

Pain medicine specialists in compulsory service: Struggles, limitations, and policy needs

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SUMMARY

Objectives: Compulsory service programs aim to improve healthcare equity by distributing specialists to underserved regions. However, pain medicine specialists face unique challenges, including professional isolation, limited resources, financial dissatisfaction, and restricted career growth. This study evaluates their experiences and explores potential policy improvements.

Methods: A cross-sectional survey was conducted among pain medicine specialists who have completed or are fulfilling compulsory service. The survey included multiple-choice, Likert-scale, and open-ended questions assessing demographics, workload, resource availability, financial compensation, career impact, and job satisfaction. Descriptive statistics and thematic analysis were applied using SPSS 20.0.

Results: Forty-nine specialists participated, with an average of 15.1 years in practice. Reported challenges included inadequate access to essential medical equipment (36.8%), lack of trained support personnel (67.3%), and professional isolation (63.3%). Financial dissatisfaction was high (48.9%), and 65.3% lacked additional housing or travel support incentives. Career limitations were notable, with 40.8% reporting restricted access to continuous education and 45.7% feeling that compulsory service negatively impacted their professional growth. Safety concerns, including workplace security and encounters with drug-seeking patients, were raised by 27.7% of respondents.

Conclusion: Compulsory service poses significant challenges, affecting job satisfaction, career advancement, and service effectiveness. Policy improvements should include structured financial incentives, better resource allocation, support for continued education, and enhanced workplace security to improve retention and care quality in underserved areas.

Keywords: Compulsory service; health policy; pain medicine.

Introduction

Compulsory service obligations for physicians have been a longstanding policy in many countries, aiming to address workforce distribution and ensure healthcare access in underserved regions.^[1] However, for subspecialists, particularly pain medicine specialists, the implications of repeated compulsory service periods pose unique challenges. Pain medicine specialists often complete extensive training, including general medical practice, primary specialty training, and a subsequent fellowship in pain medicine. Consequently, they may be required to

serve multiple compulsory service periods throughout their careers, leading to concerns about professional development, job satisfaction, and overall career trajectory.

Despite its intended benefits, compulsory service has been associated with various professional and personal challenges.^[2] Previous research has highlighted issues such as limited access to essential medical equipment, professional isolation, high patient workload, and restricted opportunities for academic advancement.^[1,2] Furthermore, the lack of structured incentives and inadequate financial

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compensation exacerbate these concerns, making it difficult for specialists to maintain a high standard of care and professional fulfillment.^[2]

This study aims to evaluate the challenges faced by pain medicine specialists during their compulsory service period. Through a comprehensive survey analysis, we explore key areas including professional workload, resource availability, career impact, financial and institutional support, and overall job satisfaction. By identifying these challenges, we seek to contribute to policy discussions on improving working conditions for pain medicine specialists and ensuring that compulsory service policies align with healthcare needs and professional development goals.

Material and Methods

Ethical approval for this study was obtained from the Non-Interventional Clinical Research Ethics Committee of Malatya Turgut Özal University. The study was conducted according to the ethical standards of the institutional research committee and the 1964 Helsinki Declaration and its later amendments.

This study utilized a cross-sectional survey design to assess the experiences and challenges faced by pain medicine specialists during their compulsory service period. The survey was distributed electronically via Google Forms (Google LLC, Mountain View, CA, USA) to pain specialists who had completed or fulfilled their compulsory service obligations. Participation was voluntary and anonymous, ensuring confidentiality and encouraging candid responses. Prior to completing the survey, all participants provided informed consent.

The questionnaire consisted of multiple-choice, Likert-scale, and open-ended questions, covering key aspects such as demographic information, professional workload, access to medical equipment and resources, financial compensation, professional development opportunities, job satisfaction, and perceived institutional support. The survey also included questions regarding participants' perceptions of patient management challenges and safety concerns, and suggested policy improvements.

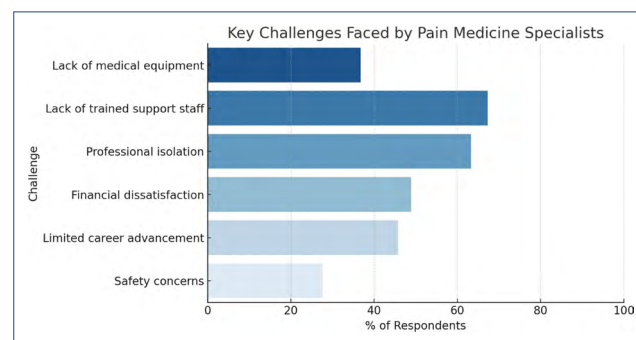


Figure 1. Key challenges faced by pain medicine specialists in compulsory service.

Statistical Analyses

All statistical analyses were performed using SPSS 20.0 (IBM, Armonk, NY, USA) to ensure accuracy and reliability. Descriptive statistics were used to analyze categorical variables, including frequency distributions and percentages. Mean, median, and standard deviation values were calculated for continuous variables. Thematic analysis was conducted for open-ended responses to identify recurring themes and key concerns.

Results

This study included 49 pain medicine specialists with an average age of 39.8 years (33–55). Among the participants, 53% were male and 47% were female. The average number of years in medical practice was 15.1, ranging from 10 to 31 years.

Regarding the types of pain encountered, low back pain was the most frequently reported condition during compulsory service, cited 36 times, followed by cancer pain (13 cases), neck pain (10 cases), and fibromyalgia (7 cases). Other less common pain conditions included headaches and joint and shoulder pain.

Participants reported various challenges related to hospital conditions and infrastructure for pain management, which are summarized in Figure 1. The availability of essential medical supplies and equipment, such as nerve block kits and ultrasound devices, was rated as “moderate” by 32.7% of respondents. However, 28.6% described it as “poor,” and only 22.4% considered it “good.” A small proportion found availability “very poor” (8.2%) or “very good” (8.2%). Referral of complex chronic pain patients to advanced care centers also posed difficulties, with 38.8% experiencing occasional challenges, while 6.1% reported

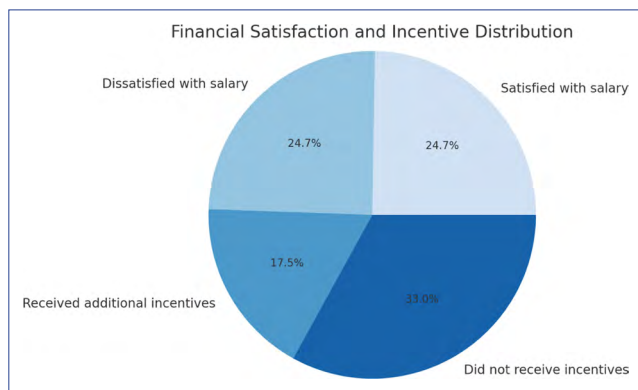


Figure 2. Financial satisfaction and incentive distribution.

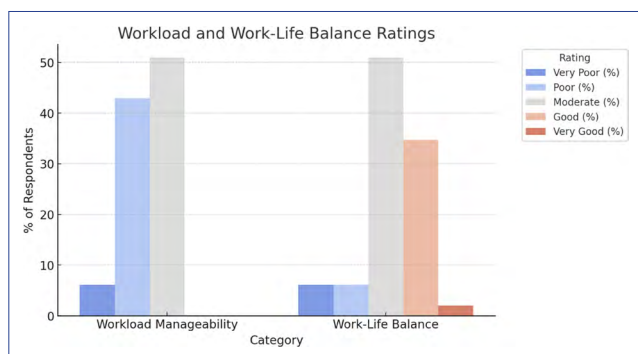


Figure 3. Workload and work-life balance ratings.

frequent obstacles. Overall, hospital conditions were mainly rated as “moderate” (42.9%), but a considerable proportion of respondents found them to be either “poor” (14.3%) or “very poor” (8.2%).

42.9% of respondents reported access to advanced diagnostic tools, such as ultrasound, MRI, and CT scans, as “easy,” whereas 24.5% considered access “moderate.” Notably, 8.2% of participants reported difficulties accessing such diagnostic services. Additionally, most respondents (67.3%) indicated that they lacked adequately trained support personnel, including nurses, technicians, and physiotherapists, which hindered procedural efficiency.

Financial compensation was another concern, with 48.9% of respondents expressing dissatisfaction with their earnings, while the same proportion reported being satisfied. Only 2% rated their financial satisfaction as “moderate.” Furthermore, 65.3% of participants stated they did not receive additional incentives, such as contract-based employment, housing support, or travel allowances, while 34.7% benefited from such programs. The distributions are shown in Figure 2.

The study also examined professional development and career progression. While 59.2% of participants stated they had sufficient access to continuous medical education opportunities in pain medicine, 40.8% reported limited access. Additionally, professional isolation was a common issue, with 63.3% of specialists feeling isolated in their practice settings. The lack of community and support was also notable, with 53.1% of respondents stating they did not feel a strong sense of professional belonging in their institutions.

Compulsory service had a mixed impact on career development. While 54.3% of respondents believed it had a positive effect, 45.7% felt it hindered their professional growth. Workload manageability also varied, with 55.1% of participants stating their workload was manageable, while 42.9% felt overwhelmed (Fig. 3). Work-life balance was rated as “moderate” by 51% of respondents, while 34.7% considered it “reasonable.” However, 6.1% described it as “very poor,” and another 6.1% as “poor” (Fig. 3).

Family and social aspects of compulsory service also posed challenges for many respondents. Among those with children, 76.1% reported having sufficient educational opportunities in their region, whereas 15.2% stated inadequate access. A small proportion (8.7%) reported a complete lack of educational options. The frequency of visits to family or hometown varied among participants, with 23.3% visiting once a month, 16.7% visiting twice a year, and 13.3% visiting four times a year. Lastly, safety was a concern for some respondents, as 72.3% stated that they felt safe in their compulsory service location, while 27.7% expressed security concerns.

Responses to open-ended questions provided further insight into the specific difficulties encountered by pain specialists. Many participants highlighted the absence of dedicated operating rooms for interventional procedures, the lack of high-quality imaging tools, and insufficient recovery areas for post-procedure care. Staffing shortages were also frequently cited as a barrier to effective pain management. Some respondents noted administrative challenges, including a lack of awareness about pain medicine among hospital leadership and limitations in reimbursement policies for interventional procedures.

Additionally, bureaucratic obstacles in patient management were noted, particularly concerning restrictions on non-core specialty (outside anesthesiology, neurology, and physical medicine and rehabilitation) specialists ordering pain interventions. Several specialists also mentioned experiencing threats from drug-seeking patients, inadequate referral pathways, and a general lack of understanding about pain medicine among other medical departments.

Discussion

Compulsory service for pain medicine specialists presents complex challenges, significantly impacting professional development, job satisfaction, and career trajectories. Although designed to address healthcare disparities, the compulsory service system often leads to professional isolation, limited resources, and restricted career opportunities.^[3] Our findings align with previous studies on compulsory service programs worldwide, emphasizing the need for policy adjustments to enhance working conditions and retain specialists in underserved areas.^[3,4]

One of the most critical issues identified in our study is the lack of essential medical equipment and support staff. Nearly one-third of the surveyed pain medicine specialists rated the availability of medical supplies, including nerve block kits and imaging devices, as poor or very poor. This deficiency compromises the quality of care and contributes to job dissatisfaction. Similar findings have been reported in other countries with compulsory service programs, where healthcare providers in rural areas face significant infrastructural deficits.^[5] Without access to fluoroscopy machines, ultrasound devices, and radiofrequency ablation tools, pain specialists are unable to perform crucial interventional procedures, leading to suboptimal patient outcomes.

Another primary concern is the high patient workload, often compounded by inadequate referral systems and administrative barriers. Many respondents reported receiving referrals for non-indicated cases, which further burdens an already overstretched system. Previous studies on medical service obligations have shown that excessive workload without proper institutional support leads to burnout and reduced job performance.^[6]

Financial compensation during compulsory service remains a contentious issue. Our study revealed that nearly half of the respondents were dissatisfied with their financial remuneration, and over 65% reported not receiving any additional incentives such as housing support or travel allowances. This finding is consistent with global literature on physician retention in underserved areas, where the absence of financial and institutional incentives leads to lower job satisfaction and higher attrition rates.^[4,7] Countries that have successfully retained physicians in rural areas often implement structured financial incentives, including loan forgiveness, salary bonuses, and career advancement opportunities.^[5]

Institutional recognition and administrative support also play a critical role in the success of pain medicine specialists. Many respondents indicated that hospital administrators did not understand pain medicine, resulting in limited funding and resources for pain management units. Additionally, professional isolation was a significant concern, with 63.3% of specialists reporting feeling professionally isolated. Previous research has demonstrated that a lack of peer support and mentorship opportunities discourages specialists from remaining in underserved areas.^[4]

Compulsory service significantly affects career development, particularly for specialists seeking academic advancement. Nearly half of the surveyed pain medicine specialists felt that their compulsory service period hurt their professional growth. The most commonly cited concerns were restricted access to continuous medical education, limited research opportunities, and lack of mentorship. A study evaluating medical graduates in Nepal reported similar findings, where compulsory service hindered access to postgraduate training and limited career progression.^[4] In contrast, successful models in other countries have implemented structured career pathways for specialists in rural areas, offering research funding, academic sabbaticals, and postgraduate training programs.^[8]

Beyond professional and financial limitations, personal well-being and safety concerns emerged as significant issues. Over 27% of respondents expressed safety concerns about their compulsory service locations. Some pain specialists reported facing threats from drug-seeking patients, while oth-

ers cited incidents of workplace violence. This aligns with findings from other studies on physician deployment in underserved areas, where inadequate security measures and lack of legal protections deter specialists from committing to long-term service.^[4,5] Addressing these concerns requires a multi-faceted approach, including better security infrastructure, legal protections, and mental health support systems for healthcare workers.

Our study underscores the urgent need for policy reforms to improve the effectiveness and sustainability of compulsory service for pain medicine specialists. Based on our findings and existing literature, we propose the following recommendations:

- **Enhancing Infrastructure and Resources:** Investment in medical equipment and trained support staff is crucial for ensuring high-quality pain management services. Hospitals should have fluoroscopy machines, ultrasound devices, and nerve block kits as standard equipment.
- **Structured Financial Incentives:** Salary adjustments, housing benefits, and travel allowances should be implemented to enhance job satisfaction and retention in underserved areas.
- **Career Development Opportunities:** Compulsory service programs should integrate structured academic and research opportunities, such as funding for conference participation, online training modules, and access to mentorship programs.
- **Improved Referral Systems and Administrative Support:** Establishing standardized referral protocols and increasing administrative awareness about pain medicine can reduce the burden of unnecessary consultations and optimize resource allocation.
- **Workplace Safety Measures:** Security policies, including legal protections for healthcare providers and hospital-based security personnel, should be reinforced to ensure the safety and well-being of specialists working in high-risk areas.
- **Flexible Service Models:** Countries with successful compulsory service programs often allow specialists to choose service locations based on personal and professional considerations. Implementing similar flexibility within the current system may improve physician retention and job satisfaction.

While compulsory service programs aim to address workforce distribution issues, they often impose significant professional and personal challenges on pain medicine specialists. Our study highlights critical deficiencies in infrastructure, financial support, career development, and workplace safety. Addressing these challenges through targeted policy reforms can enhance the effectiveness of compulsory service while ensuring that specialists remain motivated and engaged in providing high-quality pain management services.

Limitations

This study has several limitations. First, the sample size was relatively small, with only 49 participants, which may limit the generalizability of the findings to the wider population of pain medicine specialists. Second, participation was voluntary and self-reported, introducing potential selection and response biases—those with extreme opinions or negative experiences may have been more inclined to participate. Third, the cross-sectional design captures experiences at a single point in time and does not allow for assessing changes over time or causal inferences. Fourth, while thematic analysis was applied to open-ended responses, some subjective interpretations may have influenced the categorization of themes. Lastly, the study was conducted within a single national context, which may limit the applicability of the findings to other healthcare systems with different compulsory service structures.

Conclusion

This study highlights pain medicine specialists' significant challenges during their compulsory service. While the program aims to ensure healthcare access in underserved regions, it often results in professional isolation, limited access to essential resources, inadequate financial incentives, and restricted career development opportunities. Our findings indicate that these obstacles impact job satisfaction and the overall effectiveness of pain management services.

A significant issue is the lack of critical medical equipment and trained support personnel, severely limiting specialists' ability to perform interventional procedures. Financial dissatisfaction and the absence of structured incentives also contribute to decreased motivation among specialists. Many professionals

also experience difficulties accessing academic development opportunities, leading to concerns about stagnation in their field. Furthermore, safety concerns and bureaucratic obstacles further complicate the experience of compulsory service.

Given these findings, urgent policy reforms are necessary to improve the working conditions of pain medicine specialists. Providing structured financial incentives, enhancing access to advanced medical equipment, and implementing career development programs could significantly improve job satisfaction and retention rates. Additionally, ensuring administrative support and improving safety measures in healthcare settings would further enhance the program's effectiveness.

Ultimately, while compulsory service policies aim to address workforce distribution issues, they must be designed to balance public healthcare needs with the professional well-being and career advancement of specialists. Addressing these concerns through targeted reforms will be critical in optimizing pain management services in underserved regions and maintaining a motivated and skilled workforce.

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