The Correlation between Humanistic Care Ability and Perceived Care Behavior of Nursing Students

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Abstract: The overall level of humanistic care ability of domestic nursing students needs to be improved presently. In order to understand the current situation of nursing students' humanistic care and analyze the influencing factors of nursing students' humanistic care ability, this study aims to explore the perceived care behavior, humanistic care ability of nursing students and their mutual relationship after investigation and research, and to build a relationship model of influencing factors of nursing students' humanistic care ability based on the comprehensive effect of internal and external factors, and multiple linear regression model was used to analyze the influencing factors of humanistic care ability of nursing students finally. The results showed that the total score of the three dimensions in the CAI scale which were investigated by 113 nursing students in Qiqihar medical college was 178 ± 15.43. The results of stepwise regression analysis showed that 43.5% of the total score of nursing students was determined by the dimensions of emotional self-management and perceived care behavior. The results showed that the perceived care behavior and communication ability had significant influence on the humanistic care ability of nursing students, which provided theoretical basis and reference for improving the humanistic care ability of nursing students.

1. Introduction

Nursing work is a personal nursing practice process, which gives full play to people's potential to lead a meaningful life while obtaining, maintaining and maintaining health and well-being [1]. The main goal of nursing is to ensure the quality of nursing and minimize the risk of patients suffering from damage [2]. Nurses play an important role in caring for patients and their families. Facing the difficulties faced by the patients, nursing students put forward challenges to the quality of nursing education [3]. Care in nursing education refers to the interaction between teachers and students based on ethical values and humanistic values. The development of values and moral principles in the process of education, the flexibility of the process of education, the application of learning objectives, and the dynamics of the process of education are all regarded as the concept attribute of care in the process of Teaching [4].

Labrague [5] discussed the cognition of nursing students to caring behavior in four countries. The results showed that students from four countries had positive nursing behavior, especially body-based nursing intervention. Finally, it was concluded that performance nursing behavior should be emphasized in nursing education and training. To implement care intervention to help students establish or strengthen their care behavior to adapt to the clinical situation. Aupia [6] compared the cognitive differences of nursing students, patients and nursing students on caring behavior, and explored the relationship between social demographic variables and caring cognition. The results can be used as supplementary resources for nursing practice and nursing education, so as to improve the knowledge of nursing behavior. Nursing is the core and essence of nursing profession. Labrague [7] uses descriptive statistics, correlation analysis, linear regression model and one-way ANOVA to analyze the collected data and preliminarily explore the cross-country care mode of nursing teachers, so as to understand the cognition of nursing students on nursing students'
care, and use this information to better play the role of nursing students as nursing educators. The Chinese version of critical thinking tendency scale and caring behavior scale were used by Qin [8] to investigate 203 clinical nursing students. The results showed that there was a positive correlation between critical thinking and caring behavior ($\beta = 0.46$, $P < 0.01$). The conclusion shows that nursing students' caring behavior can improve their critical thinking. With the cultivation of critical thinking ability of nursing students, nursing educators should pay attention to improving their caring behavior. Wolf [9] assessed the self-confidence of nursing students in providing nursing services with professional self-confidence visual simulation scale. Through the experience of students and patients, registered nurses and teachers who simulated care behavior, perceived care may inadvertently become a part of hidden curriculum. Nursing behavior is an important aspect of nursing practice. Persaud [10] uses the care assessment tool of simulated clinical experience to explore the perceptual ability of students to show care in simulated environment. The results show that in the simulated learning environment, students can demonstrate and reflect on their caring behavior.

The nursing students of Qiqihar Medical College in China were investigated in this study. Based on the research and analysis of the current situation and correlation of humanistic care ability and perceived care behavior of nursing students, a model of influencing factors of nursing students' humanistic care ability was constructed. In order to reflect the degree of their mutual influence, and improve the humanistic care ability and thinking ability of nursing students in the future to provide theoretical basis and reference through statistical analysis of nursing students' humanistic care ability and perceived care behavior relevance and influencing factors.

2. Method

2.1 Humanistic Care Ability and Perceived Care Behavior of Nursing Students

As a major closely related to people's health and life, nursing is a humanities subject which integrates the connotation of care and holistic nursing into human health and disease experience, emphasizing the care and care for the whole person. These caring behaviors realize the possibility or potential of human beings for happiness, which are called nursing behaviors. As a social individual, the object of nursing is not only a person with physiological and pathological attributes, but also an emotional, social and cultural person. This shows that nursing objects need not only the treatment and care of diseases, but also spiritual comfort and emotional care, which determines the distinctive humanitarian color of nursing science. Although the development of high-tech medicine has solved all kinds of difficult and miscellaneous diseases in human body, it cannot solve the psychological pain, fear and anxiety that patients experience under the condition of disease. We can understand the patients' inner world and finally relieve the patients' anxiety through the humanistic care ability of nurses.

The relationship between the caregiver and the caregiver is to pay attention to the sense of life achievement in health and happiness from the perspective of philosophy, theory and paradigm. The care of the nursing staff for the nursing staff is intentionally conveyed in the care action of the nursing staff. Humanistic care is the essence and core content of nursing science, and also the comprehensive embodiment of training, education, assisting others' growth and self-realization. The nursing educators should embody the care concept in the teaching process.

2.2 Building a Relationship Model between Nursing Students' Care Ability and Perceived Care Behavior

In order to understand the current situation of nursing students' humanistic care ability and explore the relevant influencing factors of nursing students' humanistic care ability and perceived care behavior, a structural equation model of perceived care behavior and humanistic care ability of nursing college students was established in this study, and the model was modified according to the research hypothesis, so as to realize the feasible humanistic care nursing teaching program finally:
1) The perceived care behavior of nursing students, including family, teachers, and roommates and so on, are taken as a measurement variable to form a latent variable "care behavior" in this study.

2) The three factors of communication ability, emotional intelligence and caring behavior are taken as the direct effect on the humanistic care ability of nursing students.

3) Combined with the comprehensive effect of perception and care behavior and other related factors through improving the communication ability and emotional intelligence of nursing students, to improve the humanistic care ability of nursing students.

2.3 Multiple Linear Regression Model

Regression analysis is an effective method to explore the correlation and dependence between variables. Linear population regression model is the most common population regression model because of its simple form, relatively easy parameter estimation and test. The general form of multiple linear regression model is:

\[ Y_i = \beta_0 + \beta_1 X_{i1} + \cdots + \beta_k X_{ki} + \mu_i (i = 1, 2, \ldots, n) \] (1)

\( y \) is the interpreted variable, \( X_1, X_2, \ldots, X_k \) is the explanatory variable, \( \beta_0, \beta_1, \ldots, \beta_k \) is the parameter to be estimated, that is the regression coefficient; \( \mu \) is the random error term; \( K \) is the number of explanatory variables, \( i \) is the subscript of the observation value; \( n \) is the sample capacity.

The weighted multiple linear regression function can be obtained by weighted synthesis of the weight of each index obtained by AHP and the multiple linear regression equation obtained by formula 1:

\[ Y_i = \beta_0 + \sum_{k=1}^{n} \omega_k \beta_k X_{ki} + \mu_i (i = 1, 2, \ldots, n) \] (2)

The purpose of this study is to study the caring ability of nursing college students and the influencing factors and related characteristics of their perception of caring behavior, and further analyze the relationship between the two through multiple linear regression model, so as to comprehensively consider and adjust the individual factors of nursing educators in various colleges and universities, and promote the humanistic care ability of nursing college students. The development of power.

3. Research Design

3.1 Research Object

120 nursing students were selected from Qiqihar medical college in this study. A total of 120 questionnaires were sent out, which 116 questionnaires were recovered with a recovery rate of 96.7%. The remaining 113 questionnaires were valid after eliminating the invalid questionnaires, with an effective recovery rate of 97.4%. The age of nursing students was 18-22 years old among the 113 questionnaires recovered nursing students, including 35 boys and 78 girls; 83 students came from “the only-children” family, accounting for the majority, 30 students didn’t come from “the only-children” family; 66 students came from rural areas and 47 students were from urban areas; 37 students are class cadres and 76 students are not class cadres.

3.2 Scale Evaluation

This part mainly carries on the data statistics through the questionnaire. The questionnaire consists of four parts:

1) Basic information questionnaire
Basic data questionnaire designed by ourselves, including age, gender, internship period, family background, etc.

2) Humanistic care evaluation scale
The humanistic care ability of nursing students was investigated by using Huang gebing’s empirical research scale [11] as the core measurement tool in this study, so as to fully understand
the characteristics of the current humanistic care ability of nursing students. It includes three
dimensions: cognitive dimension, courage dimension and patience dimension, with total of 37 items.
The cognitive dimension includes 14 items, the courage dimension includes 13 items, and the
patience dimension includes 10 items among them.
3) Organizational care atmosphere questionnaire
The purpose of the questionnaire is to evaluate the caring atmosphere of nursing students in the
process of interaction between teachers and students. In this study, we selected three dimensions
according to the actual needs including dialogue, practice and confirmation in LIKERT-Y
self-assessment scale which contains 30 items.
4) Perceived care behavior evaluation scale
The scale of perceived care behavior adopted in this study is divided into four dimensions:
teacher-student relationship, teacher-student interaction, teaching methods, teaching environment,
which include 26 items in total.
3.3 Statistical Analysis of Data
The data of this study were analyzed by SPSS.
1) Descriptive statistics were carried out on the scores of perceived care behaviors of nursing
students. The test was used to compare the scores of different dimensions due to different variances,
as shown in Table 1. The total score of nursing students' perceived care behavior is 3.12 ± 0.51
because that if is 9.245 and P < 0.01, which shows that there is statistical significance in the scores
of all dimensions of nursing students' perceived care behavior.
Table1 Ranking of nursing students' perceived caring behavior scores

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Group</th>
<th>Score</th>
<th>F values</th>
<th>P</th>
<th>Gam-Howell check</th>
<th>sort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship between teachers and students</td>
<td>1</td>
<td>2.95±0.543</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>interaction between teachers and students</td>
<td>2</td>
<td>3.010±0.47</td>
<td>9.245</td>
<td>0.00</td>
<td>3&gt;4&gt;2&gt;1</td>
<td>3</td>
</tr>
<tr>
<td>teaching methods</td>
<td>3</td>
<td>3.21±0.31</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>teaching environment</td>
<td>4</td>
<td>3.070±0.43</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

2) Descriptive statistics is adopted for the total score of humanistic care ability and scores of
all dimensions of nursing students. The statistical results of the minimum value, maximum value,
mean value and standard deviation of the total and all dimensions in each questionnaire are listed
through descriptive statistics. The overall situation of the subjects is described and analyzed as
shown in Table 2.
Table 2 norm of caring ability scores of nursing students (n=113)

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Number of entries</th>
<th>Total score</th>
<th>average score</th>
<th>Care ability evaluation level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>High</td>
</tr>
<tr>
<td>cognition</td>
<td>14</td>
<td>75.01±8.91</td>
<td>5.35±0.63</td>
<td>&gt;85.01</td>
</tr>
<tr>
<td>courage</td>
<td>13</td>
<td>58.31±9.42</td>
<td>4.48±0.72</td>
<td>&gt;69.73</td>
</tr>
<tr>
<td>patient</td>
<td>10</td>
<td>57.62±6.16</td>
<td>5.72±0.62</td>
<td>&gt;65.68</td>
</tr>
</tbody>
</table>

3) The basic information distribution of the basic information of nursing students is shown in
table 3. The independent sample F test, one-way ANOVA and two-way ANOVA are used to
compare the data between groups for the differences caused by different family locations, whether
they are class cadres, different grades and families' attitudes towards nursing specialty, and the
relationship with their families.
Table 3 Basic information of respondents

<table>
<thead>
<tr>
<th></th>
<th>frequency</th>
<th>Percent</th>
<th>Professional identity</th>
<th>family care</th>
<th>Teachers' care</th>
<th>nurses 'care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18~20</td>
<td>74</td>
<td>65.5%</td>
<td>69/74</td>
<td>63/74</td>
<td>73/74</td>
<td>70/74</td>
</tr>
<tr>
<td>20~22</td>
<td>39</td>
<td>34.5%</td>
<td>32/39</td>
<td>35/39</td>
<td>37/39</td>
<td>39/39</td>
</tr>
<tr>
<td><strong>Sex:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>35</td>
<td>30.1%</td>
<td>31/35</td>
<td>29/35</td>
<td>33/35</td>
<td>29/35</td>
</tr>
<tr>
<td>Female</td>
<td>78</td>
<td>69.9%</td>
<td>76/78</td>
<td>71/78</td>
<td>70/78</td>
<td>67/78</td>
</tr>
<tr>
<td><strong>the only child in the family:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>83</td>
<td>73.5%</td>
<td>78/83</td>
<td>82/83</td>
<td>83/83</td>
<td>80/83</td>
</tr>
<tr>
<td>no</td>
<td>141</td>
<td>26.5%</td>
<td>135/141</td>
<td>137/141</td>
<td>131/141</td>
<td>129/141</td>
</tr>
<tr>
<td><strong>Family:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>countryside</td>
<td>66</td>
<td>58.1%</td>
<td>63/66</td>
<td>64/66</td>
<td>61/66</td>
<td>62/66</td>
</tr>
<tr>
<td>town</td>
<td>47</td>
<td>41.9%</td>
<td>41/47</td>
<td>43/47</td>
<td>41/47</td>
<td>43/47</td>
</tr>
<tr>
<td><strong>class leader:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>37</td>
<td>32.7%</td>
<td>37/37</td>
<td>36/37</td>
<td>35/37</td>
<td>35/37</td>
</tr>
<tr>
<td>no</td>
<td>76</td>
<td>77.3%</td>
<td>70/76</td>
<td>73/76</td>
<td>74/76</td>
<td>70/76</td>
</tr>
<tr>
<td><strong>Internship period:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1~ 3 moths</td>
<td>32</td>
<td>28.3%</td>
<td>29/32</td>
<td>31/32</td>
<td>30/32</td>
<td>30/32</td>
</tr>
<tr>
<td>4~6 moths</td>
<td>56</td>
<td>49.6%</td>
<td>53/56</td>
<td>54/56</td>
<td>53/56</td>
<td>53/56</td>
</tr>
<tr>
<td><strong>The attitude to humanistic nursing course:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>very interested</td>
<td>61</td>
<td>53.9%</td>
<td>59/61</td>
<td>61/61</td>
<td>61/61</td>
<td>61/61</td>
</tr>
<tr>
<td>Just so so</td>
<td>38</td>
<td>33.6%</td>
<td>37/38</td>
<td>37/38</td>
<td>36/38</td>
<td>35/38</td>
</tr>
<tr>
<td>not interested</td>
<td>14</td>
<td>12.4%</td>
<td>10/14</td>
<td>9/14</td>
<td>10/14</td>
<td>11/14</td>
</tr>
</tbody>
</table>

4) Pearson coefficient was used to measure the correlation between the scales and dimensions, to analyze the correlation between nursing students' perceived care behavior and humanistic care ability, and to measure the influencing factors of nursing students' humanistic care ability through multiple regression and structural equation model.

4. Research Results and Discussion

1) Analysis of the correlation between the perceived care behavior and humanistic care ability of nursing Students.

The total correlation between the dimensions of perceived care behavior and humanistic care ability of nursing college students is shown in figure 1.

**Figure1.** The correlation between perceptual care behavior and humanistic care ability

It can be seen from figure 1 that there is no significant correlation between the patience of nursing college students and the teaching concept of teachers (P>0.05), and the rest are significantly
positively correlated (P < 0.05). The correlation between teacher-student interaction and students' cognition was the highest (r = 0.591), among which nursing students aged 20 to 22 had the highest score in the dimension of teacher-student relationship, while there was no significant difference in the scores and total scores in other dimensions; the scores of male nursing students in the three dimensions of care behavior were lower than that of female nursing students. The score of nursing students came from “non only-child” family the interaction dimension between teachers and students is lower than that of nursing students came from “the only child” family, and there is no significant difference in the scores and total scores of the other dimensions. The score of the interaction dimension between teachers and students from urban areas is higher than that from rural areas, and there is no significant difference in other scores and total scores of the other dimensions. There is a significant positive correlation between the perceived care behavior and the ability of humanistic care of nursing students.

2) Influencing factors of humanistic care ability of nursing students

![Figure 2. Influencing factors of humanistic care ability of nursing students](image)

The results show that the average score of humanistic care ability of nursing students is 78 ± 15.43, including 75.01±8.91 in cognitive dimension, 58.31±9.42 in courage dimension and 57.62 ± 6.16 in patience dimension. The value of P in each dimension is shown in figure 2. By using correlation analysis, it can be seen that there is no correlation between the age of nursing students and the total score of humanistic care ability (P> 0.05), and there is statistical difference between the age of nursing students and the three dimensions of cognition, courage and patience (P<0.05): the age of nursing students is positively correlated with cognition and patience, and negatively correlated with courage.

5. Conclusion

The humanistic care ability of nursing students has gradually attracted the attention of nursing educators in China. There is a close relationship between humanistic care ability and perceived care behavior. This study understood the general situation of nursing students' perceived care behavior and humanistic care ability through questionnaire survey in Qiqihar medical college, and analyzed the differences between different influencing factors of nursing students' perceived care behavior and humanistic care ability. And explore the relationship between perceived care behavior and humanistic care ability of nursing college students and its influencing factors through the establishment of multiple linear regression model. The study found that the ability of humanistic care of nursing students has statistical significance in the differences between the gender, family, whether to be a class cadre, family's attitude towards nursing major, and different length of internship. At the same time, the more the nursing students perceive and care behavior, the stronger their humanistic care ability.
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References


