage in the production of qualified nurses. The quality of nursing education programme has been strongly associated with quality of curriculum, faculty and resources. These resources such as teaching materials and facilities are required to assist instructors in their delivery of nursing education (Appiah, 2020).

Nursing education is a formal and planned educational activity taking place at a university, college or school through which nursing students are facilitated, guided, assisted and given the

means to learn the art and science of nursing with the ultimate goal of producing highly competent professional practitioners. Nursing education programmes are perceived as not adequately preparing nursing students for their role in society. There is an appeal for education programmes to be more flexible and socially relevant to address the national priorities, and health and education are two such priorities. Fixed and traditional methods of learning prevent nursing students from gaining applied competence (Tsimane and Downing, 2020).

The ultimate goal of nursing education is to promote the application of theoretical knowledge in clinical practice. Limited clinical practice time affects the opportunity for students of having clinical experience with real patients. This lack of clinical practice, which prepares students for the real clinical environment, can contribute to nursing procedure errors that compromise the safety of patients (Chen et al., 2020).

The primary goals of nursing education remain the same; nurses must be prepared to meet diverse patients' needs; function as leaders and advance science that benefits patients and the capacity of health professionals to deliver safe, quality patient care. At the same time, nursing education needs to be transformed in a number of ways to prepare nursing graduates to work collaboratively and effectively with other health professionals in a complex and evolving health care system in a variety of settings. Nurses need to be able to transition smoothly from their academic preparation to a range of practice environments with an increased emphasis on community and public health settings and advanced practice registered nurses need graduate programs that can prepare them to assume their roles in primary care, acute care, long-term care and other settings, as well as specialty practices (Wood, 2011).

Nursing education as a part of medical education has developed very rapidly in 2 recent decades with regard to the number of general undergraduate and specific postgraduate courses and has caused some concerns about the quality of education. Nursing education also had faced with some challenges, including the competency of graduated nurses and quality of nursing education as well. Moreover, the nursing education is very important due to close ties with people health and should lean toward quality improvement. (Khodaveisi et al., 2012)

## 2. Materials and Methods

The study was conducted to determine the perception of faculties regarding improvement of nursing education system in Bangladesh as per following methodology.

### 2.1. Study design

This study was designed as descriptive type of cross-sectional study on nursing faculties who works at government nursing educational institutional. The study was conducted for a period of one year commencing from January to December 2020. Here data were collected in between 7<sup>th</sup> to 28<sup>th</sup> September 2020.

### 2.2. Study place and population

This study was conducted at different government nursing educational institution in eight divisions of Bangladesh. To achieve the purpose of the study eight districts from eight divisions had been chosen by random sampling technique (lottery method) by using MS Excel.

The study populations were nursing faculties worked at government nursing educational institution for at least one year in Bangladesh. All nursing faculties had been selected for study sample.

The study population consisted of nursing faculty members who had worked at government nursing educational institutions in Bangladesh for at least one year. All nursing faculty members were included in the study sample.

### 2.3. Sample size and sampling technique

Sample size was calculated by using following formula,  $n = z^2 pq / d^2$

When

$n$  = Sample size

$z$  = The reliability of coefficient at 95% confidence interval = 1.96

$p$  = 0.5 (As because there is no previous study)

$q$  =  $1 - p = 1 - 0.5 = 0.5$

$d$  = Allow error, degree of accuracy required, usually set as 5% = 0.05

So,  $n = (1.96)^2 \times 0.5 \times (1 - 0.5) / (0.05)^2$

Sample size = 384

Therefore sample size = 384

But it was possible to take interview from 195 respondents within define data collection period.

Probability type of multistage sampling technique was applied in this study. Eight districts were selected from 08 divisions and all nursing faculties from were taken from 14 government nursing educational institution.

### 2.4. Data collection instruments and pretest of the questionnaire

After preliminary observation and review of the literature a pretested semi structured questionnaire was developed in English and then translated to Bengali. The questionnaire was developed using the selected variables according to the specific objectives. The questionnaire was contained socio demographic characteristics and perception related questions regarding admission criteria, curriculum, monitoring system of regulatory authority, clinical teaching and practice, faculty development programme, student service and physical structure and equipment etc. Pre-test was done among 40 respondents to test the validity and appropriateness of the questionnaire. Then the questionnaire was finalized after necessary correction and modification based on findings of pretest.

### 2.5. Data collection technique

Data were collected by face-to-face interview conducted at 14 governments nursing educational institution in Dhaka, Khulna, Rangpur, Bogura, Habiganj, Jamalpur, Pirojpur and Cox Bazar district.

### 2.6. Data handling processing and analysis

After collection of data, they were processed, edited, coded and tabulated simultaneously avoiding irrelevant and unreliable information. The turbulent data was analyzed and described according to the aims and objectives of the study, using statistical package for social science (SPSS) version 25. The test statistics was used to analyze the data, chi square, fisher exact test has done. Level of significant was set at 0.05 at 1.96% confidence interval. The results were presented in the form of tables and graphs.

## 2.7. Ethical implication

Prior to commencement of this study ethical approval of the research protocol from the Institutional Review Board (IRB) of NIPSOM was taken.

The aim and objectives of the study along with its procedure and benefits were explained to the respondents' by easily understandable local language and then informed written consent was taken.

Each respondent was interview separately. The privacy and confidentiality of the respondents was maintained strictly. Any query regarding question and answers was to the respondents as per their demand and desire. The respondents were informed about their full freedom to participate or refuse involve in this study. No physical or emotional harm was done to the participants. No intervention or invasion procedure was performed in this study.

## 3. Results

This cross-sectional study was conducted to determine the perception of faculties regarding improvement of nursing education system in

Bangladesh. Data were collected by face-to-face interview. Collected data were cleaned and analyzed by statistical package for social science (SPSS) version 25. After analyze date following concluded result were found. Results were presented here in two separate ways; one is socio-demographic result and perception of the nursing faculties who were working in Bangladesh.

### 3.1. Socio-demographic characters of the respondents

This study studied that among the respondents highest 57.4% were in 46-55 years and lowest 0.5% was in 25-35 years. Mean age of the respondents were 48.2 years and SD  $\pm$  5.89. Where 92.80% were female and 7.20% were male and female male ratio is 1:12.93. In this study highest 71.8% were Muslim whereas 23.1% were Hindu. In this study highest 63.6% had completed MPH whereas 25.6% had MSN. The profession of the study participant was 60.5% were nursing instructor and 5.1% were on attachment as teacher. Among 195 respondents 92.8% were married. The respondents were attending in this study their service experience was highest 43.1% had experience for 0-5 years and lowest 3.1% had for 16-20 years (Table 1).

**Table1:** Distribution of the respondents by their socio demographic characteristics

Variables	Categories	n	%	Statistics
Age	25-35	1	0.5	Mean 48.2 years SD $\pm$ 5.89
	36-45	54	27.7	
	46-55	112	57.4	
	56 and above	28	14.4	
Sex	Male	14	7.2	
	Female	181	92.8	
Religion	Islam	140	71.8	
	Hindu	45	23.1	
	Christian	8	4.1	
	Buddist	2	1	
Level of education	BSc in Nursing	9	4.6	
	BSc in Public Health Nursing	2	1	
	Masters in Nursing (MSN)	50	25.6	
	Masters in Public Health (MPH)	124	63.6	
	PHD	9	4.6	
	MSc In SRHR	1	0.5	
Designation	Principal	4	2.1	
	Associate Professor	1	0.5	
	Assistant Professor	2	1	
	Lecturer	41	21	
	Nursing Instructor In-charge	4	2.1	

	Nursing Instructor	118	60.5
	Demonstrator	7	3.6
	Instructor	8	4.1
	Attachment as teacher	10	5.1
Marital Status	Married	181	92.8
	Unmarried	8	4.1
	Widow	6	3.1
Working experience	0-5	84	43.1
	6 to 10	71	36.4
	11 to 15	27	13.8
	16 to 20	6	3.1
	21 to above	7	3.6

### 3.2. Perception regarding Improvement of Nursing Education System

In this section researcher explain the perception of the respondents regarding improvement of nursing education system in Bangladesh. Out of 195 respondents 92.3% were agreed for improvement of current admission criteria and another option 93.3% were agreed to upgrade GPA and 56.4% were disagreed in admission of basic B.Sc. in nursing courses from all groups (Science, Arts, Business studies). In this study 96.9% were agreed for strengthen monitoring system of BNMC and 54.4% respondents were advised educational institution inspection should be done by BNMC twice in an academic year. Among 195 respondents 63.1% were agreed regarding multidisciplinary nursing courses is a barrier of improvement of nursing education system in Bangladesh. In another perception 65.1% were agreed single disciplinary nursing courses instead of multidisciplinary nursing courses will be helpful for improvement of Nursing education. This study reveal that 100 % respondent were agreed to establish a nursing university in our country.99% explore their opinion to start PHD course in our country 92.8% told MSN course should be start in every divisional city. Among the respondents 96.9% were agreed that course curriculum should emphasis to demonstrate competencies along with knowledge acquisition. In this study 98% respondents were agreed that nurse educator should emphasized on evidence-based teaching and 97.7% respondents were agreed foster community-based nursing education in our education system. This study reveals 97.9% respondent's has positive perception regarding development of curriculum according to the

health needs of people. Among 195 respondents 97.9% were agreed regarding curriculum should focus more on provision of courses related to patient safety and professionalism, 99.5% were agreed to the statement, regarding nursing course curriculum should designed to satisfy the requirements of international accreditation, 97.9% were agreed and regarding needs of technology-oriented curriculum, In this study we have identified 98.5% respondents agreed that continuing educational training is needed for faculty development and 1.5% were disagreed. 53.3% respondents mentioned that there is no continuing educational training available for nurse teacher in Bangladesh. In this study 37.4% mentioned that they did not attend any continuing educational training whereas 10.3% received once in a year. Among 195 respondents 96.4% were agree regarding initiation of periodic faculty appraisal (n-195). In this study among 195 respondents 83.1% advised to develop their skill by training, 14.4% were advised to change their area of practice. In this study 99.0% agreed establish a teacher's training college for nurse educators. This study reveals perception about duration of clinical practice is 72.8% has said appropriate and 26.7% said inappropriate. (Table 2).

The table 2 shows 69.2% of respondent mentioned their institution had no clinical instructor, 29.9% had clinical instructor in their own institute and this question were not applicable to 0.5% respondents because they perceived that clinical teacher is not important for learning. Among 195 respondents 89.20% IT lab with internet connectivity whereas 10.80% did not have.

**Table 2:** Distribution of the respondent's Perception regarding Improvement of Nursing Education System

Variables	Categories	Frequency (n)	Percentage (%)
Regarding needs to improve student admission criteria	Yes	180	92.3
	No	10	5.1
	No Comments	5	2.6
Regarding up gradation of Grade point average (GPA) to enter nursing courses	Yes	182	93.3
	No	10	5.1
	No Comments	3	1.5
Regarding provide scope to all groups (Science, Arts and Business studies) for applying to basic B.Sc in nursing courses	Yes	84	43.1
	No	110	56.4
	No Comments	1	0.5
Strengthen monitoring system of BNMC	Yes	189	96.9
	No	6	3.1
	Not Available	2	1
Inspection schedule of BNMC	Once	42	21.5
	Twice	106	54.4
	Thrice	41	21
	No Comments	4	2.1
Multidisciplinary nursing courses is a barrier of improvement	Yes	123	63.1
	No	71	36.4
	No Comments	1	0.5
	Not Available	46	23.6
Single disciplinary nursing courses should establish	Yes	127	65.1
	No	18	18
	No Comments	4	2.1
Masters in nursing course should start at least in each divisional city	Yes	181	92.8
	No	14	7.2
PhD programme for nurses should start in Bangladesh	Yes	93	99
	No	2	1
Needs to establishes a university for nurses	Yes	100	100
	No	0	0
Demonstrate competencies along with knowledge acquisition	Yes	189	96.9
	No	6	3.1
Evidence based teaching	Yes	192	98.5
	No	3	1.5
Effort to foster community-based nursing education	Yes	191	97.7
	No	4	2.1
Development of curriculum according to health need of the people	Yes	91	97.9
	No	4	2.1
Curriculum should focus to emerging global health issues	Yes	191	97.9
	No	3	1.5
	No Comments	1	0.5
Curriculum should focuse more patient safety	Yes	194	99.5

and professionalism	No	1	0.5
	No Comments	0	0
International accreditation	Yes	191	97.5
	No	4	2.1
	No Comments	0	0
Need of technology-oriented curriculum	Yes	191	97.9
	No	3	1.5
	No Comments	1	0.5
Continuing education training	Yes	192	98.5
	No	3	1.3
Availability of continuing educational training	Yes	86	44.1
	No	104	53.3
	No Comments	2	1
	Others	3	1.3
	Once in 6month	16	8.2
How often received continuing educational training	Once in a year	20	10.3
	Not yet got	73	37.4
	No Comments	3	1.5
	Others	16	8.2
	Initiation of periodic evaluation of faculty appraisal.	Yes	188
Taking measures on low score at performance appraisal	No	7	3.6
	Develop by training	162	83.1
	Change area of practice	28	14.4
Establish a teachers training college	No Comments	5	2.6
	Yes	193	99
	No	2	1
Student rights to represent directly on decision making	Yes	149	76.4
	No	44	22.6
	No Comments	2	1
Fair and transparent complaints and appeal process for student	Yes	145	74.4
	No	48	24.6
	No comments <sup>145</sup>	2	1
Duration of clinical practice is appropriate or inappropriate	Yes	142	72.8
	No	52	26.7
	No comments	1	0.5
Availability of clinical instructor	Not Available	1	0.5
	Yes	58	29.7
	No	135	69.2
Availability of IT lab	No comments	1	0.5
	Yes	174	89.2
	No	21	10.8
Access and utilize of IT lab	Not available	10	5.1
	Yes	174	89.2

	No	11	5.6
	Yes	182	93.3
Practice in simulation lab build up the competencies of student	No	10	5.1
	No comments	3	1.3
	Yes	96	49.2
Simulation lab facilities for student	No	97	49.7
	No comments	2	2
	Yes	72	36.9
Educator student ratio according to World health organization (WHO) guideline (n-195)	No	119	61
	No comment	2	1
	Others	2	1
Shortage of teaching staff in their institution	Yes	164	84.1
	No	31	15.9
	Yes	95	48.7
Availability of materials for community-based learning	No	97	49.7
	No comments	3	1.5
Availability of administrative and supportive staff	Yes	135	69.2
	No	60	30.8
Institution facing lack of infrastructure	Yes	57.9	113
	No	42.1	82

Those institute has IT lab among them 89.2% had access to use this. Perception regarding practice in simulation lab build up the competencies of student this percentage was 93.3 and availability and 49.2% respondents told us that they have accessibility of simulation lab facilities for student. Among 195 respondents the majorities 61.0% hadn't maintained educator-student ratio in their institution. And 84.10% respondents mentioned that they are facing lack of teaching staff and 15.90% hadn't lack of teaching staff. out of 195 respondents 49.7 % hadn't and 48.7% mentioned that they had available materials for community-based learning. In this study among 195 respondents 69.2 % mentioned that they don't have sufficient administrative and supportive staff, 30.8% mentioned they had. Among them 57.90 % were mentioned that their institution had lack of infrastructure and other mentioned they had sufficient infrastructure.

This study was conducted for educational purpose. The researcher has done some inferential statistics to find out the relationship between two variables.

A Chi test was done between age of the respondents and shortages of faculty. But here cell value is 25.0% that's why chi square test was rejected and fisher exact test is allowed. ( $p < 0.05$ ), Fisher (1,  $n = 95$ ) = 10.332,  $p = 0.010$ .

Another Chi square test was done between educational qualification of the respondents and initiation of faculty appraisal. The test result was statistically not significant. But here cell value is 66.7% that's why chi square test was rejected and fisher exact test is allowed. ( $p < 0.05$ ), Fisher (1,  $n = 195$ ) = 2.950,  $p = 1.0$

**Table 3:** Association between age of the respondents and shortages of faculty (n-195)

Designation	Categories		Statistics	P -vale
	Yes	No		
25-35 years	0	1	Fisher=10.332	p=0.010
36-45 years	18	36		
46-55 years	40	72		
56 Years to above	2	26		



**Table 4:** Association between educational qualification of the respondents and initiation of faculty appraisal (n-195)

Educational Qualification	Categories		Statistics p-value
	Yes	No	
BSc in Nursing	9	0	Fisher=2.950, p=1.0
BSc in PHN	2	0	
MSN	48	2	
MPH	119	5	
PhD	9	0	
MSc in SRHR	1	0	
Total	188 (96.4%)	7 (3.6%)	

#### 4. Discussion

The key findings of this study related to socio demographic perception of faculties regarding improvement of nursing education system in Bangladesh and conducted from January 2020 to December 2020. Data were collected through face-to-face interview from fourteen government nursing educational institutions at eight divisions in Bangladesh.

This study result revealed that among 195 respondents were in age group of 25-56 years and above the highest 57.4% respondents were in the age group of 46-55 years, mean age of the respondents were 48.2 years and SD  $\pm 5.89$ . Another study on 'Challenges for nursing education in Angola' among the respondents the majority (64.3%) of nurses were between 51 - 55 years of age group (Marchi-Alves et al., 2013).

Findings showed that 181 (92.8%) out of 195 respondents were female and 14 (7.2%) were male and the ratio between male and female is 1: 12.93 which indicates high portion of female faculties were engaged in teaching in nursing educational institution in Bangladesh. Another study on 'Transforming nursing education to strengthen health system in Malawi' among all respondents 85% (n-136) were female and 15% (n-24) were male (Bwumbwe and Mtshali, 2018).

The present study reflected the scenario of academic qualification and highest 124 (63.6%) respondents had completed masters of public health, 50 (25.6%) were masters in nursing, 9 (4.6%) were earned PhD degree, in other study on 'transforming nursing education to strengthen health system in Malawi' among all respondents

11% had bachelor degree and 4% had master degree (Bvumbwe and Mtshali, 2018).

This study revealed 60.5% of the respondents were nursing instructor, 21% were lecturer and 4.1% were instructor this finding was dissimilar with "quality of nursing education programme in the Philippines" (Appiah, 2020) The study represents the scenario of respondent according their working experience as a nurse teacher; highest 43.1% of the faculties had 0-5 years', 36.4% were 6-10 years teaching experiences in nursing education. This result was similar with Appiah, 2020. Admission criteria of nursing student depends on grade point average (GPA) and group of high school and colleges as like science, arts, business studies etc. For bachelor course student should have higher secondary passed with biology in both SSC and HSC. This admission criteria were nearly similar with admission criteria of India.

Another finding of this study showed for opening about masters in nursing (MSN) courses at least in each divisional city. It revealed 92.8% faculties were agreed to start MSN course in each divisional cities. Currently Bangladeshi nurses have the opportunity to study in MSN course at National Institute of Advanced Nursing Education and Research (NIANER) only which is situated in Dhaka.

At this time there is no opportunity for Bangladeshi nurses to perform a PhD course at government institute. This study revealed that among 195 respondents 99% were mentioned that authority should provide effort to foster the development of PhD programme. Another study on 'Policy recommendations to enhance nursing education and services among ASEAN member countries' revealed that in Philippines, Thailand,

Singapore and Malaysia currently available PhD program for nurses (Koy, 2015).

The study revealed the highest 96.9% of the respondents mentioned that nursing course curriculum should emphasize to demonstrate competencies along with knowledge acquisition. In another study 29% respondents provided qualitative data (Kopf, 2018).

In this study it's shown among 195 respondents 97.9% were mentioned that nurses' courses curriculum should designed to satisfy the requirements of international accreditation. The internationalization of nursing education, research, and practice is set to create unlimited, global opportunities for the future development of nursing (Tsai, 2020).

Study reveals highest 97.9% of respondents agreed about needs of technology-oriented nursing course curriculum. Another study on 'Technology and teaching innovations in nursing education' stated, it is hard to imagine planning a course or class without thinking about technology that might be used to engage students in learning and meet other instructional goals (Marilyn, 2015).

A guide to nursing and midwifery education standards by world health organization (WHO) setting a standard on educator student ratio for nursing education that educator: student ratio are set at the following recommended level; theory class 1:25; tutorial 1:10, clinical 1:8 and skill laboratory 1:15 as a minimum (WHO, 2015). Findings showed among 195 respondents the highest 61.0% mentioned that it was not maintain to their institution whereas 36.9% agreed about maintaining the ratio appropriately. This study also revealed that 84.1% respondents mentioned that they are facing lack of teaching staff in their institution.

In this study 89.2% respondents mentioned that their institution has provision of health information technology like IT lab and internet connectivity with students' accessibility. Another researcher Halia and other mentioned computer education is essential in Nursing education (Halia et al. 2014).

Findings of this study showed 93.3% of the respondents mentioned practice in simulation lab build up the competences of student and this study

also reveals that 49.2% respondents' institution have simulation lab facilities with student accessibility however a significant portion (49.7%) doesn't have such kind of facilities. This type of training is very valuable to equip students with a minimum of technical and non-technical skills before they use them in practice settings. (Alinier, 2006)

To explore the relationship between different variable the researcher done some inferential statistical test. This study reveals that there is significant relationship between age of the respondents and shortages of faculty, here p value is  $p=0.010$ . ( $p<0.05$ ), Another test has done between educational qualification of the respondents and initiation of faculty appraisal. This test result was not significant here p value was  $P=1.0$  ( $p>0.05$ ).

## 5. Conclusion

Nursing education has a crucial role to building a strong health system. Advanced nursing education improves the quality and magnitude of nursing education. The nursing education system needs to be improved to adapt to the change in the healthcare that effectively perform quality patient care. Capacity building of nursing faculty continual educational training is necessary, Majority portion of faculties doesn't attend pedagogy training and needs to establish teachers training college as faculty perceived. As adequate teaching staff, infrastructural facilities, materials for community-based learning, administrative and supportive staffs are the prerequisite of quality education but the findings of this study have shown shortage of these facilities to nursing educational institution. By fulfillment of these deficiencies quality education can be ensured as a result quality nursing workforce will be formed and that will help to build a strong health system of Bangladesh.

## Recommendation

Single disciplinary nursing courses either diploma or bachelor in nursing may replace multidisciplinary nursing courses. Periodic faculty assessments need to be introduced. Establish a Nursing University is essential. Provision of sufficient supportive manpower should be deployed. Infrastructural development should be in concern.

## Data availability

Data will be made available on request.

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