The educational environment of the undergraduate nursing course from the student perspective

O ambiente educacional do curso de graduação em enfermagem na perspectiva dos estudantes

El ambiente educativo del curso de graduación en enfermería desde la perspectiva de los estudiantes

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ABSTRACT

Objective: Evaluate the educational environment of the School of Nursing at the University of São Paulo from the student perspective. Method: Quantitative approach with exploratory design. The 176 students who participated in the study answered questions on a Likert scale from 1 to 5 to evaluate the educational environment. The data underwent an exploratory factor analysis and inferential statistical tests, while the reliability of the instrument was verified by Cronbach's Alpha. Results: The dimensionality analysis established four factors: support for hands-on learning, with a mean score of 3.64; attitudes during learning, mean score of 2.92; learning atmosphere, mean 3.58; and learning weaknesses, mean 3.04. Conclusion: The most favorable factor of the environment was support for learning. The attitudinal competencies received lower scores, suggesting the need to strengthen these aspects during the undergraduate course.

DESCRIPTORS

Nursing Education; Higher Education; Undergraduate Programs in Nursing; Learning; Educational Evaluation.

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INTRODUCTION

During the formation, students progressively establish a particular relationship with the school and create spaces of relationships based on experiences with their peers. In this way students can experience and reflect on new learning possibilities that are not confined to the classroom, especially when they realize that they belong to the school and their ideas are recognized by their peers and teachers.

The purpose of higher education is to promote multi-dimensional development, guiding students toward autonomy and encouraging them to adapt to constant change in their professional and personal lives. This is directly related to the educational environment, showing its relevance in the teaching-learning process.

The educational environment presupposes support for students and actions that encourage social interaction and interpersonal relationships, both inside and outside institution, and offering feedback to students[1]. It is defined as a set of factors that influence learning, such as the physical and material structure, interpersonal relationships, teaching methodology, and ethical and social dimensions. This influence transcends the teaching-learning process while integrating constituent elements to favor the formation of critical and reflective professionals, recognizing students as active subjects with experiences that cannot be ignored[2].

It is essential to evaluate the educational environment, because of its impact on the teaching-learning process, and therefore on the quality of the work developed by undergraduates and graduates[3]. Given its importance, it is essential to analyze educational environment variables by means of a systematized evaluation in order to identify the origin of actual or potential problems.

Some practical evaluation aspects of the educational environment in the health undergraduate courses should be respected in order to integrate good educational practices, such as the peculiarities of each educational context, with different aspects to be measured, the need for specific assessment for each training area in health, and the psycho-metric validation of the instruments used[6].

Considering the significant influence of the educational environment in the teaching-learning process, this study aimed to evaluate the educational environment of the School of Nursing at the University of São Paulo (EEUSP) from the student perspective.

METHOD

This was a quantitative study with an exploratory design carried out at EEUSP, which offers undergraduate, graduate, and university extension course to train nurses, teachers, researchers, and specialists in all areas of Nursing.

The Bachelor’s Degree in Nursing takes four years, being divided into eight semesters, and is offered full-time with 37 required courses offered by four departments: Medical-Surgical Nursing, Vocational Guidance, Community & Maternal-Infant Health, and Psychiatric Nursing.

It also depends on the participation of other departments of the university.

Starting in 2010, the course adopted a new Political and Pedagogical Project whose central theme is nursing care; it is organized into three cycles: the cycle of needs; the cycle of care; and the cycle of professional practice. These cycles are linked to integrative axes and organized into semesters. The relationship between theory and practice is emphasized in order to enable students to achieve greater integration of knowledge through practical activities under faculty mentorship. “The political and pedagogical proposal of the Course focuses on the nurse’s critical and reflective training”[a].

The study population consisted of the estimated 320 undergraduate students from EEUSP who were approached during the first half of December 2012 in the classrooms after authorization from the teachers responsible for the course, and also on the premises of the School, in order to provide an opportunity for all undergraduates to participate. Given the opportunity, all necessary guidelines regarding the objectives and the voluntary nature of the survey were followed. Those who agreed to participate received the data collection instrument and two copies of a Written Consent Form. A total of 176 (55%) students participated in the study by answering the questionnaire.

The data collection tool used a Likert scale developed by Messas[5] about the concept sand constituent elements of the educational environment. This instrument was submitted to a semantic and content validation performed by 12 experts using the Delphi Technique for consensus. In addition to the needed adjustments, the authors chose to exclude from the instrument the items related to evaluating the physical and material structure because, although they are important constituent elements of the educational environment, other instruments are used for this purpose.

The questionnaire was composed of 47 items evaluating the educational environment using a 5-point Likert scale with the following responses: Strongly Disagree, Disagree, Neither Agree Nor Disagree, Agree, and Strongly Agree.

This instrument was also used to collect information on the respondents: age, gender, course semester at the time of data collection, and year of enrolling in the course. These results are presented descriptively.

Messas[2] points out that six items of the instrument were extracted in full from the instrument of Mira et al. (2011)[5], which are items 3, 5, 18, 19, 28, and 32.

Initially, the responses Strongly Disagree and Disagree, and Agree and Strongly Agree, were combined; thus, the results are presented at three levels of agreement.

In a preliminary evaluation of the internal structure of the instrument, since the number of participants did not reach the critical limit of 200 cases for carrying out exploratory factor analyses[6], the relevance of grouping the items of the instrument into factors was tested.

The results from parallel analyses demonstrated the feasibility of extracting up to five factors, so factorial analyses were performed by the exploratory structural equation modeling (ESEM) using the software Mplus 7. The solutions were tested with the WLSMV estimator with a geomin oblique rotation. Five solutions and four factors were tested; the four factors (CFI=0.91; RMSEA=0.04 [IC 90%=0.035 to 0.049; Pclose=0.978]; SRMR=0.06) were the most suitable for the empirical data and were more interpretable and more consistent.

The criteria adopted for maintaining items in the factor were as follows: theoretical reasonableness or degree of interpretability of the groupings; significant load factor equal to or greater than 0.30, which excluded five items on the instrument (18, 24, 27, 30, and 44); and item-total correlation index ($r_{it}$) equal to or greater than 0.30, particularly in those cases where deleting the item contributed to an increase in the internal consistency of the factor, which resulted in the deletion of four items (3, 33, 34, and 43). In factor 4, although the index $r_{it}$ was below 0.30 for items 15 and 35, their exclusion did not contribute to increasing the factor's consistency, so that is why they were kept. Items 29, 16, 27, and 7, whose saturations were negative, were inverted for calculating the factor scores and for the internal consistency indexes.

From the point of view of internal consistency of the factors, and because it was an exploratory study, we adopted the recommendation of the value of 0.60 for the Cronbach's alpha index as the tolerable lower limit. The criteria adopted for maintaining items in the factor were as follows: theoretical reasonableness or degree of interpretability of the groupings; significant load factor equal to or greater than 0.30, which excluded five items on the instrument (18, 24, 27, 30, and 44); and item-total correlation index ($r_{it}$) equal to or greater than 0.30, particularly in those cases where deleting the item contributed to an increase in the internal consistency of the factor, which resulted in the deletion of four items (3, 33, 34, and 43). In factor 4, although the index $r_{it}$ was below 0.30 for items 15 and 35, their exclusion did not contribute to increasing the factor's consistency, so that is why they were kept. Items 29, 16, 27, and 7, whose saturations were negative, were inverted for calculating the factor scores and for the internal consistency indexes.

The descriptive analysis of the factors showed that the higher the score, the greater the congruity with the content expressed by the factor.

Some tests were used to check the existence of associations between the descriptive variables for the students and the scores obtained in the factors. In particular, we investigated the differences in the variables year of entry and current semester, since the new Political and Pedagogical Project of EEUSP was started in 2010.

The research project was approved by the Research Ethics Committee under protocol 39250 of June 19, 2012, CAAE 01273012.2.0000.5392 and by the EEUSP Research Commission.

RESULTS

Most of the students were female (91.2%), between 18 and 44 years old (M=22.12, SD=3.31, with most being under 25 [90.5%]). The students had entered EEUSP between 2008 and 2012, with the following distribution: 2.3% in 2008, 28.7% in 2009, 20.5% in 2010, 18.7% in 2011, and 29.8 in 2012. The distribution by current semester was: 29.3% in second semester, 19.8% in fourth, 22.2% in sixth, and 28.7% in eighth.

The analyses of dimensionality and scale precision resulted in the grouping of the items into four factors: 1. Support for hands-on learning; 2. Attitudes during learning; 3. Learning atmosphere; and 4. Learning weaknesses. The factors are listed below with the respective items, load factors (LF), item-total correlations ($r_{it}$), and percentage frequency of the level of agreement (D=Disagreement, NDNA=Neither disagreement nor agreement, A=Agreement) per item.

Factor 1. Support for hands-on learning with a Cronbach's Alpha of 0.68 grouped five items related to the monitoring and supervision of students in practical training (Table 1).

Factor 2. Attitudes during learning, Cronbach's Alpha of 0.76, was made up of eight items, six of which referred directly to human relations and ethical aspects. The other two were related to performance evaluation and mentoring for students (Table 2).

Factor 3. Learning atmosphere, Cronbach's Alpha 0.84, was the biggest factor with 15 items about the School environment showing instructional variables and, above all, more subjective attributes transmitted in interactions between individuals (Table 3).

Factor 4 - Learning weaknesses – with Cronbach's Alpha of 0.69, had 10 items related to vocational education and training strategies that, except for two items, represented unfavorable aspects of the teaching-learning process (Table 4).

Table 5 presents the descriptive data and dispersion for the four factors.

### Table 1 - Distribution of Factor 1 items. Support for hands-on learning per load factor and relative frequency of agreement - São Paulo, São Paulo, Brazil, 2013

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>LF</th>
<th>$r_{it}$</th>
<th>D</th>
<th>NDNA</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>I feel confident about the supervision of the teachers.</td>
<td>0.65</td>
<td>0.53</td>
<td>13.8</td>
<td>18.9</td>
<td>67.4</td>
</tr>
<tr>
<td>5</td>
<td>I have been encouraged to participate in work dynamics in the fields of practice.</td>
<td>0.64</td>
<td>0.45</td>
<td>6.3</td>
<td>13.7</td>
<td>80.0</td>
</tr>
<tr>
<td>9</td>
<td>The fields have provided conditions for carrying out the activities planned.</td>
<td>0.45</td>
<td>0.45</td>
<td>15.2</td>
<td>16.9</td>
<td>68.0</td>
</tr>
<tr>
<td>1</td>
<td>Teachers were present whenever I needed them.</td>
<td>0.42</td>
<td>0.42</td>
<td>24.4</td>
<td>20.3</td>
<td>55.2</td>
</tr>
<tr>
<td>22</td>
<td>I feel confident about the supervision of the nurses.</td>
<td>0.31</td>
<td>0.34</td>
<td>10.7</td>
<td>31.8</td>
<td>56.8</td>
</tr>
</tbody>
</table>
### Table 2 - Distribution of Factor 2 items. Attitudes during learning per load factor and relative frequency of agreement - São Paulo, São Paulo, Brazil, 2013

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>LF</th>
<th>ru</th>
<th>D</th>
<th>NDNA</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>I have witnessed the occurrence of situations that disregard ethical aspects of professional practice.</td>
<td>0.65</td>
<td>0.55</td>
<td>29.6</td>
<td>18.3</td>
<td>52.0</td>
</tr>
<tr>
<td>23</td>
<td>I notice unethical actions by some teachers.</td>
<td>0.58</td>
<td>0.54</td>
<td>31.8</td>
<td>18.2</td>
<td>50.0</td>
</tr>
<tr>
<td>2</td>
<td>I have not always been received very well by the nursing staff in the fields of practice.</td>
<td>0.49</td>
<td>0.36</td>
<td>49.7</td>
<td>8.0</td>
<td>42.3</td>
</tr>
<tr>
<td>8</td>
<td>Teachers do not listen to the students.</td>
<td>0.45</td>
<td>0.52</td>
<td>47.4</td>
<td>32.0</td>
<td>20.6</td>
</tr>
<tr>
<td>12</td>
<td>Teachers get irritated with the behavior of students.</td>
<td>0.44</td>
<td>0.49</td>
<td>32.0</td>
<td>32.6</td>
<td>35.5</td>
</tr>
<tr>
<td>29</td>
<td>The opinion of the students is considered in order to improve the teaching process.</td>
<td>-0.43</td>
<td>0.53</td>
<td>25.7</td>
<td>22.3</td>
<td>52.0</td>
</tr>
<tr>
<td>13</td>
<td>Student performance evaluation does not occur continuously.</td>
<td>0.40</td>
<td>0.35</td>
<td>35.4</td>
<td>24.0</td>
<td>40.6</td>
</tr>
<tr>
<td>16</td>
<td>Mentoring offers the support that students need.</td>
<td>-0.35</td>
<td>0.39</td>
<td>20.0</td>
<td>24.6</td>
<td>55.4</td>
</tr>
</tbody>
</table>

### Table 3 - Distribution of Factor 3 items. Learning atmosphere per load factor and relative frequency of agreement. São Paulo, São Paulo, Brazil, 2013

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>LF</th>
<th>ru</th>
<th>D</th>
<th>NDNA</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>42</td>
<td>The learning environment is stimulating.</td>
<td>0.77</td>
<td>0.64</td>
<td>22.8</td>
<td>34.9</td>
<td>42.3</td>
</tr>
<tr>
<td>37</td>
<td>This course is meeting my expectations.</td>
<td>0.70</td>
<td>0.57</td>
<td>17.2</td>
<td>19.0</td>
<td>63.8</td>
</tr>
<tr>
<td>41</td>
<td>The people of this School are caring.</td>
<td>0.69</td>
<td>0.56</td>
<td>12.6</td>
<td>33.1</td>
<td>54.3</td>
</tr>
<tr>
<td>46</td>
<td>This school is welcoming.</td>
<td>0.66</td>
<td>0.52</td>
<td>9.2</td>
<td>22.9</td>
<td>68.0</td>
</tr>
<tr>
<td>47</td>
<td>Teachers help me find learning opportunities.</td>
<td>0.63</td>
<td>0.58</td>
<td>6.3</td>
<td>28.0</td>
<td>65.7</td>
</tr>
<tr>
<td>36</td>
<td>The reflections promoted in the course have been important in my training.</td>
<td>0.61</td>
<td>0.48</td>
<td>5.2</td>
<td>14.9</td>
<td>79.9</td>
</tr>
<tr>
<td>32</td>
<td>The knowledge acquired in previous semesters has facilitated my development in the current semester.</td>
<td>0.60</td>
<td>0.41</td>
<td>4.5</td>
<td>10.9</td>
<td>84.6</td>
</tr>
<tr>
<td>40</td>
<td>I have been able to discuss the ethical and legal aspects related to the professional practice.</td>
<td>0.56</td>
<td>0.50</td>
<td>18.2</td>
<td>32.0</td>
<td>49.7</td>
</tr>
<tr>
<td>25</td>
<td>The course has provided gradual development of my professional identity.</td>
<td>0.53</td>
<td>0.51</td>
<td>2.3</td>
<td>8.5</td>
<td>89.3</td>
</tr>
<tr>
<td>39</td>
<td>I have good interactions with the teachers.</td>
<td>0.53</td>
<td>0.45</td>
<td>6.8</td>
<td>24.1</td>
<td>69.0</td>
</tr>
<tr>
<td>38</td>
<td>I feel comfortable giving my views during the theoretical and practical classes.</td>
<td>0.52</td>
<td>0.46</td>
<td>25.2</td>
<td>20.6</td>
<td>54.2</td>
</tr>
<tr>
<td>11</td>
<td>The classes are held in a pleasant atmosphere.</td>
<td>0.40</td>
<td>0.36</td>
<td>25.3</td>
<td>31.0</td>
<td>43.7</td>
</tr>
<tr>
<td>31</td>
<td>Teachers and students respect one another.</td>
<td>0.40</td>
<td>0.48</td>
<td>9.1</td>
<td>19.4</td>
<td>71.4</td>
</tr>
<tr>
<td>28</td>
<td>The information given by the School's employees is confusing.</td>
<td>-0.33</td>
<td>0.37</td>
<td>41.5</td>
<td>26.1</td>
<td>32.4</td>
</tr>
<tr>
<td>10</td>
<td>I have good contact with classmates from other semesters.</td>
<td>0.32</td>
<td>0.31</td>
<td>23.6</td>
<td>17.8</td>
<td>58.7</td>
</tr>
</tbody>
</table>

### Table 4 - Distribution of Factor 4 items. Learning weaknesses per load factor and relative frequency of agreement - São Paulo, São Paulo, Brazil, 2013

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>LF</th>
<th>ru</th>
<th>D</th>
<th>NDNA</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>The content of the courses has been comprehended by memorization.</td>
<td>0.56</td>
<td>0.39</td>
<td>15.9</td>
<td>33.0</td>
<td>51.1</td>
</tr>
<tr>
<td>45</td>
<td>I don't feel I have leisure time due to fatigue.</td>
<td>0.51</td>
<td>0.34</td>
<td>21.1</td>
<td>16.6</td>
<td>62.2</td>
</tr>
<tr>
<td>26</td>
<td>Sometimes I need to carry out activities for which I do not feel prepared.</td>
<td>0.44</td>
<td>0.33</td>
<td>14.7</td>
<td>17.6</td>
<td>67.6</td>
</tr>
<tr>
<td>19</td>
<td>I would like to have more access to the School's labs.</td>
<td>0.44</td>
<td>0.30</td>
<td>4.0</td>
<td>13.6</td>
<td>82.4</td>
</tr>
<tr>
<td>15</td>
<td>Many classes are taught exclusively with slide presentation.</td>
<td>0.43</td>
<td>0.28</td>
<td>9.2</td>
<td>6.3</td>
<td>84.5</td>
</tr>
<tr>
<td>35</td>
<td>I am not able to make friends in this School.</td>
<td>0.41</td>
<td>0.29</td>
<td>90.0</td>
<td>4.0</td>
<td>5.2</td>
</tr>
<tr>
<td>7</td>
<td>The objectives proposed for my professional training are clear.</td>
<td>-0.39</td>
<td>0.40</td>
<td>12.7</td>
<td>15.6</td>
<td>71.7</td>
</tr>
<tr>
<td>14</td>
<td>Sometimes I don't understand why they are teaching certain subjects or techniques.</td>
<td>0.39</td>
<td>0.41</td>
<td>29.5</td>
<td>11.4</td>
<td>59.1</td>
</tr>
<tr>
<td>17</td>
<td>I still don't know what the nurse's role is.</td>
<td>0.38</td>
<td>0.42</td>
<td>85.7</td>
<td>8.0</td>
<td>6.3</td>
</tr>
<tr>
<td>21</td>
<td>Initiative and decision-making are not encouraged by the teachers.</td>
<td>0.37</td>
<td>0.33</td>
<td>63.0</td>
<td>21.0</td>
<td>16.0</td>
</tr>
</tbody>
</table>
We noticed that the highest score went to Factor 1, Support for hands-on learning, and the lowest was Factor 2, Attitudes during learning.

There was no significant difference in any of the factors when comparing the factor scores by gender.

A positive and significant relationship (p<0.01) was found between the age of the participants and the score on Factor 2, Attitudes during learning (r=0.29), which means that the greater the age, the greater the probability of the participants agreeing on the items of this factor.

The ANOVA results indicated significant differences in the levels of all the scores when the comparing variable was the current semester: Factor 1 \( F(3.166)=5.166, p≤0.01 \); Factor 2 \( F(3.166)=22.014, p≤0.01 \); Factor 3 \( F(3.166)=4.348, p≤0.01 \), and Factor 4 \( F(3.166)=4.243, p≤0.01 \).

Tukey’s HSD test formed two subgroups for Factor 1, Support for hands-on learning; and the sixth semester group had significantly lower averages compared to the other groups.

In Factor 2, Attitudes during learning, the second semester group had significantly lower averages compared to the other groups. The sixth semester group obtained the highest scores in this factor, differing significantly from the other groups.

In Factor 3, Learning atmosphere, the sixth semester group had significantly lower averages compared to the other groups. The eighth semester group obtained the highest scores in this factor, differing significantly from the other groups.

In Factor 4, Learning weaknesses, the eighth semester group had significantly lower averages compared to the other groups while the sixth semester group obtained the highest scores in this factor, differing significantly from the other groups.

For the variable year of entry, the ANOVA results indicated significant differences in scores on three factors: Factor 1 \( F(3.166)=17.889, p≤0.001 \); Factor 2 \( F(3.166)=2.813, p≤0.05 \); and Factor 4 \( F(4.166)=2.376, p≤0.05 \). Factor 1, Support for hands-on learning, did not differ significantly in any group \( F(4.166)=2.168, p≤0.07 \).

The results for Factor 2, Attitudes during learning were as follows: freshmen in 2008 (M=3.59) had no significant difference with others; freshmen in 2009 (M=3.04) had significantly lower scores compared to the 2010 freshmen (M=3.46); freshmen in 2010 (M=3.46) had significantly higher averages compared to the 2009 freshmen (M=3.04), 2011 (M=2.79), and 2012 (M=2.46); freshmen in 2011 (M=2.79) had significantly lower scores compared to the 2010 freshmen (M=3.46); freshmen in 2012 (M=2.46) had significantly lower averages compared to students who entered in 2009 (M=3.04) and 2010 (M=3.46).

For Factor 3, Learning atmosphere, the 2009 freshmen (M=3.76) had significantly higher scores compared to the 2010 freshmen (M=3.44). This difference, although significant, did not produce a division of students into subgroups on Tukey’s test. There were no other significant differences between the other groups.

In Factor 4, Learning weaknesses, the 2010 freshmen (M=3.21) had significantly higher scores compared to the 2009 freshmen (M=2.90). This difference, although significant, did not produce a division of students into subgroups on Tukey’s test. There were no other significant differences between the other groups.

**DISCUSSION**

The study results showed that regarding factors 1 and 3, Support for hands-on learning and Learning atmosphere the scores were higher when compared to factors 2 and 4, Attitudes during learning and Learning weaknesses. Since the four factors relate to the educational environment construct, it is understood that these are interdependent processes and they will therefore be discussed in an integrated and coordinated manner.

Teaching in the health area, including nursing, has unique characteristics, especially since it develops in conjunction with health services and therefore with the users of these services and their needs. Thus, health education takes place not only in classrooms through interactions between teachers and students and the use of different teaching strategies, but also in scenarios of professional practice in each area, in interactions with teachers, students, and professionals of the services, and also with the users assisted. Both forms of education are necessary and complement each other, providing better learning opportunities for students.

The scenarios of practice are essential for healthcare students because they can provide experience in professional practice, observation of models, practices in action, and interactions with teams of professionals and the users assisted. This experience affects what is learned in classrooms and the response of students because it creates opportunities for reflection on all that is observed and developed by the students in these spaces.

In Brazilian higher education, the national curriculum guidelines established for nursing courses guide the curricular organization toward training that meets social health needs and ensures “theoretical and practical activi-
ties present from the beginning of the course, permeating the entire training of the Nurse in an integrated and interdisciplinary way"[15].

The practice scenarios, however, are complex because they are expressed in the reality of services, with all the tensions, contradictions, and unpredictability of situations arising from interactions between the subjects involved in the process. Because of this, it is necessary to ensure support for students by the teachers and teams of health professionals involved, so that learning in these locations can reach its full potential in the students' professional development. In the environment studied, this support was confirmed by the students, especially with respect to supervision, revealing that the teachers were present and stimulated the students to participate in work dynamics in the field, and in turn ensured the conditions for the development of the actions proposed, bringing the students feelings of confidence. These findings reveal the attention of the School in ensuring the support that students need in practical scenarios.

The confidence felt by students under the supervision given by nurses corroborates the results of another study[5], which also concluded that students felt that the nurses were confident in carrying out practical teaching.

The need for having greater understanding of student perceptions of the clinical learning environment was found in an Australian study[12] on bachelor's degree courses in the area of health care; the results showed that the climate of learning in practical teaching situations, called clinical learning in the study, is essential for the professional development of students. This requires continuous and ongoing communication between the students, teachers, and health professionals involved in the process.

Another study carried out with nursing students from nine countries in Western Europe showed that the interactions of students and the relationships between the teachers, students, and nurses involved in practical teaching in the field favored the professional development of students. Furthermore, longer duration of the activities in the field makes it possible to build more individualized student-teacher-nurse relationships that are focused on the needs of undergraduate students, which also allows them to develop ties with users and get to know the organizational structure of the services[16].

This brings up the fact that individual differences may arise in this academic environment in various forms, behaviors, attitudes, interests, and opinions, and it should be pointed out that a positive relationship between teachers and students has a strong correlation with student achievement[17-18].

Stimulation of student initiative and decisions by teachers, consideration by teachers of students' opinions, and the confidence that students feel about presenting their views are essential factors when there is a political and pedagogical project focused on meaningful learning, as it assumes active students. These factors also become fundamental to learning because they grow out of real situations or those that approach reality, enabling integration between cycles, between disciplines, and between the biopsychosocial dimensions, and because they prepare students to work in groups[19].

Student-teacher interactions are important for training, along with the availability of teachers to listen to students. Teachers are one of the most important subjects, are present in the relationships of students, and can help them in some situations by having an open and listening perspective, as well as by building democratic and warm interpersonal relationships inside and outside classrooms. This suggests that teachers must have not only expertise in health care knowledge, but also a humanized attitude[20].

Similarly, the presence of teachers and their appreciation of what students say, do, and feel strengthens relationships and promotes bonds of trust[21], which is essential for learning.

From another point of view, relationships based on respect, dialogue, and discussion of the ethical and legal dimension, as that takes place in the School, refers to a process of ethical training, understood as an educational action based on the concreteness of the subjects and centered on the reality where they are located, in which behaviors are not imposed, but where dialogue, understanding, respect, freedom, and caring are strengthened. Because of this, the process should be related to ethical concepts and situations experienced by the subjects, otherwise the notions passed on become abstract and insufficient for the full exercise of ethical values[22].

In this study, the variables of the learning atmosphere were evaluated, such as: the learning environment is considered pleasant and welcoming; relationships with teachers are good, as expressed in good interactions with them, possibilities for reflection and discussion, and the respect established between teachers and students. However, the students also emphasize the need to improve the instruction provided by technical and administrative professionals.

Good relationships between students and teachers have been highlighted in some studies[12,23], which showed a direct link between good relationships and students' professional development.

One important characteristic of the learning atmosphere is providing students with contact with tools and strategies that help them deal with ethical problems, exploring these activities both in the classroom and also during practical teaching in the field, as evidenced in a study with college nursing students in Australia[24].

Similarly, the use of participatory methodologies in teaching and the adoption of different strategies, such as games, to motivate student learning are facilitated by teacher-student relationships in innovative proposals and students' knowledge-building process, which requires mediation skills on the part of teachers[23].

Nursing education, however, still relies on traditional education with centrality of teachers and prevalence of expository and demonstration methodologies with a focus on memorization and technical skills. There is little coordination between

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the different curricular components, and teacher training is
needed to develop innovative teaching proposals\(^{(25)}\).

Recognition of the importance of teacher training for
the development of innovative curriculum proposals was
also identified in a study in a Brazilian public university
in the state of São Paulo\(^{(26)}\), which highlighted that there
are differences in the results achieved depending on the
diversity of teacher education. The study also showed that
students value innovative proposals in education, such as
integrating the different areas of nursing knowledge.

In addition to teacher training, a Brazilian study\(^{(27)}\) on
the use of participatory strategies in teaching nursing ad-
ministration pointed out that to adopt these strategies in
the teaching-learning process, it is necessary to consider
factors such as time, motivation, dedication, communication,
and above all changes in teachers’ work process.

The use of active methodologies in teaching nursing
care in Brazil occurs mostly in isolated activities in course-
sor other teaching and assistance activities. In general, in-
novative experiences are motivated by individuals and not
by institutions. Support is lacking in the spheres of organ-
ization, teaching, and assistance in the implementation of
active methodologies. It is therefore necessary to assess the
graduates of consolidated curriculum courses with innovative
methodologies to understand the impact of this type of
training on professional practice\(^{(28)}\).

The adoption of active methodologies appears to be
one weakness in the educational environment in the School
being evaluated because, in general, teaching strategies are
based on memorization and transmission of knowledge,
which may explain students’ lack of understanding regard-
ing the content covered for their professional training and
the lack of clarity of the nurse’s role.

The teaching-learning process needs to break par-
digms in order to break free of traditional training and
make learning meaningful. This intention is reinforced in
the nurse training profile defined in the National Cur-
riculum Guidelines, professionals who are generalist, hu-
manist, critical, and reflective, with scientific and intellec-
tual rigor based on ethical principles, while gaining the
knowledge required in the following skills and competen-
cies: attention to health, decision making, communication,
leadership, administration and management, and con-
tinuing education\(^{(15)}\).

Currently, the movement towards this new construc-
tion of knowledge is counter-hegemonic, since teaching
and health care practices remain fragmented and root-
ed in the traditional model. Furthermore, the change is
paradigmatic, with an explicit need to incorporate new
technologies that address the integrity, diversity, glo-
balization, and uncertainty of the daily work reality of
health professionals\(^{(19)}\).

The teaching-learning process, due to its complex-
ity and scope, involves a number of factors that are de-
cisive for the formation of qualified professionals. The
role of educational institutions is to provide academics
with a constellation of knowledge and skills that is
consistent with their role when they enter the labor
market. Institutions also have a responsibility to awak-
en teachers to the importance of interacting with stu-
dents, so as to be not only transmitters of knowledge,
but also facilitators and active cooperators in preparing
students for their work\(^{(29)}\).

For the educational environment to favor the
教学-learning process, it is necessary that educational
institutions provide adequate conditions for the integration
of students and teachers into scenarios of practice by es-
establishing relationship bonds that can be incorporated into
active methodologies in order to transcend the restructur-
ing of the. This can be the first step, since it proposes a new
policy. Still, it is essential to prepare both teachers and stu-
dents, because in some situations students are also resistant
to new teaching strategies.

We noticed in this assessment some aspects that in-
clude the principles of meaningful learning and active
methodology, when teachers provide students with learning
opportunities, thus taking on a role of facilitators in the
process. In this sense, this study suggests that EEUSP has
been making progress in these attributes.

In this study, students who are now in their sixth se-
semester, which means that they are students who entered
the School under regular curriculum development, cor-
respond to the first class under the new Political and Pedagogical Project. Although it was not the intention
to compare the curricula, it is interesting to note that
it is precisely on these two variables that these students
stood out from the other groups, suggesting a relationship
between the change in the curriculum proposal and the
development of the educational environment from the
perspective of students, who are the subjects sensitive to
the changes and curricular restructuring.

CONCLUSION

The knowledge generated in this study, for which no
research was found in the Brazilian literature on Nurs-
ing, offers to other higher education institutions a new
alternative for evaluating their educational environment,
which has such a large influence on the results of the
教学-learning process.

The most favorable factor of the environment from the
students’ perspective was Support for learning. The ele-
ments that make up the educational environment are in
line with the Political and Pedagogical Project, such as:
valuing students’ opinions so as to improve the teaching
process; promotion of learning opportunities by teachers;
students’ confidence in the supervision of their teachers;
encouragement for students to participate in the work dy-
namics in the fields of practice; and interactions between
teachers and students.

With regard to teaching strategies, however, the sup-
port offered to students demonstrated that there is still
progress to be made with regard to the active methodolo-
gies, such as is called for in the pedagogical project, because
lectures using slides are still a predominant part of learn-
ing, resulting in memorization.
Vocational training has developed gradually and students know the role of the nurse, are aware of the objectives proposed for their professional training, and indicate that the course meets their expectations. Still, some students do not understand why they are learning certain subjects or techniques, which refers to the range of knowledge that the profession requires for the formation of a generalist nurse.

Attitudinal competencies received lower scores, suggesting a need to strengthen these aspects in the undergraduate courses, although there is respect for students and discussion of ethical problems that arise.

Finally, we emphasize that the instrument we used should be applied again, since the number of respondents in this study was lower than recommended for checking consistency and internal structure and for doing a confirmatory factor analysis, which can be pointed out as a limitation of this study. This instrument was incorporated into the rating system of the Political and Pedagogical Project of EEUSP and was included in a new research project that will expand the study sites and population, which will allow reevaluation of its psychometric properties.


