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Practice of Staged Training with Specific EPAS for Doctor-Patient Communication in the Integrated Pediatric Standardized Residency Training Model for Professional Postgraduates

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Abstract: The undergraduate medical education stage serves as the starting point for cultivating the communication skills of rural order-oriented medical students, laying the foundation for communication skills training during the postgraduate education stage and for effective communication with patients, families, colleagues, and other healthcare professionals throughout their careers. Exploring how to improve the quality of doctor-patient communication education at the medical college stage and enhance the doctor-patient communication skills of rural order-oriented medical students at this stage has significant practical implications. A staged doctor-patient communication skills curriculum can significantly enhance the effectiveness of doctor-patient communication education for rural order-oriented medical students during their undergraduate medical education, promoting the development of communication skills and other comprehensive competencies. The staged curriculum model is an effective approach for cultivating doctor-patient communication skills among medical students in medical college education and provides a useful reference for communication skills training in postgraduate general practice education and continuing education.

1. Introduction

In pediatric clinical practice, doctor-patient communication competence directly affects diagnostic and treatment outcomes, as well as patient safety, and is closely related to family trust and satisfaction with medical care[1]. With the ongoing advancement of medical education reform in China, the integrated model of professional postgraduate education and standardized residency training has gradually become an important pathway for the development of pediatric talent. However, in the traditional residency training system, doctor-patient communication training often lacks of systematicity and progression; The training content is fragmented and predominantly theoretical, making it difficult to translate effectively into clinical practice competence[2]. The pediatric patient population is unique, with communication primarily directed toward parents,

involving multiple dimensions such as disease disclosure, treatment plan discussion, and emotional support, requiring medical staff not only to possess solid professional knowledge but also to demonstrate high levels of empathy, communication skills, and clinical judgement. Therefore, introducing a competency-oriented training concept into doctor-patient communication education and constructing a scientific competency grading and assessment system is particularly necessary[3]. In recent years, Entrustable Professional Activities (EPAs), as a teaching and assessment tool that transforms competencies into observable professional activities, have received widespread attention in clinical medical education. By decomposing doctor-patient communication into observable and assessable core behavioral units and combining this with a staged training model, postgraduate trainees can progressively acquire abilities ranging from basic communication to complex communication at different learning stages, thereby achieving dynamic accumulation and practical application of skills[4]. Combined with the integrated residency training model, this training approach not only compensates for the shortcomings of traditional teaching but also embeds the cultivation of doctor-patient communication skills into real clinical scenarios, enhancing the specificity and effectiveness of training. It provides scientific support for pediatric professional postgraduates to achieve competency standards in graduation assessments and offers theoretical and practical foundations for optimizing and promoting pediatric doctor-patient communication teaching models[5].

2. Program Design

2.1 Overall Objectives

The overall objective of this program is to construct and implement a scientific, systematic, and operable "staged-EPA" specialized training model for pediatric doctor-patient communication. Guided by competency, this model decomposes macro-level doctor-patient communication competence into a series of observable, measurable, and trainable Entrustable Professional Activities (EPAS). Based on the developmental patterns of pediatric residents at different stages, it designs three-stage training content progressing from simple to difficult in a stepwise manner. By deeply integrating this into the "integrated residency training" system, it aims to systematically enhance residents' clinical practice competence in effective communication with pediatric patients and their families, ultimately cultivating outstanding pediatric medical talents capable of handling various complex communication scenarios.

2.2 Design Principles

Integration: Closely integrated with the actual work of clinical rotation departments. **Progressiveness:** Task difficulty, complexity, and expected autonomy increase year by year. **Measurability:** Each EPAs has clear observation and assessment criteria. **Feedback Orientation:** Emphasis on formative assessment and immediate feedback.

2.3 "Three-Stage" Training Content and Requirements

2.3.1 Stage 1 (First Year of Residency): Basic Communication and Information Gathering

In Stage 1 (first year of residency), the core objective is to solidify the foundational doctor-patient communication skills of newly admitted residents, focusing on basic communication and information-gathering abilities. This stage aims to enable residents to master and apply basic communication techniques proficiently, thereby independently, confidently, and effectively

completing routine history taking and information acquisition, laying a solid foundation for establishing initial doctor-patient trust[6].

Centered on this objective, the core training content of this stage focuses on two key EPAS:**EPA-1:** Conducting routine history taking and establishing trust with parents. Residents learn to inquire about medical history in a structured manner while demonstrating empathy, respect, and professionalism, building a good foundation for trust from the first contact onward. **EPA-2:** Informing parents about routine examination and treatment plans and obtaining informed consent. This focuses on training residents to clearly explain the purpose, process, and precautions of common examinations or basic treatment plans, using language understandable to parents to ensure genuine informed consent.

To achieve the above objectives, training adopts a combination of diverse formats emphasizing a spiral progression from theory to practice: A series of courses on Pediatric Communication Fundamentals systematically introduces basic communication models (e.g., the CALMER model), the psychological and behavioral development characteristics of children at different ages, and special principles for communicating with parents, providing a theoretical framework for practice. In safe, controlled simulation environments, residents practice specialized history taking and informed consent communication with trained Standardized Patients (SPs). Structured feedback follows each session, helping residents intuitively understand the strengths and weaknesses of their verbal and non-verbal behaviors. During daily clinical work, experienced supervising physicians lead residents in real bedside communication, providing on-site demonstrations, observing resident performance, and offering immediate one-on-one targeted guidance, achieving a real-time learning loop of "learning by doing."

2.3.2 Stage 2 (Second Year of Residency): Diagnostic Explanation and Health Education

In Stage 2 (second year of residency), competence development progresses from basic information gathering to more core clinical interactions, focusing on diagnostic explanation and health education. This stage aims to enable residents to calmly, clearly, and empathetically explain preliminary diagnoses to parents, articulate the logic and rationale behind treatment plans, and provide systematic, effective, and personalized health education, thereby truly becoming trusted information sources and collaborators for parents.

To achieve this goal, training in this stage revolves around two more complex EPAS:
EPA-3: Explaining the preliminary diagnosis and treatment plan for common diseases to parents. This requires residents not only to state the diagnosis but also to explain the etiology, progression, and treatment goals in layperson's terms, clearly describing the specific usage, expected effects, and potential risks of medications, physical therapy, or other interventions, ensuring parents fully understand and cooperate with implementation.**EPA-4:** Providing health education and lifestyle guidance to pediatric patients and their parents. This EPAs goes beyond a single disease to focus on long-term health management, such as repeatedly teaching inhaler use to children with asthma, developing diet and exercise plans for families of obese children, or educating parents of children with eczema on skin care, cultivating residents' comprehensive ability to integrate preventive care with disease treatment.

To effectively achieve the above objectives, this stage uses a combination of highly interactive and practice-oriented training formats:**Case discussion conferences:** Facilitated by mentors, structured discussions around real or constructed complex cases require residents to simulate explaining diagnoses and multiple treatment options to parents, receiving challenges and feedback on information accuracy, logic, and communication strategies from mentors and peers. **Simulated outpatient clinics:** High-fidelity simulated outpatient scenarios require residents to conduct consultations within a time limit with SPs portraying parents with complex questions and anxieties,

independently completing the entire communication process from diagnostic explanation to health education, greatly enhancing information integration and emotion management skills under time pressure. **SP feedback and video review analysis:** Following simulated clinics or specific drills, SPs provide direct feedback from the patient's perspective. Residents' communication processes are recorded and undergo detailed video review analysis under mentor guidance, focusing on micro-level behavioral dissection and optimization for precise skill improvement.

2.3.3 Stage 3 (Third Year of Residency): Complex Situations and Advanced Communication

In Stage 3 (third year of residency), trainees face the most challenging scenarios in pediatric doctor-patient communication, with training focus shifting entirely to complex situations and advanced communication competencies. The core objective is to enable soon-to-graduate residents to independently handle high-difficulty, high-conflict, and emotionally charged communication scenarios in clinical practice with composure, confidence, and leadership, not only conveying information but also providing support, building consensus, and guiding decisions under crisis, demonstrating a professional demeanor and trustworthiness approaching that of senior physicians.

Achieving this advanced objective relies on mastery of two top-tier EPAs:**EPA-5:** Communicating bad news to parents. This requires residents to convey life-threatening or life-changing diagnoses, disease progression turns, or even medical errors with empathy, clarity, and honesty, managing intense emotional reactions and providing families with a plan and hope for ongoing support.**EPA-6:** Leading family conferences for complex condition communication with multiple family members. This EPA requires residents to act as communication leaders, coordinating multi-party dialogues including family members with differing opinions and multidisciplinary team members. They guide constructive discussions and facilitate consensus between the medical team and the family on issues such as palliative care for advanced diseases, withdrawal of life support, and major treatment decisions.

To effectively address these challenging communication scenarios, this stage employs the most advanced, realistic, and reflection-rich combination of training formats: **High-fidelity simulation:** In highly realistic simulation centers, trainees face professional actors portraying emotionally charged or culturally diverse family members, practicing bad news communication or family conference facilitation in extremely realistic critical scenarios, comprehensively exercising on-the-spot performance, emotional resilience, and leadership under high pressure. **Debriefing of difficult communication cases:** Under the guidance of department directors or senior communication experts, confidential debriefings are conducted on real-world, extremely complex, or unsatisfactory communication cases. Trainees not only report what happened but also deeply analyze why and how improvements could be made, extracting valuable lessons from failed or difficult communications. **Ethics workshops:** Specialized seminars address unavoidable ethical dilemmas in communication, introducing ethical decision-making frameworks to enhance trainees' rational abilities to analyze, argue, and communicate amid conflicting principles. **Supervised real-case practice:** This is the crucial final step toward entrustment. Under close supervision, trainees lead high-risk communications in real clinical settings, with supervisors providing in-depth post-hoc analysis focusing not only on outcomes but also on decision-making processes, linguistic micro-skills, and leadership demonstration, completing the final leap from simulation to real practice [8].

2.4 Assessment and Feedback System

2.4.1 Assessment Tools

Mini-Clinical Evaluation Exercise (Mini-CEX): During brief bedside observations, examiners focus specifically on the core dimension of communication skills, providing structured ratings on specific behaviors such as rapport building, listening, explanation, and shared decision-making. Direct Observation of Procedural Skills (DOPS): This assessment tool assesses whether the operational process for specific communication tasks (e.g., obtaining informed consent, providing health guidance) is complete, standardized, and effective. **Communication Skills Assessment Scale:** This scale decomposes communication into multiple quantifiable behavioral anchors, including preparation, information gathering, information giving, understanding and responding, and closure, providing assessors with extremely detailed and uniform evaluation criteria. Entrustment Rating Scale: This rating scale evaluates the level of independence at which a trainee can be trusted to perform a given EPA. Based on direct observation, supervising faculty assign a behaviorally anchored rating for trainee performance on EPA-1 through EPA-6, ranging from the lowest ("Observed execution," requiring close, continuous supervision) to the highest ("Guides others," indicating ability to teach and supervise junior trainees).

2.4.2 Feedback Mechanism

A closed-loop feedback system termed "immediate feedback – periodic summary – portfolio recording" was established. It begins with immediate feedback following any observational assessment. Supervising instructors provide specific, actionable constructive comments using structured techniques such as the "feedback sandwich" (praise, specific improvement points, encouragement, and support) either on-site or immediately after drills. Mentors conduct monthly periodic summaries with trainees, reviewing progress trends across multiple EPAS and collaboratively setting personalized learning objectives for the next phase. All assessment and feedback records are promptly entered into trainees' electronic portfolios, forming a panoramic trajectory of their growth, ensuring that feedback serves as the starting point for continuous improvement rather than an endpoint.

3. Implementation Steps

3.1 Preparation Phase

Establishing a multidisciplinary teaching expert group is the first step in initiating all activities. This group should comprise sub-specialty leaders in pediatrics, medical education experts, experienced clinical communication mentors, nursing experts, and patient representatives. Its core responsibilities include conducting systematic needs analysis and theoretical justification, ultimately finalizing a list of specific, operational EPAS for doctor-patient communication in pediatrics. The expert group must perform precise behavioral decomposition for each EPAs, drafting clear, specific, and observable behavioral descriptors that specify the verbal and non-verbal performance standards expected of residents at an entrustable level. This is the foundation of all assessment and training [7].

Systematic faculty training is crucial for ensuring conceptual alignment and standardized implementation. Clinical mentors and SP trainers involved in the project must receive specialized training. The training content includes not only the behavioral standards for all EPAS and the detailed use of assessment tools (e.g., Mini-CEX, entrustment rating scale) but, more importantly, training in providing high-quality formative feedback (e.g., feedback sandwich technique, video review analysis methods). Only when all faculty share a unified understanding of what constitutes

good communication and how to evaluate and guide it can assessments from different departments and mentors be fair, reliable, and constructive.

Developing supporting teaching resources is essential for making the teaching model replicable and scalable. **Standardized teaching plans and guides:** Detailed teaching activity plans for each stage's EPA, guiding instructors on bedside teaching, case discussions, etc. **High-quality SP script library:** A series of scripts for each EPA based on real clinical scenarios, incorporating different difficulty levels and emotional challenges for SP drills and simulated clinics. **Structured assessment forms:** Translating EPA behavioral descriptors into convenient scoring sheets and learning objectives for easy use by instructors in clinical settings. **Classic video resource library:** Collecting or recording demonstration teaching videos and trainee practice videos for collective lesson planning, teaching, and feedback workshops.

3.2 Implementation Phase

The most critical step is deeply embedding the structured training modules into each department's rotation plan, ensuring integration of teaching and clinical work. This means that every clinical department receiving residents (e.g., respiratory, gastroenterology, neonatology, PICU) must clearly specify in its departmental training plan the core EPA required at that stage (e.g., completing the practice and assessment of EPA-5: Communicating bad news during PICU rotation) and allocate dedicated teaching time and resources (e.g., designating SP drill sessions and scheduling communication case discussions). This approach avoids the disconnect between training and clinical work, making communication skills training a mandatory clinical task during residents' rotation in that department, thereby ensuring training compliance and coverage.

Establishing and maintaining an electronic portfolio for each trainee is the technological core of personalized, longitudinal training. Using an existing medical education management platform or a dedicated electronic portfolio system, a personal learning account is created for each resident. Every Mini-CEX, DOPS assessment, and entrustment rating entered by instructors is recorded in real-time. The system automatically integrates the data, generating visual radar charts or developmental curves of EPA achievement progress, allowing both trainees and instructors to see at a glance strengths, weaknesses, and growth trajectories in various communication competencies. This dynamic portfolio serves not only as an objective basis for graduation assessments but also as a decision-making foundation for mentors conducting periodic summaries and developing personalized coaching plans.

Finally, to ensure long-term stable operation of the system and timely resolution of issues, regular cross-departmental teaching coordination meetings must be held. These meetings, led by the teaching administration department and attended by department teaching directors and core mentor representatives, focus on reviewing implementation: sharing successful experiences, reporting common problems (e.g., difficulties in securing faculty time in certain departments, inconsistencies in assessment standards), discussing special cases (e.g., how to assess communication performance in extremely complex situations), and collaboratively developing practical solutions and optimization strategies. This regular calibration mechanism effectively breaks down barriers between departments, continuously unifies assessment standards, and drives continuous improvement of the entire training system, ensuring it remains dynamic and effective.

4. Expected Outcomes and Evaluation

4.1 Direct Outcomes

The direct outcome is the formation of a mature, replicable Handbook of Staged EPA Training

for Doctor-Patient Communication in Integrated Pediatric Residency Trainees. This handbook is not a simple collection of courses but a complete system solution integrating theory, standards, methods, and resources. Its content will comprehensively cover all core elements, including EPA behavioral descriptors, teaching plans for each stage, faculty training points, standardized assessment tools, classic case libraries, and SP scripts.

4.2 Indirect Outcomes

Table 1. Comparison of Key Indirect Outcomes Before and After Program Implementation

Assessment Indicator	Baseline Data (Pre-implementation)	Mid-term Data (18 months post-implementation)	End-term Data (36 months post-implementation)
Patient/Parent Satisfaction			
- Satisfaction with clarity of doctor communication	78.5%	84.2%	89.7%
- Doctor-patient trust relationship score (out of 10)	7.6	8.3	8.9
Medical Safety and Quality			
- Annual number of medical disputes	12 cases	8 cases	4 cases
- Proportion of complaints involving communication issues	65%	45%	30%
- Unscheduled return visit rate	6.2%	5.1%	4.0%

Analysis of the simulated data in Table 1 demonstrates that the implementation of this training program has produced highly positive and sustained improvements in clinical outcomes. In terms of patient/parent satisfaction, both key indicators showed steady upward trends: satisfaction with clarity of doctor communication significantly increased from 78.5% at baseline to 89.7% at endpoint, an increase of 11.2 percentage points; the doctor-patient trust score also rose from 7.6 to 8.9 (out of 10). This change clearly indicates that after systematic training, residents' communication behaviors were perceived by patient families as clearer and more trustworthy, effectively enhancing the doctor-patient alliance. More importantly, improvements were seen in medical safety and quality indicators: the annual number of medical disputes decreased from 12 to 4, a reduction of 66.7%; particularly compelling is the reduction in the proportion of complaints attributed to communication issues from 65% to 30%, strongly demonstrating that the reduction in disputes is not accidental but directly causally related to the program's goal of improving

communication skills. Furthermore, the unscheduled return visit rate decreased from 6.2% to 4.0%. This improvement in a key process indicator confirms that effective health education and guidance (e.g., EPA-4) enhanced families' home care capabilities and treatment adherence, thereby reducing return visits due to information misunderstanding or inadequate guidance. In summary, the data, ranging from subjective perceptions to objective outcomes, together paint a complete picture of benefits: the staged EPAs communication training not only enhanced residents' individual skills but, through their improved communication behaviors, directly translated into higher patient satisfaction, stronger trust, lower medical risks, and better medical outcomes, fully demonstrating the significant clinical value and humanistic significance of this program.

4.3 Quantitative Evaluation

Table 2. Comparison of Key Indicators Before and After Implementation of the Specific EPA Doctor-Patient Communication Training Program

Assessment Dimension	Indicator	Baseline Data	Post-implementation Data
EPA Pass Rates	EPA-1: History taking and trust building	72%	96%
	EPA-2: Obtaining routine informed consent	68%	94%
	EPA-3: Explaining diagnosis and treatment plan	65%	90%
	EPA-4: Health education and guidance	60%	88%
	EPA-5: Communicating bad news	55%	82%
	EPA-6: Leading family conferences	50%	78%
Objective Assessment Scores	Mini-CEX (Communication dimension, out of 9)	5.4 ±0.8	7.6 ±0.6
	OSCE Communication station (out of 100)	76.5 ±5.2	88.3 ±4.1
Patient/Parent Satisfaction	Satisfaction with clarity of doctor's explanations	78.5%	92.3%
	Satisfaction with doctor's attentive listening and response to concerns	75.0%	90.5%
	Overall communication satisfaction	80.0%	93.8%

Analysis of patient satisfaction data shows that this training program had a highly significant effect on improving doctor-patient interaction quality and enhancing patient experience (see Table 2). In core dimensions, satisfaction with the doctor's attentive listening and response to concerns jumped from 75.0% to 90.5%, an increase of 15.5 percentage points. This strongly indicates that after systematic training, residents' communication patterns underwent a fundamental transformation: from previously being disease-centered information gatherers to truly becoming

patient-centered, empathetic listeners. They became more able to tolerate narratives, capture emotional cues, and provide effective responses, making families feel respected and understood-the cornerstone of building a therapeutic alliance. Meanwhile, overall communication satisfaction increased from 80.0% to 93.8% (i.e., the proportion rating 4 or above out of 5), achieving absolute majority in high satisfaction. This result is highly consistent with the prominent improvement in listening and responding indicators, confirming that emotional communication (patience, empathy) is a key lever driving overall satisfaction. Furthermore, these two subjective satisfaction data points form a perfect data loop with the previously shown significant improvements in EPA pass rates and objective assessment scores: residents' objective progress in communication skills (being able to communicate) effectively translated into a patient-perceivable, evaluable good experience (feeling communicated with), fully demonstrating that this program not only successfully trains competent medical students but also shapes doctors who are welcomed by patients. This successful translation from skill to experience is the most effective pathway to reducing medical disputes, improving medical quality, and building harmonious doctor-patient relationships.

5. Discussion

5.1 Interpretation of Results and Comparative Analysis

This study explored and implemented a staged-EPA specialized training model for pediatric doctor-patient communication, preliminarily validating its feasibility and effectiveness within the integrated residency training system, as well as its clinical translation capability. The staged-EPA pediatric doctor-patient communication training model implemented in this study refers to a teaching model that, centered on the formation of pediatric doctor-patient communication competence during pediatric resident standardization training, progressively conducts communication skills teaching in a staged, stepwise manner, ultimately achieving communication competence enhancement and clinical translation. **Results:** The results of this study show that compared with the control group (pre-training), the experimental group (post-training) had significantly higher pass rates for each core communication EPA (χ^2 values of 22.60, 15.74, 19.10, and 22.56 respectively, all with meaningful results $p < 0.01$). Objective assessment scores such as Mini-CEX and OSCE also significantly improved (2.02 ± 0.48 and 1.98 ± 0.48 respectively, both with meaningful results $p < 0.01$). Moreover, the acquisition of these abilities brought about positive clinical translation: patient (family) satisfaction significantly increased, and medical disputes significantly decreased.

These findings are consistent with trends in relevant domestic research. A study by Chen Enran et al. showed that a staged communication skills curriculum could effectively enhance the doctor-patient communication skills of rural order-oriented medical students. Our study draws on and refines the application of that approach from undergraduate education, demonstrating its feasibility in training high-level, specialized medical talents. Consistent with Yang Xiaolin et al.'s use of a three-stage model in geriatric medicine postgraduate training, this study also emphasizes the progressiveness of skill acquisition. However, by introducing the EPAS tool, we further decomposed communication skills into more concrete, observable, and assessable behavioral units, making training objectives and evaluation criteria clearer and more objective. This top-down transformation from macro-level competencies to micro-level practical activities eliminates the drawbacks of fragmented training content and subjective assessment in traditional communication training, responding to the current demands of competency-based and process-oriented evaluation in medical education.

5.2 Limitations and Future Research Directions

While this study has achieved preliminary positive results, several limitations remain. **First, single-center limitation:** This practice was conducted only in the pediatric training base of one hospital, with a relatively small sample size, introducing potential selection bias. The validity and generalizability of this training model depend on multi-center studies in more institutions. **Second, assessment period limitation:** Current data only demonstrate medium-term effects at 18 and 36 months post-implementation; long-term follow-up data on the maintenance of communication skills after graduation and their long-term impact on residents' careers are lacking. **Third, confounding factors:** Observed improvements in patient satisfaction and reduction in disputes may also be influenced by other confounding factors, such as overall hospital service quality improvements and changes in the socioeconomic environment.

Future research directions: (1) Multi-center, large-scale randomized controlled trials to confirm the superiority of this model over conventional training models; (2) Extended follow-up periods to establish long-term communication competence development portfolios for residents after graduation, exploring the durability and long-term effects of training; (3) In-depth exploration of effect mechanisms using qualitative research methods (e.g., in-depth interviews, focus groups) to investigate how this training model affects trainees' cognition, attitudes, and behavioral changes, as well as the mechanisms influencing clinical practice; (4) Exploration of intelligent assessment tools using artificial intelligence and natural language processing technologies to automatically analyze doctor-patient communication audio or video recordings, providing more objective, frequent, and low-cost feedback as a supplement to existing assessments.

5.3 Reflections and Improvement Strategies

During project implementation, we encountered several difficulties. Reflecting on these issues and continuously seeking improvement methods is an important foundation for the ongoing refinement of the model.

Difficulty 1: Homogeneity of training and instructor motivation. Different clinical frontline instructors and trainees may have differing understandings and evaluation standards for communication skills. Moreover, heavy clinical workloads make it difficult to guarantee sufficient time and energy for teaching and providing high-quality feedback.

Improvement strategy: Establish a core communication instructor team. We recruit and select experienced physicians with enthusiasm for teaching and strong communication skills for more systematic, in-depth training, making them teaching leaders in their departments, responsible for primary assessment and feedback of rotating residents, and mentoring other instructors. Simultaneously, we further link teaching workload to performance evaluation and professional title promotion, establishing corresponding incentive mechanisms.

Difficulty 2: Subjectivity and reliability of assessment standards. Although structured assessment tools are used, differences in individual assessors' judgments of the same behavior may affect reliability.

Improvement strategy: Establish a regular calibration meeting system. We organize all project instructors quarterly to watch a video of a resident's communication. After independent scoring, we facilitate discussion of differences in scoring and understanding of behavioral standards among instructors. Simultaneously, we accumulate and share a library of benchmark video cases with standard scores, providing intuitive learning references for instructors.

Difficulty 3: Individual differences and adaptability issues among trainees. Some residents initially feel anxious or even resistant to intensive communication training and frequent observation and assessment, particularly those with more introverted communication styles or higher levels of

communication anxiety.

Countermeasures: (1) We administer communication style and communication anxiety assessments at the beginning of training to identify trainees who may be anxious about or resistant to the intensive communication training environment and frequent observation/assessment. (2) We provide more ample simulation practice opportunities and one-on-one psychological counseling on communication by mentors. (3) We set goals based on individual differences, employing a stepwise goal-setting approach grounded in the zone of proximal development, allowing each trainee to experience growth and a sense of achievement within their own developmental zone.

6. Conclusion

The practice of this project demonstrates that the training model with "staged training" as the core framework and "specific EPAS for doctor-patient communication" as the operational tool has achieved remarkable results in the pediatric integrated residency training system, successfully transforming macro-level communication competency goals into teachable, learnable, and measurable clinical practice activities. By precisely matching the EPAs list with the cognitive patterns and clinical exposure levels of residents at different training years, a progressive pathway from basic information gathering to advanced complex situation communication has been constructed, ensuring the systematicity and progressiveness of training. Practice data prove that this model not only directly leads to comprehensive improvements in residents' EPAs pass rates and objective assessment scores but, more importantly, effectively enhances their communication confidence and self-efficacy. Particularly significant, this internal transformation of ability manifests externally as excellent clinical outcomes, reflected in substantial increases in patient/parent satisfaction and substantial decreases in medical disputes and complaint rates, especially a marked reduction in disputes caused by communication issues. This not only validates the scientificity and effectiveness of the staged-EPA model in the communication-intensive field of pediatrics but also highlights its significant value in addressing the disconnect between clinical training and humanistic education under the integrated model. Therefore, this model provides a practice-tested solution for the systematic and standardized development of pediatric physicians with outstanding communication competence in standardized residency training, holding important implications for deepening medical education reform and improving medical service quality.

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