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Students' Preferences on Rotation Scheduling of *Tuina* Department for Professional Master's Students: A Student Perspective Survey

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Abstract: *Objective:* To clarify the preferences and core demands of professional Master's students in *Tuina* at Yunnan University of Chinese Medicine regarding "concentrated" versus "dispersed" rotation schedules in the *Tuina* department, as well as their preferred year for primary rotation, providing evidence for optimizing rotation programs and improving the quality of standardized training. *Methods:* Paper questionnaires, including two multiple-choice questions and one open-ended question, were distributed to 30 professional *Tuina* Master's students, completed on site, and collected immediately. Descriptive statistics were used to analyze preference distributions. *Results:* A total of 30 questionnaires were distributed and 30 valid responses were collected, achieving a 100% response rate. Among them, 23 students (76.7%) supported "concentrated training," while seven students (23.3%) preferred "dispersed training." Regarding rotation year preference, 18 students (60.0%) selected the second year for concentrated *Tuina* rotations, eight students (26.7%) selected the third year, and four students (13.3%) selected the first year. The core demands supporting concentrated training were "skill continuity, deep involvement in diagnosis and treatment, and smooth mentorship transition," whereas those supporting dispersed training were "integration of multi-department knowledge, coordination of research time, and avoidance of fatigue from a single department." *Conclusion:* Most professional *Tuina* Master's students prefer concentrated *Tuina* rotations in the second year. It is recommended that institutions adopt a "second-year core department concentrated + auxiliary department flexible dispersed" model and establish flexible coordination and feedback mechanisms to balance clinical skill development with individualized growth needs.

Keywords: *Tuina*; Professional Master's degree; Standardized training; Rotation schedule; Concentrated training; Dispersed training

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1. Introduction

The professional Master's program in *Tuina* (massage) aims to cultivate clinically practical talents.

The rotation schedule (concentrated or dispersed) and the rotation year in the *Tuina* department during standardized training directly affect the development of clinical thinking and skill proficiency in students. Concentrated training typically involves continuous rotation in a single department (e.g., 10 months), which facilitates continuity in skill training. Dispersed training splits the rotation into multiple stages (e.g., 1–3 months per stage), promoting cross-departmental knowledge integration and scheduling flexibility. Rotation year considerations typically include the first year (course-dominated), second year (transition between courses and clinical practice), and third year (preparation for graduation and employment), with each stage having distinct time characteristics and learning priorities. This study, from the student perspective, investigates professional *Tuina* Master's students' preferences and core demands regarding rotation mode and year, providing evidence for optimizing training schedules.

As the core institution for TCM talent cultivation in the Yunnan border region, Yunnan University of Chinese Medicine must align its professional *Tuina* Master's training program with regional healthcare needs and student development demands, consistent with the concept of adapting training for border-region *Tuina* graduate students as discussed in "Optimization of Training Models for *Tuina* Professional Degree Graduate Students in Ethnic Minority Areas under the Medical-Education Collaborative Context" [1]. However, there is currently no specific survey on the rotation time preferences and rotation year choices of professional *Tuina* Master's students at this university, making it difficult to accurately grasp students' dual preferences and underlying needs. Therefore, this study surveyed 30 professional *Tuina* Master's students using paper questionnaires to collect opinions on rotation schedule and rotation year, aiming to provide data support for optimizing training programs, balancing "skill depth," "time flexibility," and "year appropriateness," and facilitating the cultivation of clinically competent *Tuina* professionals. The study design referenced the survey logic focused on Master's training time requirements in "Student Needs Survey on Rotation Schedules in Standardized Training of Professional Master's Students in TCM Institutions" [2].

2. Methods

2.1. Participants

Participants: Thirty professional *Tuina* Master's students from Yunnan University of Chinese Medicine were selected, covering the first, second, and third years to ensure representation across different training stages.

2.2. Research methods

Questionnaire design: A paper questionnaire was used, consisting of three core sections

Multiple-choice question 1 (Rotation mode): "Which rotation schedule do you prefer for the *Tuina* department?" (Options: A. Concentrated training; B. Dispersed training). "Concentrated training" was defined as "continuous 10-month rotation in the same department," while "dispersed training" was defined as "rotation split across different stages (e.g., one department per month)," in line with the 2021 "Implementation Measures for Standardized Training of TCM Resident Physicians," to avoid misunderstanding [3].

Multiple-choice question 2 (Rotation year): "In which year should the main rotation period in the *Tuina* department be scheduled?"(Options: A. First year; B. Second year; C. Third year). "Main rotation period" was defined as the stage comprising more than 60% of the total *Tuina* rotation duration, ensuring focus on the core period.

Open-ended question: "Please briefly explain your reasons for choosing the rotation mode and rotation year (e.g., course learning, skill training, research coordination, graduation preparation)," to collect students'

deeper demands.

Questionnaire distribution and collection: The researcher distributed questionnaires during students' centralized learning periods (e.g., after Master's meetings), explained the survey purpose in person(anonymous, for academic research only, no personal information collected), and collected them immediately after completion to ensure authenticity and response rate.

2.3. Quality control

Pre-survey optimization: Prior to the formal survey, five professional *Tuina* Master's students were selected for a pilot survey. Feedback was used to refine questionnaire wording (e.g., clarifying the time frame of "concentrated/dispersed training") to ensure clarity and avoid ambiguity.

Anonymous completion: Questionnaires did not include names, student IDs, or other identifiers, reducing students' concerns.

Data verification: After collection, two researchers independently entered the data (e.g., number of students preferring each year, keywords from open-ended responses) and cross-checked to ensure completeness and accuracy.

2.4. Data analysis

Descriptive statistics were used to calculate the number and percentage of students supporting concentrated/dispersed training and selecting first, second, or third-year rotations. Keywords from open-ended responses (e.g., "skill continuity," "balance between courses and clinical practice") were extracted and categorized to summarize core dimensions of students' rationale for mode and year selection.

3. Results

3.1. Questionnaire recovery

A total of 30 paper questionnaires were distributed and 30 valid responses were collected, yielding a 100% response rate and validity. The distribution of students across grades is shown in **Table 1**, with a clear representation of rotation stages, indicating a reasonable sample structure.

Table 1. Grade distribution of survey samples

Grade	Number of students	Percentage (%)	Standardized training stage
Grade 3	10	33.3	Have completed 2 years of standardized training and have complete rotation experience
Grade 2	12	40.0	Undergoing standardized training(have rotated in *Tuina* Department)
Grade 1	8	26.7	About to enter standardized training and understand the requirements of standardized training

The table illustrates the grade distribution of the surveyed sample. Among them, 10 students (33.3%) were in the third year, having completed two years of standardized training with comprehensive rotation experience; 12 students (40.0%) were in the second year, currently undergoing training and having already rotated through the Department of *Tuina*; and 8 students (26.7%) were in the first year.

3.2. Rotation modes

Table 2 indicates that students show a significantly stronger preference for centralized standardized training compared to decentralized training, with 23 students (76.7%) selecting the former and seven students (23.3%) choosing the latter. Within centralized training, second-year students participated more frequently (10 students, 43.5%), whereas in decentralized training, first-year students had a relatively higher participation rate (three students, 42.9%), suggesting variations in preferences across academic years.

Table 2. Distribution of students' preferences for *Tuina* department rotation modes

Preference mode	Total number of students	Total proportion (%)	Distribution and proportion (%) in each grade		
			Grade 1	Grade 2	Grade 3
Centralized standardized training	23	76.7	5 / 21.7	10 / 43.5	8 / 34.8
Decentralized standardized training	7	23.3	3 / 42.9	2 / 28.6	2 / 28.6

3.3. Grade preferences

Table 3 further shows that a total of 4 students opted for first-year rotations, including three first-year students (75.0%) and one second-year student (25.0%), with no third-year students making this choice; For second-year rotations, 18 students participated: three from the first year (16.7%), eight from the second year (44.4%), and seven from the third year (38.9%). For third-year rotations, eight students participated: two from the first year (25.0%), three from the second year (37.5%), and three from the third year (37.5%).

Table 3. Distribution of students' preferences on annual rotation in *Tuina* department

Rotation grade	Total number of students	Distribution and proportion (%) in each grade		
		Grade 1	Grade 2	Grade 3
Grade 1	4	3 / 75.0	1 / 25.0	0 / 0.0
Grade 2	18	3 / 16.7	8 / 44.4	7 / 38.9
Grade 3	8	2 / 25.0	3 / 37.5	3 / 37.5

3.4. Open-ended question: Analysis of students' selection rationale

Open-ended feedback from 23 supporters of concentrated training, seven supporters of dispersed training, four first-year selectors, 18 second-year selectors, and eight third-year selectors was analyzed for keyword extraction, core reason classification, and typical expressions, as follows:

3.4.1. Reasons for rotation mode selection

(1) Core reasons for supporting concentrated training (high-frequency keywords)

(a) Skill continuity: "Concentrated rotation in the *Tuina* department allows continuous patient follow-up, mastering the full process from consultation and syndrome differentiation to manual techniques; dispersed rotation often changes departments before fully familiarizing, making it easy to forget" (Third-year student)

(b) Deep involvement in diagnosis and treatment: "Concentrated rotation allows tracking of the complete treatment cycle for chronic patients, such as *Tuina* therapy for lumbar disc herniation; dispersed rotation only exposes students to fragments, limiting the learning of systematic treatment approaches"

(Second-year student).

(c) Smooth mentorship transition: "Studying intensively with the same mentor allows the teacher to understand my operational weaknesses and provide targeted guidance; dispersed rotation requires adapting to new teaching styles repeatedly, reducing learning efficiency" (Third-year student).

(2) Core reasons for supporting dispersed training (high-frequency keywords)

(a) Multi-department knowledge integration: "Dispersed rotation allows intermittent training in the rehabilitation department to learn exercise therapy combined with *Tuina*, such as rehabilitation for stroke patients, optimizing the '*Tuina* + Rehabilitation' integrated program" (Second-year student).

(b) Research time coordination: "Concentrated rotation involves heavy clinical tasks, leaving no time for data collection; dispersed rotation is lighter, allowing time for writing reviews or organizing cases" (Third-year student).

(c) Avoiding learning fatigue: "Two months in a single department can be monotonous; dispersed rotation changes the pace and maintains learning interest" (First-year student).

3.4.2. Reasons for rotation year selection

(1) Core reasons for choosing first-year rotation (high-frequency keywords)

(a) Early development of clinical thinking: "First-year students mainly learn theory, avoiding purely textbook-based knowledge" (First-year student)

(b) Reserved time for subsequent activities: "Completing core rotations in the first year provides time in the second and third years to focus on research or employment preparation without rushing clinical progress" (First-year student)

(2) Core reasons for choosing second-year rotation (high-frequency keywords)

(a) Balance between coursework and clinical practice: "First-year students need to focus on foundational knowledge and lack time for deep clinical practice; third-year students face thesis and job pressures; second-year students have mastered basic knowledge and can concentrate on clinical skills without compromising either" (Third-year student)

(b) Key period for skill enhancement: "Second-year students have a foundation in professional theory, making departmental rotations more effective for hands-on practice, such as mastering *Tuina* technique force, compared to first-year students learning blindly" (Second-year student).

(3) Core reasons for choosing third-year rotation (high-frequency keywords)

(a) Aligning with graduation schedule: "Third-year students have mastered foundational knowledge and diagnostic procedures, allowing full engagement in clinical practice; cases encountered during rotation can also serve as material for the graduation thesis, achieving dual benefits" (Third-year student).

(b) Focus on employment preparation: "Third-year students face job searching; rotating more in departments helps accumulate patient encounter experience, increasing confidence for clinical practical assessments during interviews" (Second-year student).

3.5. Additional student suggestions

Fifteen students (50% of respondents) provided additional suggestions regarding rotation mode and year compatibility, time flexibility, and individualized needs. Some recommended establishing a "rotation-stage feedback mechanism" instead of collecting opinions only at the semester's end—for instance, during the

midterm of second-year concentrated rotation (around month 5), small discussion sessions could assess students' views on rotation duration and departmental suitability; if many students report "monotonous department content" or "fatigue due to prolonged duration," subsequent arrangements could be adjusted to better meet actual learning needs.

4. Discussion

4.1. Reasons for choosing training mode

(1) Reasons supporting concentrated training

The advantages of concentrated training mainly lie in skills, clinical practice, and mentorship. First, concentrated rotation in the *Tuina* department ensures continuity of learning, allowing students to systematically master the full process from consultation, syndrome differentiation, to manual techniques within the same department, preventing skill and knowledge fragmentation from frequent department changes. Second, it facilitates deep engagement in patient care, enabling tracking of complete treatment cycles for chronic conditions, such as *Tuina* therapy for lumbar disc herniation, gradually developing systematic clinical thinking; in contrast, dispersed rotation often exposes students only to fragmented clinical experiences. Finally, consistent mentorship with the same teacher allows tailored guidance based on students' weaknesses, whereas frequent mentor changes can reduce learning efficiency [4].

(2) Reasons supporting dispersed training

The advantages of dispersed training mainly include knowledge expansion, research scheduling, and learning rhythm. Cross-department rotation allows students to acquire experience across disciplines—for example, learning exercise therapy in the rehabilitation department and integrating it with *Tuina* techniques to create a "*Tuina* + Rehabilitation" program suitable for stroke rehabilitation. Additionally, dispersed rotation imposes lighter clinical pressure, enabling students to manage research tasks such as data collection, literature reviews, or case organization, whereas concentrated rotation often leaves insufficient time for research. Moreover, prolonged single-department rotation may induce fatigue; dispersed rotation adjusts learning environments and pace, maintaining interest and engagement [5].

4.2. Reasons for choosing rotation year

Each rotation year serves distinct purposes. First-year rotation helps students engage in clinical practice early, building clinical thinking while avoiding abstract, purely theoretical learning, and reserves time for subsequent research and employment preparation, alleviating dual pressures in the second and third years. Second-year rotation balances coursework and clinical practice; students already possess a theoretical foundation and can focus on improving clinical skills efficiently, particularly mastering key techniques such as force control in *Tuina*. Third-year rotation aligns with graduation and employment timelines; students can apply learned theory and diagnostic processes in practice, conduct thesis research using cases, integrate research and clinical work, and gain patient encounter experience to support clinical skill assessments for employment [6].

The survey suggests that a "core department second-year concentrated + auxiliary department flexible dispersed" mechanism preserves the advantage of a solid clinical foundation in the second year, ensures continuity in core skill learning, and complements knowledge breadth through auxiliary department dispersed rotations. Reserving one flexible day per week addresses insufficient time for research or cross-department learning during concentrated rotations. The adjustment process and pre-sharing of interpretations reflect consideration of individual differences—resolving conflicts among clinical practice, research, and exams,

reducing learning gaps from passive adjustments, and guiding lower-year students to make informed choices. A routine feedback loop allows dynamic optimization of the program, preventing rigidity. Overall, this student-centered approach balances learning efficiency and individual adaptation; specifying the scope of flexible, dispersed departments and rules for flexible days can further enhance implementation effectiveness [1,3].

5. Conclusion

When optimizing the *Tuina* department rotation program, institutions should prioritize a dual-dimensional model of "core department second-year concentrated + auxiliary department flexible dispersed." This model aligns with the 2021 Implementation Measures for Standardized Training of TCM Resident Physicians and the training direction of "balancing core skills and multi-domain adaptation for *Tuina* professionals in border areas" [1,3]. Concurrently, establishing flexible coordination mechanisms and guidance for lower-year students addresses both the majority clinical skill enhancement needs and the minority individualized demands, ultimately improving the quality of professional *Tuina* Master's standardized training and cultivating *Tuina* professionals suited to the healthcare needs of Yunnan's border region.

Disclosure statement

The authors declare no conflict of interest.

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