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Article

Professional Obstacles to Anaesthesiology Practice in Punjab, Pakistan: Qualitative Study of Consultant Anaesthesiologists' Perspectives

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Abstract: Global anaesthesia workforce limitations contribute to emigration of skilled anaesthesiologists from lower- to higher-income countries, jeopardizing workforce balance and patient outcomes in Pakistan. This study aims to explore challenges experienced by anaesthesiologists in Punjab, Pakistan's most populous province, and necessary changes to encourage their retention. We conducted a qualitative study to examine perspectives of anaesthesiologists who chose to serve in Pakistan. We drew data from semi-structured interviews conducted with 25 purposively-sampled consultant anaesthesiologists. We analysed data thematically and distinguished the practice hurdles faced by anaesthesiologists in public and private hospitals of Punjab. The main reasons to work abroad could be broadly categorized under two inductive themes, i.e. practice hurdles in public and private sector. Both had distinct issues which compromised the number and quality of anaesthesia workforce in the country. The key outcomes were workplace security, promotion/incentive issues and gender inequalities in the government sector. The private sector had improper salaries and facilities, anaesthesiologist's dependency on surgeons for getting work and lack of out-of-theatre practice which minimise the scope and earnings of anaesthesiologist within the country. There is a need to overcome surgeon dependency and hospital manipulation by fixing salary percentages for each surgical case and encouraging direct patient-anaesthesiologist relationships.

Keywords: anaesthesia; workforce challenges; qualitative research; Pakistan

1. Introduction

Global anaesthesia workforce limitations have disproportionately affected low- and middle-income countries (LMICs) as skilled professionals immigrate to high-income countries for better opportunities [1]. This one-way migration jeopardises the clinical workforce balance and patient outcomes by shifting tasks to often less rigorously trained non-physician anaesthetists.

In South Asia, anaesthesiology is not a preferred clinical speciality due to lack of recognition, surgeon dependence, professional stress, scarce research funding, and medico-legal issues [2]. The World Health Organization (WHO) reported 6 of 7 South Asian countries lack anaesthesiologists due to emigration, national mal-distribution, insufficient specialist training, and increased demand [3]. For example, only 10% of sub-district hospitals in India have anaesthetists, while skilled anaesthesia staff in Pakistan and Bangla-

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desh are mal-distributed towards urban areas [4]. Unfortunately, in these countries, anaesthesiology is not only underappreciated by the general public but also by their own fellow medical professionals despite their crucial intraoperative and postoperative roles [5]. As a result, 25-30% of anaesthesiologist trained in Pakistan work in other countries, while 37% of Sri Lankan anaesthesiologists are in the United Kingdom and USA [4].

As the general public has poor knowledge about anaesthesia procedures and personnel in these resource deficient countries [6], their roles intra- and post-operatively are poorly understood [7]. About half of the people in India (58%) and Pakistan (49%) had no idea about the person who would anesthetize them or risks associated with it [8,9]. The lower appreciation for this speciality, increased dependence on other surgeons, lower wages and ultimately lower job satisfaction is causing a number of specialists to migrate. This, in turn, causes a national brain drain and burnout [10,11]. Although the COVID-19 pandemic has highlighted the importance and versatility of this profession, in developing countries the future of this profession is in hands of relationship with surgery [12].

A study in India described multiple challenges faced by anaesthesiologists in private practice, including being forced to work at facilities with poor infrastructure or staying at mercy of surgeons for choosing them for their surgeries [13]. Another study highlighted various challenges, including lack of security in hospitals, which makes it hard to practice in critical specialities in developing countries [14]. However, until now, no such study has been conducted in Pakistan to highlight the problems and hardships anaesthesiologists face. This is important as it would not only bring focus to why lesser medical professionals opt for this speciality but will also shed light to reasons behind increased immigration of skilled anaesthesiologist from the country. Thus, this study aims to explore perceived hardships among anaesthesiologists working in Punjab province, Pakistan, and necessary policy or practice changes for improving the working opportunities for this speciality.

2. Methods

2.1. Study design

We conducted a qualitative study in order to understand hardships experienced by anaesthesiologist while practising in Pakistan's province Punjab [15,16]. The researchers used a phenomenological approach to get insights into barriers and hurdles which make practicing anaesthesiology difficult in Pakistan through an insider's perspective [17,18].

2.2. Participant selection

Purposive and snowball sampling were used to recruit research participants (anaesthesiologists) with postgraduate qualifications (i.e. doctor of medicine [MD], Member/Fellow of the College of Physicians and Surgeons [MCPS/FCPS]) working in public hospitals of Punjab (i.e. Township/'Tehsil' Headquarters Hospital [THQ], District Headquarters Hospital [DHQ], teaching hospital) as consultants, registrars, senior registrars, or department heads. The initial participants from teaching hospitals were contacted through their official phone numbers, available on the internet. Then they were asked to refer other participants from DHQ/THQs, who were contacted through their reference and interviews were conducted after taking appointments at the place of their convenience [19]. None of the participants refused to take part in the study.

2.3. Data collection

We developed a semi-structured interview guide informed by literature and expert consultation that covered the following topics: demographics (e.g. age, position, years of experience), challenges in practising anaesthesia, challenges in acceptance from colleagues and patients, management and monetary issues, and interviewee suggestion in overcoming problems. The guide allowed for both discussion of deductive concerns and emergence of unexpected issues.

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This paper is a part of dissertation project of the first author on the assessment of anaesthesia health system capacity and efficacy in public hospitals of Punjab, Pakistan. The first author contacted potential participants on their work phone for explain the study and inviting them to participate. In-person semi-structured interviews in Urdu were conducted from June to November 2021, until determined data saturation had been achieved as no new ideas or concepts were emerging. Interviews took 40-50 minutes and were audio-recorded if participants allowed. Most did not allow audio recording due to security and administrative sensitivities. Therefore, detailed notes were taken. The audio files were transcribed and the transcriptions as well as notes were translated into English immediately after the interviews. We ensured participants' anonymity and confidentiality by allowing to choose interview times and locations, using identification codes instead of names on all outputs, deleting audio files after transcription, and storing transcripts in a password-protected hard drive only accessible by the research team of this study.

2.3. Data analysis

Data were analysed thematically in six phases by the first author following this procedure [20]: reading and re-reading; initial noting; developing themes; searching for connections across themes; moving to the next subtheme; and looking for patterns across subthemes. RZ and NH reviewed themes and subthemes and contributed to finalising the interpretations [21]. Reporting adheres to COREQ criteria [22].

2.3. Ethics

The Department of Public Health, Institutional Review Board at University of the Punjab in Pakistan provided ethical approval (1456/Acad.; February 22, 2020). Informed consent was taken prior to each interview.

3. Results

3.1. Participants' characteristics and analytical themes

Of 25 participants, 10 (40%) were from teaching hospitals (TH), 8 (32%) from District Head Quarter (DHQ) hospitals, and 7 (28%) from the Tehsil Head Quarter (THQ) hospital. About two-third of study participants (n=17; 68%) were males. Consultants serving in teaching hospitals had job experience between 5-24 years, while those working at DHQ or THQ had 1-19 years of experience (Table 1).

Table 1. Participants' characteristics.

ID	Job	Gender	Age (in years)	Experience (in years)
TH1	Anaesthesia consultant at teaching hospital	Male	42	10
TH2	Anaesthesia consultant at teaching hospital	Male	54	15
TH3	Anaesthesia consultant at teaching hospital	Male	37	7
TH4	Anaesthesia consultant at teaching hospital	Female	36	5
TH5	Anaesthesia consultant at teaching hospital	Male	59	28
TH6	Anaesthesia consultant at teaching hospital	Male	44	11
TH7	Anaesthesia consultant at teaching hospital	Female	35	6
TH8	Anaesthesia consultant at teaching hospital	Female	55	24
TH9	Anaesthesia consultant at teaching hospital	Male	48	18
TH10	Anaesthesia consultant at teaching hospital	Male	50	19
DH1	Anaesthesia consultant at DHQ hospital	Female	31	2

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DH2	Anaesthesia consultant at DHQ hospital	Female	36	3
DH3	Anaesthesia consultant at DHQ hospital	Male	40	6
DH4	Anaesthesia consultant at DHQ hospital	Male	51	18
DH5	Anaesthesia consultant at DHQ hospital	Male	45	9
DH6	Anaesthesia consultant at DHQ hospital	Female	42	5
DH7	Anaesthesia consultant at DHQ hospital	Male	37	8
DH8	Anaesthesia consultant at DHQ hospital	Female	33	4
QH1	Anaesthesia consultant at THQ hospital	Male	52	19
QH2	Anaesthesia consultant at THQ hospital	Male	48	5
QH3	Anaesthesia consultant at THQ hospital	Male	34	1
QH4	Anaesthesia consultant at THQ hospital	Male	41	6
QH5	Anaesthesia consultant at THQ hospital	Male	37	5
QH6	Anaesthesia consultant at THQ hospital	Female	42	4
QH7	Anaesthesia consultant at THQ hospital	Male	32	1

We subdivided the findings according to public and private sector health facilities, as issues in both were sufficiently distinct. Major obstacles identified in the public sector were personal security concerns, lack of facilities for women anaesthesiologists, differentiation between consultant and specialist by the hospital administration, payment and incentives, and privatising public hospitals time clash in evenings. Major private-sector obstacles were improper salary and facilities, surgeon dependency, lack of out-of-theatre practice, fee fixation, and hierarchy as per surgery.

3.2. Practice hurdles in public sector health facilities

3.2.1. Security

Security of health professionals is the utmost dilemma in all public sector hospitals of Pakistan. Security was particularly concerning in peripheral areas where equipment and medication are available to administer anaesthesia, but anaesthesiologist could not take risk of anesthetising patients for serious surgeries due to their own security. Sometimes, they themselves are beaten or injured by patients' accompanying family in case of serious outcomes. One of the study participants having more than 5 years of job experience narrated:

"Why would I put my life in danger by anesthetising a patient who is already in shock with insufficient blood in hand and a mob of patient's family outside theatre ready to rip me off in case of his demise." (QH5)

Half of the study participants (13 of 25) reported that patients in peripheral areas are often from low socioeconomic backgrounds with unidentified comorbidities, e.g. high blood pressure, diabetes, cardiac abnormalities. Usually, these patients are called to hospital on the day of surgery due to the limited number of beds available for inpatients. Sketchy anaesthetic pre-operative check-ups are done just 10 minutes before the surgery which makes it impossible to handle any serious case due to improper background knowledge. All study participants agreed that focusing on patient's wellbeing is more difficult when your own is in danger. Therefore, they prefer to provide anaesthesia services for only day surgeries or caesarean sections. A participant from DHQ hospital quoted:

"Government has appointed a few police sergeants outside each hospital which cannot control illiterate attendants – especially when there are hundreds of them out there. So, in peripheral setups, best is to take non-serious or ASA 1 [American Society of Anaesthesiologist Classification] cases. I know it's not good for patients, but it's not good to risk lives of the healthcare team either." (DH2)

In teaching hospitals, the situation is not any better in emergency areas but still under control as patients for elective surgeries are optimised before surgery while emergency

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police is right available to control the attendants in case of any mishap. In addition, emergency exit doors for healthcare staff are present. Few respondents claimed this security agenda of secondary level hospitals a lame excuse for referring patients to teaching hospitals and not working efficiently. They stated that the management is not interested in the wellbeing of healthcare staff or public in any hospital. According to them, attendants should never be allowed to enter the surgical floor to create a scene:

"There is no check and balance anywhere, just we don't have lame excuse to refer it to some other hospital. So, we save patients life while peripheral workforce prefers to save their own." (TH2)

3.2.2. Gender inequalities

Women are becoming indispensable to the anaesthesia workforce. However, most did not enter the anaesthesia workforce after postgraduate studies. While some reasons were complex, one was unacceptably low wages. As women were not considered family breadwinners in Pakistan, they only come out to work if they are getting good salary or facilities. A senior consultant shared her experience:

"When I was an MCPS student 20 years back, I used to get 3k for a case, and immediately used to go for it, but now after being an FCPS having 20 years of experience why would I go for 5 or 10K for case where surgeon having equal qualification is getting in 100-500K. Even I have to go before him and come after him due to pre- and post-ops – so why don't I spend quality time with my family instead?" (TH8)

For other women it was not the payment but the facilities themselves that deterred them. Among other reasons, the lack of good-quality and safe 24-hour childcare or safe late-night transportation, was stated.

"Transport facilities must be provided to female staff in every hospital especially in night shift when moving alone in local transport or private taxis is generally not considered safe in our country." (TH7)

Others described poor security within hospitals, complaining that every theatre had an office for female surgeons' rest and refresh after surgery but no such spaces were provided for female anaesthetists who had to sit with male colleagues – whether or not they were comfortable with this. They advocated for rooms for female anaesthetists, particularly when working night shifts, inside or near theatres with a security guard present. As almost 70% of anaesthesiology consultants in Punjab are women due to male anaesthetists moving abroad, women could be better integrated within the system by improving their (perceived) safety.

3.2.3. Experiential seniority outranking qualifications

Several participants noted that in Pakistan, all anaesthesia personnel with postgraduate degrees (e.g. DA or FCPS) are considered consultants and prioritised according to their hospital experience regardless of their degree, which was confusing and needs to be corrected. Teaching hospital participants insisted on not calling diploma-holders' consultants, noting they should be referred to as specialists to overcome this confusion. Almost all participants agreed that those who are worthy should be given due rights and positions. Otherwise the system will continue losing qualified personal because of constant degradation from unqualified seniors.

"The government made rules to move every MCPS and DA consultant to peripheral hospitals and FCPS/MS consultants to stay in tertiary care and train other residents. But unfortunately, in many tertiary care hospitals DA consultants are leading […] and FCPS consultants have to work under them which creates chaos, ultimately leading FCPS consultant to give up and move out of the system. So, the differentiation in status according to specification of degree is inevitability now." (TH1)

3.2.4. Pay and incentives

All participants expressed concerns about pay grades and lack of incentives, insisting that doctors globally are highly-paid professionals, with surgeons and anaesthetists entitled to the highest salaries. However, in Pakistan they received equivalent salaries to government officers working standard hours in an office.

"I am getting the same pay as any government officer in bank, taxation or teaching in school with same pay grade. What's the point in working so hard, attending 24-hour calls, working on all public holidays, disasters, pandemics when you can't provide your family a better lifestyle or education than others?" (DH3)

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The lack of differential reward, with surgery/anaesthesia consultants working round the clock getting the same wages as dermatologists working a few hours daily, engendered frustration and perceptions of injustice. Some suggested that if government could not change pay grades, at least inter-grade categories must be created, e.g. enabling anaesthetists to get some amount per case alongside their regular salary. This would increase interest in public service and thus increase workforce. Several suggested providing benefits instead of salary increases, as army officials received.

"If not for all doctors at least consultants should be offered housing, transport facilities, clubs and specific schools for kids or at least special quota seats for healthcare professional's families along with regular salary. This could overcome our workforce deficiency, as nobody wants to move out of their native country if they can get best for their families here." (DH5)

All agreed that anaesthesiology required urgent attention to ensure appropriate incentives to attract sufficient workforce, but incentives should be dependent on qualifications (e.g. FCPS/MS should receive highest incentive, MCPS midrange, DA lower, allied personal lowest). While the government started providing incentives to anaesthetists 20 years ago, amounts have not increased so these are now meaningless. Some suggested offering complete packages (including salary, facilities, housing car fuel etc.) to anaesthesiologists according to their qualifications rather than regular pay grades given minimal private-sector opportunities. Moreover, timely promotions and incentives could improve confidence and ultimately improve quality and workforce.

3.2.5. Evening privatization of public hospitals

Several participants suggested allowing private consultations in government hospitals during evening hours, as this could not only stabilise quality and price but improve equity among departments by giving equal chances and wages to qualified personnel.

"It was a common practice in the past in biggest tertiary care hospitals […]. Richest people would opt for state-of-the-art private wards of government hospitals as they were reliable." (TH3)

Participants agreed that private practice in government hospitals would both eradicate fraudulent practitioners and improve wages for clinicians and allied staff, as private bodies would be unable to manipulate patients and qualified anaesthetists.

"Autonomous hospital bodies have the legislative authority to start private practice but they do not want to take responsibility, as evening private practice need cleanliness, up-to-date or at least decent waiting venues etc. Although 30% of income received from private patients goes to management for maintaining these things but they are not willing to burden themselves." (TH10)

Participants suggested that starting private practice in evenings where they served in the morning would not only promote quality but also improved relationships between doctors and their workplace as they would want to make the facility welcoming and comfortable for themselves and their patients, which would improve public trust as well.

3.3. Private-sector health facilities obstacles

3.3.1. Improper salary and facilities

Most participants suggested that the private sector monopoly was primarily responsible for driving qualified anaesthetists to emigrate from Pakistan. They reported several ways the field had worsened. Most private hospitals listed a senior consultant anaesthetist, while actually junior house officers, medical officers or even operation theatre assistants provided anaesthesia due to a lack of quality-control or consequences.

"Private sector is making a fool of the public by making modern buildings, interiors, reception private rooms etc., but as public cannot enter operating rooms, the situation is grave there. Insufficient and out-dated monitoring and equipment, lack of proper sterilization, even drugs sometimes. So, complication rates are 60-70% more than in government hospitals…" (DH4)

Participants mentioned a few private healthcare companies that paid anaesthetists well but were controlled by a group of senior anaesthetists unwilling to allow anyone except their 'favourites' to join. Other anaesthetists had to choose from poor-quality hospitals and fixed remuneration.

"In the private sector, not only are wages lower but also qualifications give you no edge. If they want to give an anaesthetist 5,000 for a case they would get one, whether it's some OTA, HO, MO or technician. They

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would give you no preference or better wage over your qualification which not only reduces quality of anaesthesia but also reduces opportunities for skilled personnel in-country." (DH8)

Despite differences in age and experience, participants insisted if at least 20-25% of total operative charges were fixed for anaesthesiologists it would improve anaesthetist interest in private practice. Furthermore, it would also ensure a high level of qualification as facilities would lose the incentive to hire unqualified people if paying fixed rates. Moreover, organizations must introduce a minimum wage for anaesthetists according to their qualification and must make sure no one agrees to work in less than this set amount. This could improve the monetary issues to some extent. Another suggestion was to make an online portal for hospitals, and doctors where everyone enters a case which he or she performs. This could confirm the participation of qualified personnel in a controlled manner which could be monitored online in order to overcome misuse of consultant's credentials. This would improve surgical outcomes and help retain qualified anaesthetists in Pakistan.

3.3.2. Surgeon dependency

Practicing consultants explained that anaesthetists were usually recruited through surgeons, especially in smaller facilities. As surgeons brought in cases, they were major contributors to private hospital wealth. For that reason, surgeons' preferred anaesthetists rather than most-qualified would be requested.

"The worst thing in Pakistan's private sector for anaesthetists is surgeons. You can practice only if you are connected to some surgeon who can call you for his surgery on his terms. If anaesthetists are directly collaborating with hospitals instead of surgeons, only then could a check-and-balance be kept." (QH4)

Most participants claimed that due to negligible anaesthesia mortality rates owing to improved equipment and drugs, surgeons assumed anaesthesia was just the injection and tried to save money by hiring less-qualified anaesthetists. Surgeons assumed they could handle anaesthesia complications themselves as surgery was harder, while in reality grave anaesthesia-related complications could happen in seconds. Several suggested that anaesthetists should be employed by every private hospital, not just reputable ones, instead of being on-call for surgeon-dependent cases so surgeons could not try to reduce costs by hiring less qualified anaesthetists.

"With my more than 19 years of experience in this field, I can assure that the only thing to overcome this issue is to make a rule that anaesthetists should meet with patients two days before surgery, for preoperative assessment and rapport-building or patient get to choose anaesthetist himself instead of surgeon or hospital. This is the only this way this malpractice could be reduced." (QH1)

3.3.3. Lack of out-of-theatre practice

Most participants claimed their non-operative practise was ruined by other specialities.

"Chronic pain management is a definitive branch of anaesthesia but it has no scope in private practice as fellow consultants of oncology or ortho would never refer them to any anaesthesiologist. They think they can handle everything by themselves." (DH6)

As anaesthesia is not curative, nobody comes to hospital looking for anaesthesia. Thus, anaesthetists have minimal patient interaction and require other consultants to refer pain patients to them. However, financial interests prevented most colleagues from doing so. Most participants described this as a major disincentive to work in Pakistan, as they had little chance of a respectable private practice. All participants advocated legislation to define specialty roles and end 'one-man shows' in surgery.

3.3.3. Surgery categorisation

All respondents insisted that private hospitals must categorise surgeries to ensure enough qualified anaesthetists per surgery. Often private hospitals only employed one anaesthetist rather than a team, so no senior could be called for help. For example, category A cases (i.e. cardiac, fire arm injury, road traffic accident, pulmonology, transplant) should only be handled by FCPS/MS anaesthetists, category B (i.e. laparotomy, open fractures) by MCPS/DA anaesthetists, and category C (i.e. amputations, caesarean sections) by residents or medical officers.

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"Strict legislations are required for private sector as they take anaesthetists for granted. Not every anaesthetist is capable of handling any case or any kind of complication, so they must be called according to the type of surgery." (QH7)

4. Discussion

The limited anaesthesia workforce in Pakistan is a serious issue, sometimes described as a 'crisis' [23]. Anaesthesiologist shortages are common in lower-income countries, largely due to emigration of qualified staff [24]. This study is one of the first to examine the perceived challenges anaesthesiologists experienced in government and private hospitals in Punjab. These reduced their trust in the health system and encouraged them to emigrate for better remuneration and healthier working conditions, creating a 'brain drain' that weakened service provision.

Physical security was a major concern in all public hospitals, which aligns with findings in other countries [25-27]. For example, lack of security caused a mass exodus of health professionals from Syria while in India health professionals are going on multiple strikes due to brutal assault of patient's relatives on fellow doctors in emergency departments [28,29]. This insecurity leads to unnecessary referrals resulting in increased morbidity and mortality rates due to the time required in reaching distant hospitals.

The second most important issue is disparity in salaries of anaesthesia professionals due to increased duty hours and lack of private practice opportunities [30]. This issue is specifically seen in LMIC where practice of anaesthetist is dependent on surgeons and where anaesthetists are underpaid due to these reasons [31]. Clear legislations are required in Pakistan to ensure relevant salary with regular incentives at every hospital and health setup for qualified anaesthetists. This trend can be observed in previous studies [32] held in various countries which depict that incentives should be performance based and categorical on base of education level, instead of being fixed and seniority based to retain interest of working anaesthetists [33,34]. Moreover, they should be increased yearly according to the economic demands of society [35].

While many senior anaesthesiologists demanded privatization of government hospitals in the evening to ensure qualified staff and services which is manipulated in private sector, a previous study showed negative effect of incentives in delayed working hours. It could cause reduced work in day time with fixed salary while improved and more work in evening hours [36]. Moreover, females participation is increasing in every medical speciality in Pakistan including anaesthesia and this trend can be seen in many other countries [37]. Unfortunately, even in high-income countries, female anaesthesiologists are suffering due to the unavailability of certain maternal facilities. This is similar to our study, but due to adequate and good salaries they still opt for work, whereas in Pakistan female consultants opt to stay because of a lack of family support and although they do not receive the salaries they deserve. This trend needs to be changed immediately if participation of female's anaesthesiologist in improving the healthcare should be promoted.

4.1. Implications for policy and practice

Incentives are needed in order to retain more skilled staff and to improve the interest of already working staff especially in government setup [38]. The incentives must be according to productivity in clinical activity and categorised by educational/seniority level.

Demands of privatization of government hospitals in the evening could jeopardize regular morning services. However, still it would ensure participation of qualified physicians and could overcome the monopoly played by private setups in Pakistan as more people will trust to go for privatized government setups instead of private hospitals and getting ripped by them [39].

In addition, the focus should be given to improve the relationship between surgeons and anaesthetists during their training which would lead to increased respect for each other's domain and lesser complications in monetary terms [40-42]. This is only possible if anaesthesiologist start interacting and discussing preoperative assessments and plan

two to three days before surgery by developing rapport with the patient just like surgeons. Moreover, an improved check and balance is required, allowing anaesthesiologists to explore out of theatre domain [43]. The national society of anaesthesiologist should work to ensure rights of anaesthesiologist in the private sector. They should work on minimum acceptable or percentage wages according to qualification of anaesthesiologist and encourage reporting of malpractice in private hospitals [44].

4.2. Limitations

Several limitations should be considered. First, only anaesthesiologists' perspectives were considered and other specialities or patient perspectives might have provided additional insights. Second, participants were all from Punjab province, which has a relatively high socioeconomic, educational, and health provision status and anaesthetists' experiences in other provinces may potentially be worse. Third, the sample is relatively small. Although we aimed for data saturation, some nuances may have been missed.

5. Conclusions

The perceived challenges and needs of skilled anaesthesiologists must be considered if they are to be retained. Surgeon dependency and hospital manipulation must be reduced, e.g. by fixing remuneration percentages by type of surgery. Moreover, the relationship between patients and anaesthesiologists must be improved in both private and public hospitals to increase public awareness and confirm qualified personals participation. The government sector should work on giving incentives based on clinical productivity along with providing advance facilities or subsidies. Security must be improved specifically in hospitals of remote areas to increase the participation of working anaesthesiologist and decrease the unnecessary burden towards central hospitals.

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Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Due to the qualitative nature of this study, the transcripts cannot be published to allow for the anonymity of participants. However, data is available from the corresponding author upon reasonable request.

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