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Analysis and Optimization Strategies for Nursing Interns' Humanistic Professional Competence Training Needs Based on the Kano-IPA Model

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Abstract: *This study analyzed nursing interns' humanistic professional competence training using the Kano-IPA model to evaluate content importance and satisfaction while identifying priority improvement areas. A survey of 122 interns classified competencies into 17 attractive (34%), 13 must-be (26%), 14 expected (38%), and 6 indifferent attributes (12%). The IPA analysis revealed 12 high-priority improvement areas including communication skills, humanistic nursing research, ethical care and patient-centered practices, alongside 5 well-performing aspects such as humanistic teaching qualities and core nursing skills that require maintenance. The results indicate nursing education should strategically focus on enhancing must-be and expected attributes in improvement areas while sustaining performance quadrant competencies, with teaching approaches being flexibly adapted to address these prioritized needs for optimal development of interns' humanistic professional capabilities.*

Keywords: *Nursing interns; Humanistic professional competence; Kano model; IPA matrix analysis*

1. Introduction

The concept of humanistic competence refers to the ability of nursing staff to effectively integrate humanistic knowledge, skills, and spirit into clinical nursing practice[1]. It is a fundamental requirement in modern nursing work. Based on the respect for life and care for patients, nursing services that combine both professionalism and humanistic care not only reflect the professional qualities and communication abilities of the nursing staff, but also directly affect patient satisfaction, medical experience, and clinical outcomes[2,3]. Therefore, strengthening humanistic education in the process of nursing talent cultivation, especially enhancing nursing interns' humanistic competence during their internship phase, has significant practical implications for the development of the nursing industry in China and the individual career development of nurses.

In recent years, many nursing schools at home and abroad have actively promoted the reform of humanistic course settings and teaching[4-6]. However, nursing interns in China still face many challenges in terms of humanistic competence: on one hand, the curriculum content tends to emphasize theoretical teaching, with insufficient practical application in the teaching process; on the other hand, students have varying levels of acceptance and expectations regarding the course content, which makes it difficult to stimulate students' interest and meet their needs for developing professional competence[7]. Therefore, scientifically identifying nursing interns' actual needs and preferences regarding humanistic competence training content has become a critical issue to address in current nursing humanistic education.

Based on this, this study targets nursing undergraduates from a university in Shaanxi, using the Kano model combined with the IPA matrix analysis method to evaluate their needs, satisfaction, and importance regarding humanistic competence training content. The objectives of the study are to: clarify nursing interns' key concerns in different humanistic training modules; identify strengths and areas for improvement in the current humanistic curriculum; and provide data support and practical pathways for nursing schools to optimize course design and improve teaching effectiveness.

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2. Research Methodology

2.1. Research Participants

This study uses a convenience sampling method to select nursing undergraduates from the 2021 cohort at a university in Shaanxi, who are in their fourth year of internship. Inclusion criteria: nursing students in their fourth year of the undergraduate program; internship duration of ≥6 months; the internship hospital is a tertiary A hospital; informed consent to participate in the study. Exclusion criteria: students interning in non-clinical frontline nursing positions; those whose absence from the internship exceeds six months due to exams, vacations, sick leave, or other reasons. A total of 122 students participated in this study, with 0 invalid questionnaires and 122 valid questionnaires, resulting in a response rate of 100%.

2.2. Research Tools

The survey questionnaire consists of two sections. The first section includes general information about the nursing interns, such as gender, age, hospital, whether they are an only child, and whether they have received humanistic competence training. The second section is based on the Kano model and focuses on assessing the humanistic competence of nursing interns. The content of this section is derived from the talent cultivation program for nursing students at a university in Shaanxi, along with a review of relevant literature and a demand attribute survey questionnaire based on the nurse humanistic competence training program[8]. The survey covers 50 items in 8 areas: an overview of humanistic knowledge, knowledge related to humanistic nursing disciplines, communication and interpersonal relationships, psychological nursing, humanistic nursing clinical practice, humanistic nursing education, humanistic nursing management, and humanistic nursing research.

Each content item is presented with both positive and negative wording, and respondents are asked to rate their feelings on a 5-point scale: "Like" "Should be this way" "Indifferent" "Reluctantly accept" and "Dislike" .For each paired question about a given demand, each participant can provide one of 25 possible response combinations. Kano's typical attribute classifications are shown in Table 1.

Basic Needs (Must-be quality, M): These are the elements that participants believe must be met; failure to meet these needs will significantly decrease satisfaction. They represent the minimum requirements for the internship and are considered the baseline for training content. Performance Needs (One-dimensional quality, O): These are key factors influencing satisfaction, where the level of satisfaction is directly proportional to how well the needs are met and should be given high priority. Excitement Needs (Attractive quality, A): These are excitement-driven needs that surprise interns when met. They are opportunities for innovation and should be developed into distinctive features. Indifferent Needs (Indifferent quality, I): These are needs that the interns consider unimportant. Whether these needs are met or not does not affect satisfaction. Related training courses can be reduced or eliminated based on interns' needs. Reverse Needs (Reverse quality, R): These are needs that would cause discomfort or displeasure in the interns. The satisfaction level decreases as these needs are met, and they should be avoided in the course curriculum. Questionable Attributes (Questionable quality, Q): This indicates that the respondent misunderstood the question and made an incorrect judgment.

Table 1: Kano Model Demand Attribute Classification Table

Positive Question	*Negative Question*				
	Like	*Must-be*	*Indifferernt*	*Tolerate*	*Dislike*
Like	*Q*	*A*	*A*	*A*	*O*
Must-be	*R*	*I*	*I*	*I*	*M*
Indifferernt	*R*	*I*	*I*	*I*	*M*
Tolerate	*R*	*I*	*I*	*I*	*M*
Dislike	*R*	*I*	*R*	*R*	*Q*

2.3. Data Collection Method

Data were collected using an electronic survey platform (Questionnaire star) from February to April

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2025, with informed consent obtained from all participants. Each participant completed the questionnaire independently and only once. Detailed instructions and precautions were provided in the questionnaire, and participation was voluntary.

2.4. Statistical Methods

Data were analyzed using SPSS 27.0 software. The satisfaction and importance of each item were calculated, and the Kano model was used to define the attributes of the training content. A matrix diagram was drawn using the Better-Worse coefficient. The importance-satisfaction ratio (I/P) for each item was calculated to assess the priority level. The higher the I/P value, the greater the priority of that item.

2.5. Importance-Performance Analysis (IPA) Matrix Model

The IPA matrix analysis model is a technique used for prioritizing attributes based on satisfaction and importance metrics. The IPA model was first proposed by scholars Martilla and James [9] and has gradually evolved into a commonly used tool for decision-making in services or products, helping to identify areas requiring improvement and the misallocation of resources. In the four-quadrant matrix, importance is represented on the horizontal axis, and satisfaction on the vertical axis, with the average values of the overall evaluation serving as the dividing points for the axes. The entire area is divided into four quadrants: "Strengths," "Maintain," "Opportunities," and "Improvement" [10]. IPA analysis can provide reference points for determining the teaching priorities and importance levels of humanistic training content for students.

3. Results

3.1. Classification of Overall Training Content Demand Attributes

At the overall level, nursing interns have certain demands for the 50 training items, including 17 items with Attractive Attributes (34%), 13 with Must-be Attributes (26%), 14 with One-dimensional Attributes (38%), and 6 with Indifferent Attributes (12%). There were no reverse demands identified. The highest percentage quality attribute corresponds to the Kano attribute for each respective indicator[11].To assess the hierarchical classification and importance of nursing interns' demands, the Better-Worse coefficient and Demand Importance coefficient were used[12]. Better-Worse coefficient (Satisfaction) = (A + O) / (A + O + M + I). The closer the result is to 1, the greater the impact of the item on the satisfaction of nursing interns. Demand Importance = (M + O) / (A + O + M + I). The closer the result is to 1, the more important the nursing interns consider the item. The Cronbach's alpha coefficient for this measurement is 0.83, and the content validity is 0.87. Detailed results can be found in Table 2.

Table 2: Nursing Intern Training Content Demand Kano Attributes, Importance, and Satisfaction

Num	*Item*	*M*	*O*	*A*	*I*	*Kano*	*Importance*	*Satisfaction*
1 Overview of Medical Humanities								
1	*Introduction to Medical Humanities*	*12*	*21*	*13*	*76*	*I*	*0.27*	*0.28*
2	*The Important Value of Humanities in Nursing*	*17*	*15*	*15*	*75*	*I*	*0.26*	*0.25*
3	*The Evolution of Nursing Models and the Development of the Nursing Discipline*	*21*	*13*	*23*	*65*	*I*	*0.28*	*0.30*
4	*The Concept and Essence of Humanistic Nursing*	*24*	*15*	*26*	*57*	*I*	*0.32*	*0.34*
5	*The History and Development of Humanistic Nursing*	*21*	*37*	*18*	*46*	*I*	*0.48*	*0.45*
6	*Overview of Western Humanistic Nursing Theories*	*25*	*32*	*45*	*20*	*A*	*0.47*	*0.63*

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7	*Nursing Ethical Guidelines*	*44*	*30*	*27*	*21*	*M*	*0.61*	*0.47*
2 Knowledge Related to Humanistic Nursing Disciplines								
8	*Nursing Aesthetics and Etiquette Code*	*29*	*27*	*35*	*31*	*A*	*0.46*	*0.51*
9	*Nursing Laws and Regulations*	*45*	*40*	*21*	*16*	*M*	*0.70*	*0.50*
10	*Nursing Ethics*	*36*	*15*	*31*	*39*	*I*	*0.42*	*0.38*
11	*Nursing and Literature*	*20*	*21*	*50*	*31*	*A*	*0.34*	*0.58*
12	*Nursing Philosophy*	*19*	*42*	*41*	*20*	*O*	*0.50*	*0.68*
13	*Nursing Anthropology*	*20*	*40*	*30*	*32*	*O*	*0.49*	*0.57*
14	*Nursing Sociology*	*18*	*40*	*31*	*33*	*O*	*0.48*	*0.58*
15	*Traditional Chinese Nursing Culture*	*18*	*41*	*36*	*27*	*O*	*0.48*	*0.63*
3 Nurse-Patient Communication Skills								
16	*Nurse-Patient Communication Skills*	*62*	*40*	*9*	*11*	*M*	*0.84*	*0.40*
17	*Medical History Collection, Communication of Diagnosis, and Health Education Skills*	*12*	*37*	*55*	*18*	*A*	*0.40*	*0.75*
18	*Skills in Developing Nursing Plans with Patients/Family Members*	*51*	*13*	*45*	*13*	*M*	*0.52*	*0.48*
19	*Prevention and Management of Communication-Related Disputes*	*41*	*40*	*21*	*20*	*M*	*0.66*	*0.50*
20	*Nursing Interpersonal Relationship Skills and Conflict Management*	*68*	*30*	*11*	*13*	*M*	*0.80*	*0.34*
4 Psychological Nursing								
21	*Basic Knowledge of Nursing Psychology*	*19*	*46*	*35*	*22*	*O*	*0.53*	*0.66*
22	*Basic Techniques of Nursing Psychological Assessment*	*8*	*29*	*72*	*13*	*A*	*0.30*	*0.83*
23	*Identification, Intervention, and Evaluation of Patient Psychological Problems*	*55*	*36*	*27*	*4*	*M*	*0.75*	*0.52*
24	*Nurse Emotional Management and Self-Maintenance of Mental Health*	*57*	*33*	*15*	*17*	*M*	*0.74*	*0.39*
5 Humanistic Nursing Clinical Practice								
25	*Principles and Methods of Clinical Humanistic Nursing Practice*	*8*	*25*	*82*	*7*	*A*	*0.27*	*0.88*
26	*Standards for Building Humanistic Care Demonstration Wards*	*10*	*26*	*76*	*10*	*A*	*0.30*	*0.84*
27	*Narrative Nursing Knowledge*	*30*	*35*	*45*	*12*	*A*	*0.53*	*0.66*
28	*Knowledge of Patient Experience*	*40*	*41*	*25*	*16*	*O*	*0.66*	*0.54*
29	*Humanistic Care in Palliative Care*	*30*	*50*	*36*	*6*	*O*	*0.66*	*0.70*
30	*Traditional Chinese Medicine Humanistic Nursing Practice*	*25*	*40*	*45*	*12*	*A*	*0.53*	*0.70*
31	*Humanistic Care for Patients in Special*	*42*	*50*	*25*	*10*	*O*	*0.72*	*0.59*

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	Settings: ICU, Transplant Wards, Outpatient, Emergency, Operating Rooms, Community, etc.							
32	*Medical Social Work and Humanistic Nursing*	*20*	*35*	*50*	*17*	*A*	*0.45*	*0.70*
33	*Health Management Across the Lifespan and Humanistic Nursing*	*35*	*50*	*31*	*6*	*O*	*0.70*	*0.66*
34	*Smart Nursing and Humanistic Nursing*	*15*	*40*	*55*	*12*	*A*	*0.45*	*0.78*
6 Humanistic Nursing Education								
35	*Cultivating Professional Spirit in Clinical Nurses*	*45*	*30*	*26*	*21*	*M*	*0.61*	*0.46*
36	*Developing Nurses' Humanistic Care Abilities*	*48*	*57*	*8*	*9*	*M*	*0.86*	*0.53*
37	*Humanistic Cultivation of Nursing Educators*	*22*	*48*	*45*	*7*	*A*	*0.57*	*0.76*
38	*Life Education in Nursing Teaching*	*20*	*40*	*39*	*23*	*O*	*0.49*	*0.65*
39	*Methods, Techniques, and Evaluation of Humanistic Nursing Education*	*28*	*35*	*32*	*27*	*O*	*0.52*	*0.55*
40	*Enhancing Nurses' Humanistic Literacy: Calligraphy, Painting, Literature Appreciation, Public Speaking, etc.*	*10*	*31*	*68*	*13*	*A*	*0.34*	*0.81*
7 Humanistic Nursing Management								
41	*Nurse Career Planning and Development*	*47*	*21*	*45*	*19*	*M*	*0.52*	*0.50*
42	*Humanistic Literacy of Nursing Leaders*	*18*	*45*	*44*	*15*	*O*	*0.52*	*0.73*
43	*Nursing Team Culture Building and Management*	*37*	*53*	*26*	*6*	*O*	*0.74*	*0.65*
44	*Humanistic Care in Nurse Occupational Safety Management*	*55*	*45*	*11*	*11*	*M*	*0.82*	*0.46*
45	*Humanistic Care in Managing Nursing Adverse Events*	*19*	*42*	*53*	*8*	*A*	*0.50*	*0.78*
46	*Nursing Quality Management and Evaluation from a Humanistic Perspective*	*20*	*38*	*36*	*28*	*O*	*0.48*	*0.61*
47	*Organization and Implementation of Nursing Volunteer Services*	*29*	*31*	*50*	*12*	*A*	*0.49*	*0.66*
8 Humanistic Nursing Research								
48	*Ethical Requirements in Nursing Research*	*66*	*33*	*13*	*10*	*M*	*0.81*	*0.38*
49	*Humanistic Nursing Research Methods*	*11*	*49*	*53*	*9*	*A*	*0.49*	*0.84*
50	*Innovation in Humanistic Nursing Research*	*15*	*40*	*61*	*6*	*A*	*0.45*	*0.83*

3.2. IPA Matrix Analysis of Training Content Items

Through IPA matrix analysis, with nursing interns' professional competence as the target latent

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variable, this study identifies aspects of the teaching process that are highly important but currently underperforming. These aspects should be prioritized for improvement and adjustment, providing more comprehensive and accurate suggestions for enhancing nursing education.

Based on the satisfaction and importance of the items, a quadrant chart was drawn. The analysis revealed the following:

First Quadrant (Strengths): 5 items fall into this quadrant, where the variables have both high importance and high satisfaction. These are areas that students consider important and perform well, and should be maintained. These items are primarily focused on humanistic nursing communication skills and content.

Second Quadrant (Maintain): 21 items are placed in this quadrant, where the variables have low importance but high satisfaction. These are areas that students believe are less important but are performing well. These areas may have an over-supply of resources.

Third Quadrant (Opportunities): 12 items fall into this quadrant, where the variables have both low importance and low satisfaction. These are areas that students consider less important and are underperforming. Due to their low importance, these areas should be improved after addressing the factors in the "Improve" quadrant.

Fourth Quadrant (Improve): 12 items are located in this quadrant, where the variables have high importance but low satisfaction. These are areas that students believe are important but are not performing well, and are thus areas requiring improvement [13]. See Figure 1 for details.

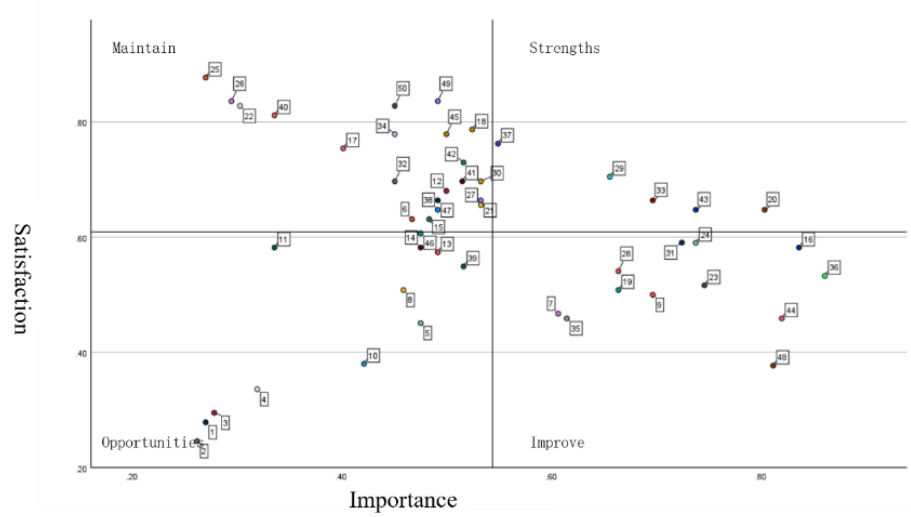

Figure 1: IPA Matrix of Nursing Interns' Training Content Demand Attributes

In the Kano model's attribute classification, Must-be Attributes have the highest priority, followed by One-dimensional Attributes, and then Attractive Attributes, with Indifferent Attributes having the lowest priority. In the IPA analysis matrix, the training items in Quadrants I and II exhibit high satisfaction levels and should be maintained to consolidate the current high levels of satisfaction. Among these, the items in Quadrant I are of higher importance than those in Quadrant II. Therefore, when implementing the maintenance strategy, priority should be given to the elements in Quadrant I. In contrast, training content in Quadrants III and IV has relatively low satisfaction and requires improvement strategies to enhance satisfaction. Among these two quadrants, Quadrant IV has a higher satisfaction level, so when implementing the improvement strategy, the elements in Quadrant IV should be addressed first, followed by those in Quadrant III.

For training items within the same quadrant and with the same Kano demand attribute, based on the principles outlined above, a comprehensive analysis using the Kano-IPA model can determine the order of maintenance and improvement for the nursing interns' course content, as summarized in Table 3.

Table 3: Priority Ranking of Maintenance and Improvement for Training Items

Maintain training items	*Improve training items*	*Kano*	*I/P*
43Nursing Team Culture Building and		*O*	*1.14*

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Management			
33Health Management Across the Lifespan and Humanistic Nursing		*O*	*1.05*
29Humanistic Care in Palliative Care		*O*	*0.93*
37Humanistic Cultivation of Nursing Educators		*O*	*0.75*
	48Ethical Requirements in Nursing Research	*M*	*2.15*
	44Humanistic Care in Nurse Occupational Safety Management	*M*	*1.79*
	36 Developing Nurses' Humanistic Care Abilities	*M*	*1.62*
	23Identification, Intervention, and Evaluation of Patient Psychological Problems	*M*	*1.45*
	16 Nurse-Patient Communication Skills	*M*	*1.44*
	9 Nursing Laws and Regulations	*M*	*1.39*
	35Cultivating Professional Spirit in Clinical Nurses	*M*	*1.34*
	19Prevention and Management of Communication-Related Disputes	*M*	*1.31*
	7Nursing Ethical Guidelines	*M*	*1.30*
	24Nurse Emotional Management and Self-Maintenance of Mental Health	*M*	*1.25*

4. Discussion

Nursing interns represent the reserve force for China's nursing workforce, and their humanistic practice abilities are directly related to the quality of nursing services and the development of the profession. Compared to registered nurses, interns generally exhibit lower levels of humanistic literacy, communication skills, and ethical sensitivity. Therefore, it is essential to enhance their comprehensive qualities through scientific and reasonable training. This study systematically examines the needs, satisfaction, and importance of nursing interns' humanistic practice abilities training based on the Kano-IPA model, proposing corresponding optimization strategies. This analysis provides empirical evidence for further improving the humanistic practice abilities of nursing interns and offers valuable insights for nursing educators in prioritizing curriculum design and teaching implementation.

4.1. Analysis of Humanistic Nursing Training Content under the Kano Model

The study results indicate significant differences in the demand for various training contents, with nursing interns focusing on different aspects of the training modules. Within the framework of the Kano model, essential and expected attributes account for a large proportion of the results, 26% and 38%, respectively, while the charm and indifferent attributes account for a smaller proportion. Specifically, in the field of humanistic nursing, communication with patients, psychological care, humanistic nursing research, and ethics were viewed as essential and expected attributes. This suggests that nursing interns have high fundamental requirements for humanistic care and are particularly concerned with how to implement humanistic care in clinical practice. Given the high demands for patient-nurse communication, collaboration[14,15], and interpersonal skills[16] in modern nursing, Dellasega[17] suggested that integrating humanities into the nursing field facilitates the development of professional relationships, collaborative abilities, and a patient-centered service ethos.

During the analysis, we observed that some contents (such as nursing laws and regulations) were categorized as essential attributes, highlighting their role as foundational and core to the improvement of nursing interns' professional competence. At the same time, certain modules (e.g., nursing anthropology,

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nursing sociology) were considered "interest attributes," reflecting nursing interns' relatively low interest and perceived limited practical value in these subjects. This aligns with previous research[18] that emphasized focusing on key scientific issues in nursing and forming a "basic-clinical-translational" nursing innovation system, which generates technological outcomes with societal contributions.

4.2. Prioritization and Maintenance Strategies for Training Content from the Kano-IPA Perspective

Based on the Kano-IPA analysis, the optimization strategy for training content should be reasonably allocated according to the priority order of importance and satisfaction. Through IPA matrix analysis, we can clearly identify which training contents require priority improvement and which should be maintained at their current level. The results indicate that training items in the "improvement zone" should be the focus of optimization, particularly in areas like patient-nurse communication, psychological care, and ethics courses. In contrast, items in the "strength" zone, which are currently deemed satisfactory and important by the interns, should continue to be strengthened and optimized through maintenance strategies. For example, patient-nurse communication skills, placed in the "essential attribute" category, underscore its central role in the development of nursing interns' professional competence. Further analysis shows that the satisfaction with patient-nurse communication is relatively low, indicating that, despite its high importance, there is room for improvement in teaching practices. Therefore, courses in this domain should incorporate innovative teaching methods and strengthen practical applications to better meet the needs of nursing interns.

For items in quadrants such as 39, 13, 46, 11, 31, 35, and 24, which display low satisfaction, these contents are not meeting interns' expectations for "satisfactory content." These entries suggest that students have a strong interest in innovative and interdisciplinary content[19]. Future course designs should fully explore such content as highlights of the curriculum, investigating diversified teaching methods like interdisciplinary electives and the integration of humanities with technology. According to the Kano-IPA analysis, the top five priorities for improvement are: 48 > 44 > 36 > 23 > 16.

4.3. Recommendations for Optimizing Humanistic Nursing Courses

This study offers several suggestions for optimizing humanistic nursing education courses. First, educators should focus on nursing interns' basic needs in humanistic nursing courses, especially in areas such as communication skills and psychological care, ensuring that these course contents meet the basic professional competence requirements of nursing interns. Secondly, course design should emphasize interdisciplinary integration, especially combining nursing with disciplines like psychology and ethics, to enhance the comprehensiveness and practical relevance of the courses, thus increasing students' interest and recognition of humanistic nursing as a field.

The course system should dynamically adjust priorities. Based on the Kano-IPA comprehensive ranking (Table 3), the training of essential skills, such as ethical decision-making, humanistic care in professional safety management, and patient-nurse communication, should be prioritized, followed by the gradual incorporation of expanded content such as humanistic care in palliative care (item 29) and life-cycle management (item 33). Additionally, teaching methods should focus on the "integration of theory and practice." For high-expectation attribute content, such as palliative care (item 29), narrative medicine approaches can be adopted to promote emotional resonance and skill internalization[20, 21]. Lastly, a diversified evaluation mechanism should be established. The six indifferent attribute items identified in this study (such as Introduction to Medical Humanities, item 1) suggest that certain traditional theoretical courses need to improve engagement through methods like Problem-Based Learning (PBL) and flipped classrooms.

Furthermore, nursing educators should pay attention to interns' expectations and interests in course content, particularly regarding interdisciplinary course design and innovative course development. Flexible course arrangements and innovative teaching methods should be employed to stimulate students' enthusiasm for learning. For instance, more courses on patient experience and palliative care should be incorporated to enhance students' ability to cope with real-world clinical challenges.

4.4. Limitations and Future Directions

Although this study provides strong theoretical support for enhancing the humanistic practice abilities of nursing interns, there are some limitations. First, the research sample was limited to nursing interns from a university in Shaanxi Province, and the sample size was relatively small. Future research could

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improve the generalizability and representativeness of the results by expanding the sample range and conducting multicenter studies. Secondly, this study did not explore the differences in nursing interns' needs for humanistic nursing courses across different backgrounds, such as gender, cultural background, and regional factors, which may influence students' demands. Future research should further consider the impact of these variables.

In conclusion, through the Kano-IPA analysis, we not only revealed the structure of nursing interns' humanistic practice ability training needs but also provided targeted curriculum optimization suggestions for nursing education. It is recommended that nursing educators dynamically adjust training content according to Kano classification results and IPA matrix priorities, focusing on practical and participatory courses. These optimization strategies will help improve nursing interns' humanistic practice abilities, achieve a student-centered humanistic nursing education model, and ultimately enhance the quality of nursing services and patient satisfaction.

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References

[1] Wu Xinjian. Enhancing Nurses' Humanistic Practice Competence to Achieve the Vision of Future Health Care [J]. Nursing Management Journal, 2021, 21(05): 305-308.
[2] Yan Haiping. Study on the Construction of a Nurse Humanistic Practice Competence Assessment Tool [D]. Southern Medical University, 2016.
[3] Resnick B. The Difference Nurses Are Making to Improve Quality of Care to Older Adults Through the Interdisciplinary Nursing Quality Research Initiative [J]. Geriatric Nursing, 2010, 31(3): 157-164.
[4] Li Jian. The Disciplines, Curriculum, and Talent Training Innovation Pathways for the Construction of Digital Humanities Majors in Colleges and Universities Under the Context of Smart Education [J]. Shanxi Archives, 2025(03): 110-112.
[5] Ji Yuan, Cui Huixian. A Study of the Medical Humanities Education Curriculum and Evaluation Systems in the U.S., U.K., Germany, and Japan [J]. Medicine and Philosophy, 2025, 46(05): 53-58.
[6] Kelly-Hedrick M, Louis S R, Chisolm M S. Character and Virtue Development in Medical Learners: Another Role for the Arts? [J]. International Review of Psychiatry, 2023, 35(7-8): 631-635.
[7] Liang Sijing, Zhai Huimin, Bu Mengru, et al. A Survey on Nursing Master's Students' Humanistic Awareness and Need for Humanistic Education [J]. Journal of Nursing, 2021, 36(10): 74-76.
[8] Wang Jianjing, Li Huiling, Xie Hongzhen, et al. Study on the Development of a Nurse Humanistic Practice Competence Training Program [J]. Chinese Nursing Education, 2025, 22(05): 522-529.
[9] Cheng Linghong, Li Xiaobin. Evaluation of Chronic Disease Patients' Satisfaction with Primary Health Care Based on SERVQUAL Model and IPA Analysis [J]. Occupational Health, 2024, 40(18): 2520-2526.
[10] Yan Huimin, Qu Huili, Wu Xiaoqi, et al. A Study on the Perioperative Nursing Needs of Artificial Joint Replacement Patients Based on the Kano Model [J]. General Practice Nursing, 2024, 22(14): 2734-2738.
[11] Wang Shuyi, Qian Shengsan. Application of the Kano Model in Hospital Service Quality Management [J]. Industrial Engineering and Management, 2005(04): 104-106.
[12] Berger C B R B D. Kano's Methods for Understanding Customer-Defined Quality [J]. Journal of, 1993.
[13] Yu K, Wu L, Zhou L. Research on the Mixed Education Mode for the Safety Engineering Major During the Coronavirus (COVID-19) Epidemic [J]. International Journal of Environmental Research and Public Health, 2022, 19(4).
[14] Cheng Yaqin, Xiao Yangchun, Zhou Chenxi, et al. Progress in the Application of Directive Language in Communication Between Caregivers and Patients with Cognitive Impairment [J]. Journal of Nursing, 2025, 40(05): 121-125.
[15] Zhang Xinyu. Study on the Effectiveness of Communication Skills in Nurse-Patient Communication in Triage Waiting Rooms [J]. Continuing Medical Education, 2024, 38(12): 185-188.
[16] Ma Xiaolu, Li Xiaohan, Wang Yanmei, et al. Research on Nursing Undergraduate Students' Clinical Internship Communication Experience [J]. Chinese Nursing Education, 2021, 18(03): 197-202.
[17] Dellasega C, Milone-Nuzzo P, Curci K M, et al. The Humanities Interface of Nursing and Medicine

ISSN 2616-5791 Vol. 6, Issue 7: 94-103, DOI: 10.25236/AJMHS.2025.060712

[J]. Journal of Professional Nursing, 2007, 23(3): 174-179.
[18] Li Ruolan, Zhang Jing, Feng Yaoqing, et al. From Introduction to Indigenous Growth: A Reality Reflection and Path Exploration for Building Chinese Nursing Theory [J]. Nursing Research, 2024, 38(12): 2088-2091.
[19] Zhang Y, Li S, Huang Y, et al. Correlation Between Ethical Sensitivity and Humanistic Care Ability Among Undergraduate Nursing Students: A Cross-sectional Study [J]. BMC Nursing, 2024, 23(1): 863.
[20] Li Ruolan, Zhang Jing, Feng Yaoqing, et al. From Introduction to Indigenous Growth: A Reality Reflection and Path Exploration for Building Chinese Nursing Theory [J]. Nursing Research, 2024, 38(12): 2088-2091.
[21] Liu Yuwei, Tian Yali, Cui Jinbo, et al. Analysis and Reflection on the Current Situation of Nursing Discipline Construction and Development in China [J]. West China Medical Journal, 2024, 39(02): 325-329.