

# Investigation and Countermeasure Research on the Current Situation and Countermeasures of Medical Professional Master Training under the Integrated Training Mode of “Two-Track Integration”

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## Abstract

The training goal of postgraduates majoring in clinical medicine is to train compound medical talents with post competence in the new era, that is, not only to master conventional medical knowledge and clinical skills, but also to have the training of scientific research ability. This paper discusses the problems encountered by the master of clinical medicine in the standardized training of residents, such as self-cognition, time conflict, lack of attention, lack of scientific research ability, humanistic spirit education, salary and mentality, and puts forward relevant solutions.

## Keywords

Standardized Training for Residents, “Two-Track Integration” Mode, Professional Masters of Clinical Medicine

## 1. Two-in-One Model

In 1997, the 15<sup>th</sup> meeting of the academic degrees Committee of the State Council of China examined and approved the measures for the trial implementation of Professional degrees in Clinical Medicine. The following year, several opinions on adjusting the types of Medical degrees and setting up Professional degrees in Clinical Medicine and the measures for the trial implementation of Professional degrees in Clinical Medicine were formally promulgated, establishing

the training system for postgraduates majoring in clinical medicine in China, and hereby set up a professional degree in clinical medicine. Since 2014, newly recruited students studying for a master's degree in clinical medicine (hereinafter referred to as "Junior Master") will not only complete their postgraduate studies, but also participate in the standardized training of residents as students (hereinafter referred to as "regular training"). This is the so-called "two-in-one" model. For the students under this model, they need to complete 33 months of clinical rotation study, but also need to complete a series of courses and corresponding scientific research tasks. Due to the limitation of time and energy, professional masters will encounter considerable difficulties in learning professional knowledge. In addition, the "two-in-one" model still needs to be improved in many aspects. This study makes an in-depth analysis of some existing problems and puts forward some solutions in order to provide some suggestions and references for professional masters.

## **2. The Problems and Phenomena Existing in the "Two-Track in-One" Model**

### **2.1. Students' Self-Cognition**

Medical scientific research is a scientific research activity for people to explore the essence and law of human life and disease phenomena, to study and formulate strategies and measures to transform the living environment, maintain and improve health, prevent diseases, promote physical and mental rehabilitation, and improve population quality. However, some graduate students think that only entering the laboratory experiment can be regarded as scientific research, and unlike academic graduate students, because of the busyness of clinical work, some graduates think that they have no energy to carry out scientific research while completing clinical tasks. This narrow cognition has been deeply rooted in the hearts of some clinical graduate students (Zhang et al., 2019).

### **2.2. Time Conflict: How to Have Both Scientific Research and Clinic?**

According to relevant research, in terms of course teaching schedule, Junior Master's satisfaction is relatively low. The reason is that going to work during the day and attending classes at night make Junior Master generally under greater pressure (Fan et al., 2017). At present, most of them undertake the work of residents of the same level, and it has become the norm to work overtime after 8 hours of work, so it is difficult to ensure the tasks of scientific research and course study. On this basis, specialized education should be treated differently from the traditional training of residents (Du, 2018). During the training period, Junior Master must complete the qualification certificate of medical practitioner, standardized training certificate of resident, master's degree certificate and master's diploma before he can graduate, that is, the so-called "four certificates in one". Due to many tasks, heavy pressure and continuous examinations, Junior

Master is basically in the state of preparing for the examination in the whole process of clinical rotation learning. In this state, he can only make use of his spare time to persist in the study of scientific research and bear the pressure of far more than his peers.

### **2.3. Lack of Attention from Relevant Personnel: Serious Formalism**

Due to the short-time, high-density rotation and the lack of reward and punishment mechanism, some of them show the tendency of idling and lazy learning, which is not active, active and non-learning, and the source is the lack of attention to rotation learning in non-professional departments. Teaching teachers lack teaching experience or teaching motivation, only to reduce their own work pressure and avoid teaching risks, and to deal with simple and repetitive work to students, so that the effect of learning and training is poor.

### **2.4. Is the Scientific Research up to the Standard and Have a Certain Scientific Research Ability?**

With the development of science and technology, in the future, people's attention to the right to health and the right to life will inevitably be strengthened, and the quality and skills of doctors must also be continuously improved, which determines that the quality and requirements of regular training can only be continuously improved (Cui & Wang, 2016). However, under the two-track in-one mode, there exists the phenomenon of "emphasizing clinical practice rather than scientific research" (Fu & Zhu, 2016). During the period of undergraduate study in clinical medicine, most people have insufficient scientific research experience and weak scientific research foundation. After they start graduate studies, they still fail to receive enough scientific research education, and their own scientific research ability is poor. As for mentors, some mentors do not give students enough scientific research guidance because they are busy with their work or do not pay enough attention to it. As for the school, in order to ensure the smooth progress of students' clinical rotation learning, they have to compress the course time, or arrange to study after work or on weekends, resulting in the shortcomings of low learning efficiency, short time and poor systematicness. A survey in a hospital in China shows that clinical postgraduates have some problems such as heavy learning tasks and compressed research time, which leads to insufficient training of clinical scientific research ability of clinical postgraduates (Chen et al., 2023).

### **2.5. Is the Mentor Capable and Good at Direction?**

As far as Junior Master is concerned, the tutor is undoubtedly the first guide on the road of scientific research, so the scientific research level of the tutor has a key impact on the scientific research study during the master's degree (Pei et al., 2019). In recent years, in response to the national policy of expanding enrollment, while the number of graduate students is increasing, the number of master

mentors is also increasing, and there is a great difference in the level of mentors (Wang et al., 2021). Some mentors lack teaching experience and even teach simply to increase their “seniority”. To deal with the mentality, which undoubtedly increases the difficulty of the master’s educational work. On the other hand, most tutors pay attention to clinical work and have limited time and energy, so they are unable to give sufficient guidance to students, and some of them have the phenomenon of “stocking”, and even their actual scientific research ability after graduation is basically the same as that of undergraduates. There is no shortage of colleges and universities in remote and backward areas. The result of a questionnaire in a hospital in China shows that the tutor’s attitude towards the connotation and cultivation of medical humanistic quality is generally good, but at the same time, the form of tutor’s medical humanistic quality training is single, the effect is not good, and the mentors with different characteristics have different attitudes towards the cultivation of clinical medical humanistic quality (Zhang et al., 2023).

## 2.6. Humanistic Spirit

At present, humanistic education is still lacking in the early clinical education and teaching process of residents (Xu et al., 2010; Yin et al., 2020). The service object of the medical industry is people, so practitioners are required to pay attention to humanistic care. With the development of society, medicine has gradually changed from biomedical model to bio-psycho-social medical model, and medical colleges and universities also pay more attention to humanistic education (Xia, 2006). Humanistic care is a fine tradition of our country. Sun Simiao said in the “moxibustion of Qianjin Wing Policy” that doctors have the same meaning. If he is good at intention, he is a good doctor. However, a recent survey shows that most of the graduates lack the knowledge of humanistic care, which reflects the deficiency of graduate education for humanistic care education (Bu et al., 2020). A study shows that the performance of junior college students in medical history collection, physical examination, clinical diagnosis and treatment plan and knowledge examination is significantly better than that of regular training students, but there is no significant difference in communication skills and humanistic care between the two groups (Wu et al., 2020). In clinical work, in the face of patients who are troubled by illness, this not only requires front-line specialists to have excellent professional skills, but also requires them to have the spirit of humanistic care (Sun et al., 2019). As the famous saying “occasionally cure, often help, always comfort” said, the great help that humanistic care brings to patients cannot be ignored.

## 2.7. Salary and Mentality Created

As far as China is concerned, only Shanghai and a few developed cities enjoy the “dual treatment” of postgraduates and residents (Wang, 2015). In most areas, while Junior Master undertakes the same work as regular training doctors in the

same period, their salary and treatment lags behind the latter (Tian et al., 2021). The mentality of not suffering from scarcity but suffering from uneven mentality makes some of them lazy and lazy. It is extremely detrimental to the work of post-graduate education. In terms of long-term impact, it is easy to spread negative mentality among Junior masters. In recent years, there are a lot of tragic news caused by the mentality of graduate students, and the mentality of graduate students has been paid more and more attention. A recent study showed that among the 235 samples surveyed, 148 (63.0%) had symptoms of depression and 162 (68.9%) had increased perceived stress. the main pressures were economic pressure, academic pressure, scientific research pressure and employment pressure (Zhu et al., 2020). A healthy state of mind is the basis of graduate education and learning. Attaching importance to the mental health of graduate students is not only the work of schools and mentors, but also should be valued and supported by policies.

### **3. Solution**

#### **3.1. Guide Junior Master to Set up Correct Learning Concept and Consciousness**

In the era of ever-changing science and technology, the quality of talents is related to the development of the country. As a national high-level talent team, graduate students are an important decisive force to realize the great rejuvenation of the Chinese nation. To a certain extent, they represent the core competitiveness of the country. The difference between Junior Master and ordinary students is that they not only belong to graduate students at school, but also play the role of clinicians in hospitals. When they go to work in the future, they need to undertake the important task of saving lives and treating patients, and strengthen students' ideological and political education to cultivate solid professional skills to meet the needs of social development. According to the 2021 China Health Statistical Yearbook, only 5.9% of the health personnel in medical institutions have postgraduate degrees. In 2020, China's health personnel will mainly have college and undergraduate degrees. The "two-track in one" system helps to improve the professional quality and training efficiency of clinicians, meets the educational requirements of clinicians, and contributes to the medical cause and social development.

#### **3.2. Attach Importance to Scientific Research Education and Strengthen the Cultivation of Scientific Research Quality**

The students report their work to the tutor regularly, and the mentor assigns tasks to the students regularly. The department regularly holds academic lectures, department exchanges, case discussions and other academic activities to broaden the scientific research horizons of postgraduates. Attach importance to the construction of students' mentality, make them establish a good learning mentality, change from the negative mentality of "want me to learn" to the posi-

tive mentality of “I want to learn”, so that the phenomenon of idling and lazy learning can be solved, and put an end to the emergence of extreme mentality such as “lying flat” and “laying apart”. Group meetings are held regularly, during which the working process and learning progress can be shared with each other, and the tutor can guide the students and arrange the work, which can make the work of the scientific research team smoother and more tacit.

### 3.3. Double Tutor System or Multi-Tutor System

Double-tutor or multi-tutor system is a hot topic in recent years, that is, two or more mentors set up mentor groups to guide students. This advantage lies in that the implementation of multi-tutor system depends on the multiple wisdom of mentors inside and outside the school, brainstorming and complementary advantages, constantly improve students' knowledge structure, ensure the seamless connection from theoretical learning to practical ability training, improve the effectiveness of guidance and the training quality of graduate students' practical skills. Ensure to meet the social demand for high-level applied compound medical talents (Zeng et al., 2021; Li & Yu, 2021; Wang et al., 2018; Zhu et al., 2021). The multi-tutor system can make the time control of mentors more free, increase the fault tolerance rate of students' choice of mentors, increase the choice of students' topics, and avoid the above problems of “stocking” students, mentors' lack of time and lack of attention. To a certain extent, the problem of insufficient ability of mentors can be solved.

### 3.4. Raise the Salary of Junior Master Appropriately

In essence, Junior Master is a student, but he also undertakes the grass-roots work of the hospital. A good salary can not only solve the mentality problem of Junior Master, but also improve the service quality of the hospital and make his work more positive. Establish a good and appropriate reward and punishment mechanism, standardize specialized learning, avoid professional depravity and waste of learning resources, and spur them to better complete their studies. This measure needs the support of the policy, like the policy of training doctors, to avoid the disobedience of local hospitals and the space for policy interpretation, to protect the basic rights of specialists, and to maintain education.

## 4. Conclusion

How to train comprehensive clinical talents for the country under the “two-track in one” mode is a problem that we have been discussing all the time. Through the continuous exploration of post-graduate education, we can find more problems, so as to continue to improve and innovate, and find a way that is more suitable for the cultivation of clinical medicine in our country. If the above problems are solved after the improvement proposed in this paper, we can try to implement it beyond the wider environment. At the same time, this article is limited to the author's personal views and horizons, and in the field of future in-

vestigation, more improvements and improvements are needed. In order to further formulate and improve the implementation of graduate education policy, comprehensively train master talents, and have certain insight and thinking on the future graduate education, this study puts forward some opinions and ideas on the cultivation of graduate educations. with a view to further improve and improve the implementation of graduate education policy, comprehensively train master talents, and have some inspiration and thinking for the future graduate education.

### Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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