

# Undergraduates' experiences of the post RN BScN program, Karachi, Pakistan

Liaquat Ali<sup>1</sup>, Yasmeen Amarsi<sup>2</sup>, Ambreen Thahrani<sup>3</sup>, Khalil Ahmad<sup>4</sup>

<sup>1</sup> Assistant Clinical Instructor, Department of Nursing, PIMS Hospital, Islamabad, Pakistan

<sup>2</sup> Professor Emeritus, School of Nursing and Midwifery, Aga Khan University Hospital, Karachi, Pakistan

<sup>3</sup> Assistant Professor, School of Nursing and Midwifery, Aga Khan University Hospital, Karachi, Pakistan

<sup>4</sup> Head Nurse, Department of Nursing, PIMS Hospital, Islamabad, Pakistan

## Author's Contribution

<sup>1</sup> Conceptualization of study, wrote the paper

<sup>2</sup> Data analysis

<sup>3</sup> Contributed data and analysis tool

<sup>4</sup> Review the article

## Article Info.

Conflict of interest: Nil

Funding Sources: Nil

## Correspondence

Liaquat Ali

liaquat.ogahi123@gmail.com

## A B S T R A C T

**Introduction:** Nursing education has a major responsibility in preparing nurses for clinical practice. In Pakistan, most of the nurses are diploma qualified. Post Registered Nurse Bachelor of Science in Nursing (Post-RN BScN) program plays a substantial role in the transition from diploma to degree. Therefore, it is necessary to explore the experiences of graduates of Post-RN BScN for the successful implementation and quality improvement of the program.

**Objectives:** This study explored the strengths and weaknesses of the Post-RN BScN through experiences of the nurses who completed the BSc N program in 2015 in nursing education institutions in Karachi, Pakistan.

**Methodology:** The qualitative descriptive exploratory study was designed to explore the experiences of the nurses who completed the Post-RN BScN in 2015. Purposive sampling was used for data collection through semi-structured interviews. Data was analyzed through the content analysis method, through which sub-themes and themes emerged.

**Results:** The study participants from a public sector highlighted the strengths of program, such as integration of theoretical knowledge into clinical practice, having graduate qualified faculty, and having appropriate technological and education resources. Whereas, majority of the participants were concerned about the lack of integration of theoretical knowledge into clinical practice, under qualified faculty with unsatisfactory teaching competencies, inaccessibility to and unavailability of resources.

**Conclusion:** The study provided recommendations for stakeholders for improvement in the quality of nursing education by addressing major areas such as integration of theory into practice, competencies and shortage of the faculty members, and provision of technological and educational resources.

**Keywords:** BSc, Experiences, Post RN, Undergraduates

**Cite this article a:** Ali L, Amarsi Y, Thahrani Ahmed K. Undergraduates' experiences of the post RN BSc N program, Karachi, Pakistan. JSTMU. 2022; 5(1):15-22.

## Introduction

Pakistan is a developing country where accessibility to quality-based health care is a challenge. Quality of health care is closely associated with nursing care, its benchmarks and standards of practice. Nursing care depends on two key components, such as the level of qualification and the quality of the nursing education program.<sup>1</sup> Globally, it is observed that a baccalaureate degree is an essential prerequisite for entering the profession for practice. Nursing education comprises two

essential components: theoretical and clinical practice.<sup>2</sup> Therefore, to ensure quality, nursing institutions need to provide quality-based nursing education that produces nurses who are equipped with theoretical knowledge integrated into clinical practice.<sup>3</sup> To achieve this objective, the recruitment process of appointing nurse educators should be quality-based, ensuring professional competencies of educators for better learning of the students.<sup>4</sup>

Quality nursing education is critical for accessing opportunities for students to be knowledgeable, problem solvers, and critical thinkers.<sup>5</sup> However, one study has identified the flaws in nursing institutions, such as poor facilities for learning, incompetent nurse instructors, and outdated curriculum in educational institutions.<sup>5</sup> In Pakistan, the association of nursing education with clinical training and learning approaches is still in its infancy stage, because nursing schools are still not well prepared with updated resources.<sup>6</sup>

Nursing education in Pakistan comprises two undergraduate programs: post-RN BScN (two years) and the generic BSc Nursing program (four years). Recently, the HEC and the PNC have directed all the nursing academic institutions to discontinue the three-year nursing diploma programs from 2018 and to start a baccalaureate program for professional development.<sup>7</sup>

Most of the nurses in Pakistan are having a diploma in general nursing.<sup>7</sup> Post-RN BScN program is a significant transition from diploma to degree for diploma holder nurses. There were several aspects that motivated me to explore the experiences of the nurses who had completed their post-RN BScN program, such as challenges observed in terms of quality of nursing institutions and quality of nursing education. Therefore, it is necessary to explore and understand the challenges of the post-RN BScN program from the perspective of the graduates of the program.

### **Study Questions**

The following study questions were explored in the study:

- What are the experiences of post-RN BScN students who graduated in the year 2015?
- What are their recommendations for improving the post-RN BScN program?

---

## **Methodology**

---

The methodological process applied during the research study is following.

### **Study Design**

A qualitative descriptive exploratory study was designed.

### **Sampling**

The study population consisted of nurses who had completed their post-RN BScN degree program in 2015, at

two public and two private nursing institutions in Karachi, Pakistan. Purposive sampling of a sample size of 8-12 participants was considered appropriate for exploratory qualitative research studies.

### **Inclusion Criteria**

- Post-RN BScN graduates of 2015 working in public and private hospitals in Karachi, Pakistan.
- Participants who were proficient in speaking either Urdu or English.

### **Data Collection**

Data was collected through in-depth semi-structured interviews which focused on the participants' experiences about the post-RN BScN program. The questions were asked through a semi-structured interview guide using probes to obtain additional information. Each interview lasted for almost 20 to 30 minutes.

During the interview, field notes were taken to note the non-verbal cues of the study participants. Each interview was audio-recorded, transcribed and translated in English, coded and saved on a password-protected personal computer and a copy was kept in another data storage device as a backup.<sup>8</sup> The transcription of the interviews was cross-checked, also, the recordings of the interviews were played and listened to several times to ensure the accuracy of the data with the help of a linguistic expert.

### **Data Analysis**

Data analysis was performed following the Creswell's<sup>8</sup> guidelines of qualitative data analysis. Firstly, the interviews were transcribed, and the material was scanned and catalogued. Then, it was typed up and organized properly. Secondly, each transcription was repeatedly read for the purpose of the accuracy of the data and the transcript was matched with the audio recording. The transcription was read carefully, word by word, and every effort was made to understand the latent message in order to maintain the accuracy of the data.<sup>8</sup> Thirdly, the related data was then coded into a separate table with reference to the transcriptions of the interview. It involved separating sentences (or paragraphs) into categories and labelling those categories with the original verbose of the participant. The related data was then encoded into a separate table with reference to the transcriptions of the interview. After this, similar statements were grouped and

emerged as categories. Lastly, these categories were then grouped to form holistic themes.

**Rigor of the Study**

Rigor in this study was ensured following Lincoln and Guba’s criteria of trustworthiness. Their criteria of trustworthiness include credibility, dependability, confirmability and transferability.<sup>9</sup>

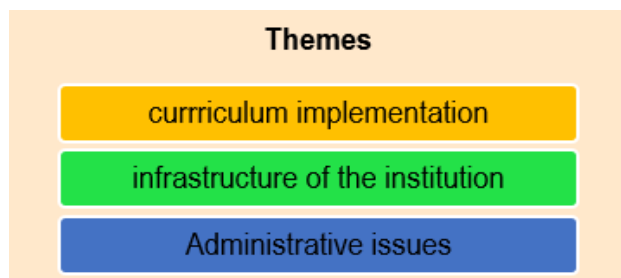
The credibility of the data was maintained through the audio recording and verbatim transcription, member checking, reflexive journaling, and notes taking during the interviews. The credibility was ensured through the prolonged interaction of the interviewer with the study participants. Dependability was enhanced by careful documentation of the research process at every stage. Confirmability of the study was ensured by debriefing and review of the research process and research findings with the research committee members. Transferability was maintained through the detailed and clear description of the research process. The detailed and clear description of the research process also ensures the authenticity of the study.

**Ethical Considerations**

The ethical procedure was followed with ethical approval from the Ethical Review Committee (ERC), and permission letters from the institution for data collection. Secondly, the confidentiality and anonymity of the participants was ensured.

**Results**

The analysis of data from the semi-structured interviews by the participants led to several categories from which three themes emerged (Figure 1). These themes include curriculum implementation, the infrastructure of the institution, and administrative issues.



**Figure 1: Themes emerged from the data**

**Table 1: Themes and Categories from the findings of the participants**

Themes			
Categories	Curriculum Implementation	Infrastructure of the Institution	Administrative Issues
		<ul style="list-style-type: none"> <li>Integration of theoretical knowledge into clinical practice</li> <li>Course Content</li> <li>Competence of the Faculty</li> <li>Teaching and Learning Resources</li> </ul>	<ul style="list-style-type: none"> <li>Infrastructure of the library</li> <li>Infrastructure of the classroom</li> </ul>

**Theme 1: Curriculum Implementation**

Curriculum implementation emerged as a major theme in the findings with the following categories: integration of theoretical knowledge and clinical practice, coarse content, orientation to the semester, faculty competence, and teaching/ learning resources.

**Integration of Theoretical Knowledge into Clinical Practice**

Most of the participants expressed that they were not able to integrate theory with practice, which they felt was a big gap in their program. A study participant from the private sector remarked, *“Whatever we learned in class, we could not apply in the clinical area.”* P-10. Similarly, another study participant from another institution reported, *“We had theoretical classes five days a week. We had a few hours of clinical practice in our schedule per week. We could not practice skills as there was no equipment on which to learn the clinical skills.”* P-12.

**Course Content**

A few of the study participants shared their concerns about the course content. A participant said, *“There must be a standardized curriculum of post-RN BScN program prescribed by the PNC for all nursing institutions rather than being provided by affiliated universities”* P-11.

The participants further expressed that the curriculum should contain courses such as Pharmacology, English and Bioethics as these are important for nurses in order to provide competent nursing care. Also, courses such as biostatistics and research should be taught by the nursing faculty rather than the non-nursing faculty.

One of the study participants from the public sector expressed, *"We did not learn pharmacology as a course, as it was not included in our BSc N curriculum."* P- 05.

Besides, the core courses, one participant from another institution also had suggestions about the improvement of the English course, and said, *"English skills of the nursing students should be improved, as there was less focus on improving English skills"* P-03. A participant from the public sector further suggested, *"Biostatistics and research should be taught by nursing faculty. The non-nursing faculty of biostatistics and biochemistry did not teach us effectively"* P-06.

### **Competence of the Faculty**

This category reflects the experiences of the study participants regarding the competencies of the faculty members who were teaching in the post-RN BScN program.

The study participants also commented on the teaching/learning methodologies and said, *"Group discussions and class participation were the main teaching strategies that were encouraged by faculty members"* P-04. While the study participants from one institution reported that their experiences of the teaching skills of the faculty were unsatisfactory. *"Teaching/ learning strategies were mainly presentations and self-directed learning without the guidance of teachers"* P- 03. Regarding the knowledge and skills of the faculty, there were almost negative views by the study participants, *"Mostly, teachers were not even aware of the content of the slides and were not competent enough to deliver"* P-06. Moreover, participants also shared their experiences about the qualification of the faculty from the perspective of their competencies. One of the study participants said, *"The faculty members with Masters of Science in nursing degrees were more competent and helped us to improve our knowledge and skills."* P-01. A study participant from the private sector suggested, *"post-RN BScN program should be taught by experienced and master prepared teachers"* P-07.

Study participants discussed issues of irregularity in classes and reported the careless behavior of faculty in the sense of teaching. A study participant complained, *"The teachers did not take classes according to schedule. The faculty did not provide guidance; they avoided clarifying our*

*confusion regarding the taught material. There was no feedback by the faculty to the students for any improvement"* P-07.

### **Teaching and Learning Resources**

The study participants also shared their concerns about the availability of teaching and learning resources. A participant from the public sector remarked, *"There was an insufficient number of teachers as compared to the subjects taught per semester."* P-05. Another participant from the private sector also commented, *"Shortage of faculty was common in our institution. There were few teachers who were overburdened with many subjects"* P-11.

Inaccessibility to the internet was another issue reported. A study participant from the public sector remarked, *"There was no internet facility for the students. Students always brought their own internet devices"* P-06. Most of the study participants shared their experiences about computer access, *"There were 10 computers for sixty students of the two batches of post-RN BScN program of year one and two; in addition, most of the time the computers remained turned off, and it was difficult for us to do without computers in the computer lab"* P-05. However, one of the study participants from the public sector expressed satisfaction by saying, *"Computers were updated and were sufficient for students. The time was monitored strictly to provide a chance to all the students"* P-01. The study participants from the same institute appreciated that they had accessibility to a library equipped with updated books and journals or magazines, and said, *"The library facility was available, with updated books and journals. We had access to current books and nursing magazines in the library,"* P-01. Only one participant, from one public sector institution, responded positively about the availability of the multimedia and printing facilities. The study participant from the public sector said, *"Multimedia and printing facilities are easily available in our institution"* P-01.

### **Theme 2: Infrastructure of the Institution**

Study participants also shared their experiences about the infrastructure of the institution which emerged as a theme.



### **Infrastructure of the library**

The infrastructure of the library was also a major issue. One of the study participants from the public sector said, *"The library was cramped and non-spacious. The environment of the library was also very congested and hot."* P-05.

### **Infrastructure of the classroom**

Regarding the infrastructure of the classroom, the study participants from the public sector shared positive experiences about the infrastructure of the classrooms, and said, *"The classroom was air-conditioned and was appropriate in size and spaces. The rooms were well ventilated, with enough chairs available for the students"* P 01. Similarly, a study participant from the private sector said, *"The classrooms were congested and could not accommodate all the students, as there were insufficient numbers of classrooms in our institution."* P-11.

### **Theme 3: Administrative Issues**

Administrative issues included the categories, such as extended duration of the semester and delay in award of the degrees, complaint systems, and attendance of the nursing students.

### **Extended Semester and Delay in the Award of the Degree**

Most of the study participants commented on the delay in semesters. A study participant expressed, *"The sessions started five months late due to improper management and lack of coordination between the institution and the affiliated university"* P -02. Likewise, a participant from the private sector said, *"The degree was awarded four months later than the expected time"* P-08. Another study participant complained about the delayed announcements of the results of the semesters. A study participant said, *"The announcement of the result was delayed usually, and the delay was due to the lengthy process and lack of coordination between the university and affiliated institution"* P-10.

### **Complaint System**

Most of the study participants had the same grievances about the disorganized complaint system in their institutions. A study participant from the public sector said, *"Complaints were not addressed regarding infrastructure,*

*teaching and learning resources and attitude of the faculty by our administration"* P-01.

### **Monitoring System**

Mostly, study participants from the private sector shared their experiences about the absenteeism of students and the monitoring system during the semester. A study participant said, *"Absence of students was rampant. Students appeared just only during the final days of the semester to appear in the exams. There was no proper monitoring system"* P-07.

---

## **Discussion**

---

### **Curriculum Implementation**

Curriculum implementation was reported to be the major area of the post-RN BScN program in which participants shared their experiences regarding theoretical integration into clinical practice, The participants shared their positive experiences from one public sector institution about their clinical experiences where they were able to apply the theoretical knowledge into clinical practice; while experiences of the study participants from one public and two private sector institutions were opposite, as there was a lack of application of theoretical knowledge into clinical practice. Most of the students reported that they could not find an opportunity to apply theoretical knowledge to clinical practice.<sup>10,11</sup> The above studies reported that students' clinical experience was inadequate; therefore, their learning was compromised.

Participants also commented that pharmacology and bioethics were not taught and may be included in their curriculum. In addition, participants expressed that the English faculty did not focus on their English language improvement. These findings were not found in the literature review.

The study participants reported that the curriculum of the program was provided by the university to which the institutions were affiliated. As there was no standard curriculum for the post-RN BScN program provided by the PNC. Literature suggests that curriculum provides academic rigor and quality assurance.<sup>12</sup> Also, the study participants from one of the public sector institutions, situated in a university had positive experiences about the competence of the faculty while the rest of the three institutions had unsatisfactory experiences The study participants who had positive experiences about the

master prepared faculty which was competent enough and delivered better. This finding is similar to a study in which nursing and midwifery students from State University in Turkey strongly supported the findings that nursing faculty members who teach subjects should be well qualified and properly trained.<sup>13</sup>

Bachelors qualified faculty members were considered as under-qualified due to having insufficient knowledge and inadequate teaching skills. Participants were concerned about the teaching-learning strategies used by faculty at their institution, as they were mainly depending on the students instead of preparing and delivering the lectures themselves. Furthermore, participants reported a weak role of faculty in facilitating their learning as there was a lack of feedback and guidance for the students' improvement. Faculty competency for teaching the assigned course was also a concern that often resulted in receiving unsatisfactory answers to the questions that arose during class; which often showed that the faculty was unprepared for teaching in the class. This is similar to the findings in the existing literature have reported in their study that the most serious factor related to students' dissatisfaction was the inadequate levels of knowledge of the nursing faculty.<sup>14</sup> Results of a study conducted on college students in Turkey corroborated with the existing findings that students were not satisfied with the performance of the nursing faculty members, as they were unprepared for the topics of the course to be taught, and gave unsatisfactory answers to students' questions during lectures, and utilized ineffective teaching methodologies during the delivery of lectures.<sup>14</sup>

The study participants also commented on learning resources such as the shortage of resources as a weakness during their undergraduate program, while the participants from one of the public sector institutions considered the availability of the resources in their institutions as the strength of the program. The shortage of faculty was commonly experienced by one public and two private sector institutions. The faculty was seen to be overburdened with too many courses; therefore, they responded unsatisfactorily to the questions asked by students and could not meet the learning requirements of the students. The World Health Organization reported that a shortage of faculty is a major challenge.<sup>15</sup>

The study participants from one public sector institution considered the availability of the educational and technological resources as a strength of their program, whereas participants' comments, from one public and two private sector institutions, were not satisfied with technological resources. Therefore, participants were not adequately facilitated during their study program due to deficiency of the resources.

A study found that a pleasant and conducive physical environment of the school, such as a new building, with a properly ventilated environment, increased the outcomes of the students' performance.<sup>16</sup> There are several studies that validate the current findings as reported by the students about infrastructure.<sup>11, 16-18</sup>

### **Infrastructure of the Institution**

The study participants expressed that the infrastructure of their institutions affected their learning. The experiences of the participants from the public sector institutions regarding the space and number of the classrooms were positive, whereas the experiences of participants from private sector institutions were negative as insufficient numbers, limited space in the classrooms and congested libraries were major issues. These classrooms were congested and could not accommodate a large number of students. And improper infrastructure and location, which disturbed the concentration of the students. The findings of the current study were similar to the findings of several studies in which students reported that they found the classrooms and their sizes inadequate for the study: and the basic needs of infrastructure as insufficient.<sup>11</sup>

### **Administrative Issues**

Exploration of nurses' experiences about the administrative issues revealed new findings in this research study, which have not been reported in the reviewed literature so far. These administrative issues included the extension in the duration of the semester for several months without following the schedule prescribed in the curriculum and delays in the issuance of the degree. These issues caused frustration to the students as they lost several job opportunities because of these delays.

Another finding was reported that there was an improper and disorganized complaint system for the students in both the private and public sectors and

therefore, their complaints regarding administrative and educational issues remained unaddressed.

The finding about the unfair practices also surfaced in the experiences of the study participants from the private sector. Unfair practices were observed by the faculty members such as favoritism and discrimination in marking criteria. Another unique finding was reported that students were given admission during the semester in the post-RN BSc N program because of no specific admission criteria. Thus, this indicated a flaw in the admission process.

A major finding was observed through the experiences of the study participants that the main campus of the university provided a positive learning environment, while participants from one public sector and two private sector institutions, which were affiliated with a university but located outside, had unsatisfactory experiences about the program. This finding was unique to the study, one not found in the literature.

---

### **Strengths**

---

1. As the study is, apparently, the first of its kind, additional similar studies need to be done in Pakistan. Results of this study revealed new information regarding administrative issues, such as poor monitoring of the students' attendance and regularity in the class. Additionally, semester delays and prolonged duration of the degree program were also reported by the study participants.
2. Poor implementation of the nursing curriculum during the undergraduate program of the post-RN BScN program was also highlighted by the study participants as a major flaw in the program, which was not identified earlier.

---

### **Limitation**

---

1. The study was conducted only on students' experiences. This study could be strengthened by obtaining faculty, administrative staff and other stakeholders' perspectives to gain in-depth knowledge of the program.
2. The reluctance of the heads of many private nursing institutions in giving permission to provide contacts for the study participants.
3. Few nursing institutions were selected for study in Karachi, while there are more than twenty nursing

institutions in Karachi that conduct post-RN BScN program.

---

### **Implication**

---

This study highlights the several implications for stakeholders in nursing as well as the health profession.

1. This study has provided a guideline for improving the competencies of the faculty members in nursing education. Therefore, the PNC will have to monitor and enhance the required competencies of faculty members and their qualifications for teaching in the post-RN BScN program.
2. The findings of this study will help the Pakistan Nursing Council in making policy by providing guidelines for reviewing, revising and implementing the standard undergraduate curriculum for the post-RN BScN program.

---

### **Recommendation**

---

Recommendations are provided based on the analysis of findings. It is recommended that:

- Monitoring quality assurance measures should be taken for the improvement of the program by the PNC, and the HEC.
- MSc N prepared faculty should teach the post-RN BScN program.
- Attendance and regularity of the nursing students should be monitored.
- Similar research could be conducted to obtain perspectives of faculty members, management of the institutions, and other stakeholders.

---

### **Conclusion**

---

This study is the first of its kind in Pakistan, which explored the experiences of the under graduated study participants regarding the post-RN BScN program, in both public and private sector institutions in Karachi, Pakistan. The study findings indicated that nursing institutions are still not well equipped with highly qualified faculty, appropriate technological and educational resources, appropriate administrative support and effective academic program. There is also a need for appropriate measures, such as integration of theoretical knowledge with clinical practice and modification in the curriculum regarding a few courses. Therefore, all nursing institutions offering the

post-RN BScN program should review their policies as per recommendations and seek ways to improve the weak areas identified in the study.

## References

1. Blaauw D, Ditlopo P, Rispel LC. Nursing education reform in South Africa—lessons from a policy analysis study. *Glob Health Action*. 2014; 7(1):26401. DOI: <https://doi.org/10.3402/gha.v7.26401>
2. Brugnolli A, Perli S, Viviani D, Saiani L. Nursing students' perceptions of tutorial strategies during clinical learning instruction: a descriptive study. *Nur Edu Today*. 2011; 31(2):152-6. DOI: <https://doi.org/10.1016/j.nedt.2010.05.008>
3. Slevin O, Hanucharunkul S. The substance of doctoral education. *Doctoral education in nursing: International perspectives*. 2005; 1-26.
4. Grainger P, Bolan C. Perceptions of nursing as a career choice of students in the Baccalaureate nursing program. *Nur Edu Today*. 2006; 26(1):38-44. DOI: <https://doi.org/10.1016/j.nedt.2005.06.004>
5. Watson J. Can an ethic of caring be maintained?. *J Adv Nurs*. 2006; 54(3):257-9. DOI: [https://doi.org/10.1111/j.1365-2648.2006.03848\\_2.x](https://doi.org/10.1111/j.1365-2648.2006.03848_2.x)
6. Khan BA, Ali F, Vazir N, Barolia R, Rehan S. Students' perceptions of clinical teaching and learning strategies: A Pakistani perspective. *Nurse Educ Today*. 2012; 32(1):85-90. DOI: <https://doi.org/10.1016/j.nedt.2011.01.016>
7. Huda SU, Alisbinati AS. Nursing education in Pakistan: challenges and trends in degree program. *Int J Nurs Edu*. 2015; 7(4):59-62. DOI: <https://doi.org/10.5958/0974-9357.2015.00194.4>
8. Creswell JW, Creswell JD. *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications; 2014.
9. Guba EG, Lincoln YS. Competing paradigms in qualitative research. *Handbook Qual Res*. 1994; 2(163-194):105.
10. Broadbent M, Moxham L, Sander T, Walker S, Dwyer T. Supporting bachelor of nursing students within the clinical environment: Perspectives of preceptors. *Nurse Educ Pract*. 2014; 14(4):403-9. DOI: <https://doi.org/10.1016/j.nepr.2013.12.003>
11. Güner P. Perceptions of final-year nursing students on the facilities, resources and quality of education provided by schools in Turkey. *Contemp Nurse*. 2015; 51(1):56-68. DOI: <https://doi.org/10.1080/10376178.2015.1040279>
12. Keating SB, editor. *Curriculum development and evaluation in nursing*. Springer Publishing Company; 2014.
13. Yazıcı S. Midwifery students' demographic characteristics and the effect of clinical education on preparation for professional life in Turkey. *Nurse Educ Pract*. 2010; 10(6):367-73. DOI: <https://doi.org/10.1016/j.nepr.2010.05.005>
14. Saydan R. ÜNİVERSİTE ÖĞRENCİLERİNİN ÖĞRETİM ELEMANLARINDAN KALİTE BEKLENTİLERİ: YÜZÜNCÜ YIL ÜNİVERSİTESİ İİBF ÖRNEĞİ. *Gazi Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*. 2008;10(1):63-79.
15. World Health Organization. *The world health report 2006: working together for health*. World Health Organization; 2006.
16. Bullock C. The relationship between school building conditions and student achievement at the middle school level in the Commonwealth of Virginia (Doctoral dissertation, Virginia Tech).
17. Gul R, Cassum S, Ahmad A, Khan S, Saeed T, Parpio Y. Enhancement of critical thinking in curriculum design and delivery: A randomized controlled trial for educators. *Procedia Soc Behav Sci*. 2010; 2(2):3219-25. DOI: <https://doi.org/10.1016/j.sbspro.2010.03.491>
18. Mumtaz S. Factors affecting teachers' use of information and communications technology: a review of the literature. *J Educ Technol Teacher Educ*. 2000; 9(3):319-42. DOI: <https://doi.org/10.1080/14759390002000096>