A qualitative study of junior doctors attitude towards near peer teaching

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Research Article

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ABSTRACT

Background

Learner benefits of Near-Peer Teaching (NPT) are evidenced in literature but the experience of junior doctors participating in NPT is only beginning to be explored. This study explores qualitatively the attitude of junior doctors towards NPT using a cognitive-affective-behavioural model.

Methods

Junior doctors a tertiary teaching hospital in Ireland participated in semi-structured interviews conducted by a peer-researcher, which were audiotaped, transcribed, coded using NVIVO, and thematically analysed.

Results

Four main themes were identified. Near-peer teaching was perceived as an enjoyable and satisfying role of a clinician. Near-peer teachers believed that NPT was beneficial to both teachers and learners. Participants acknowledged that knowing one's limitations is vital to safe teaching practice. A structured approach to NPT programs was suggested to improve the efficiency and participation of teachers and learners.

Conclusion

This study documented the personal Learning experience, an enjoyable and satisfying teaching experience, and the perceived teacher and learner benefits as the motivational factors and the main challenges of junior doctors towards NPT were personal limitations, learner disengagement, and the lack of time, resources, and a structured NPT program. Suggestions to improve the participation of learners and teachers in NPT were identified and discussed.

KEYWORDS

- Near-peer teaching
- Junior doctors,
- Teaching motivation
- Protected teaching time
- Teaching benefits

INTRODUCTION

Near-peer teaching is where medical students or junior doctors are taught by medical students or doctors who are one or more years senior to themselves.(Bulte et al. 2007) Every Doctor has a professional obligation towards teaching (General Medical Council) but the evidence about the attitude of Doctors towards teaching is limited with quantitative justification studies. Most doctors report that they enjoy teaching and are motivated to improve their teaching skills.(Peadon et al. 2010) However only a fraction of the junior doctors, actively participate in clinical teaching.(Z.U. Qureshi et al. 2013) In a quantitative review using self-administered rating questionnaires 93% of Junior Doctors reported that they were motivated to teach but only 35% actually taught. This discrepancy in reporting and practice needs qualitative clarification.

Near-peer teaching is a relatively new concept that is seen as useful, efficient and enjoyable by both learners and Junior Doctors yet the emphasis is largely on the learner's experience. Learners participating in the near-pear teaching programs the report satisfaction with the teacher competence and the relevant content (A Jenkinson, E Kelleher, D Moneley 2017) Nonetheless, with a learner-focused approach, the motivations, challenges and support of the Intern Teachers are only beginning to be explored. Scotland based Foundation Doctors rated their near-peer teacher experience to be useful in preparing them for teaching and expressed interest in attending more tutorials.(Rodrigues et al. 2009) Yet the failure to translate this interest into practice remains unexplored or unaddressed.

Despite highly rated motivation to teach (Dahlstrom et al. 2005), perpetual challenges at the teacher, learner and institution levels prevent Junior Doctors from clinical teaching.(Peadon et al. 2010) Clinicians with inadequate training in teaching may feel reluctant to teach.(Foster & Laurent 2013) In spite of GMC's guidance to 'have dedicated time to deliver educational activities' (General Medical Council 2011) only 10% of the clinicians are able to teach during allocated work hours. (Z.U. Qureshi et al. 2013) Reduced working hours and increased patient care also limits participation in clinical teaching. (Nagel et al. 2011) Thus, a qualitative study of Junior Doctors' attitude towards teaching would help explain the discrepancies in evidence and practice, and explore any unaddressed challenges in clinical teaching. The challenges and solutions proposed by Junior Doctors will inform stakeholders and policymakers in medical education, and guide future research to increase the participation of Doctors in clinical education early on in their career.

METHODS

Qualitative approach and research paradigm

A Qualitative design and an Interpretivism paradigm was used to interpret the attitude of Junior doctors towards teaching and understand their real life challenges. Despite a limited sample size, a qualitative approach would give factual and descriptive information about the thoughts and feelings of junior doctors about teaching. It would also help gain a wider understanding about the teaching behaviours of junior doctors and describe the challenges faced by them in teaching practice and development. Interviewing junior doctors in their natural practice settings and analysing the abundant data involving real life experiences will ensure that the evidence emerges from data rather than testing assumptions.

Researcher characteristics and reflexivity

The Primary researcher's experience of the teaching practice as an Intern Doctor himself at the proposed study site might influence the interpretation of the research findings. However, the primary researcher's undergraduate degree in Nursing with more than 10 years of nursing and teaching experience would help him reflect on his own teaching practice, be aware of his own teaching motivations and challenges, and minimize transference of personal beliefs and feelings on to the study findings.

Context and Sampling strategy

The study was conducted in July, 2021, at a tertiary hospital in Ireland where 31 Medical graduates started clinical practice as Interns in May 2020. Following a one-day 'Train the Trainer' workshop the Interns participated in an Intern Led Teaching Program for the Final year medical students . A pragmatic approach using purposive sampling was used to get a balanced view of the various factors that motivated some junior doctors but challenged others in pursuing an active role in clinical teaching.

Sample size and data saturation

As this study had a broad aim yet specific samples at similar career stage, with an iterative process for Data collection and interpretation, 10 samples were proposed for this study. The sampling procedure and tools were designed to gain more information relevant to the study from each sample in order to improve information power and minimise sample size.(Malterud et al. 2015) If data saturation was reached before sampling the proposed number of samples, further sampling would be curtailed as it was less likely to add any new

information. If new data continued to emerge then further samples would be recruited within the constraints of the pragmatic limitations (Vasileiou et al. 2018) like availability of samples, time and resources.

Sampling Procedure and instruments

Data collection was over a period of 4 weeks, using demographic questionnaires and semi-structured interviews. Following expression of interest to participate in the study, interviews were scheduled one at a time at the annexure educational building in collaboration with participants. The Interviewer used a pre-drafted semi-structured interview guide (Appendix 1) following the framework described in Table 1. Each interview lasted from 15 – 20 mins and audio recorded using the Philips Voice Recorder App in m4a format. The recordings were imported into Otter.io online platform and verbatim transcribed on the same day. The transcripts underwent preliminary screening prior to coding and analysis.

RESULTS

Data collection using semi-structured interviews and coding of the collected data in NVIVO were conducted simultaneously. Although 10 participants were planned to be interviewed originally, data collection was curtailed to 8 participants due to data saturation. Of the 8 participants (3 males, 5 females) that were interviewed 4 had graduated from an Undergraduate Medical Programme and 4 had graduated from a Graduate entry medical programme. Only one participant had not participated in the Intern-Led teaching programme at the study site.

Four major themes were identified, highlighting the various conceptualizations of junior doctors' attitude towards near- peer teaching.

Near-peer teaching as an enjoyable and satisfying role of a clinician

Undisputedly near-peer teaching was seen as an enjoyable experience and all participants asserted that they enjoyed the Intern-led teaching programme. The participants voiced in unison that they wanted to be more involved in teaching medical students, juniors and peers. While some of them wanted to pursue a formal degree in teaching and a career in medical education, others wanted to continue informal clinical teaching of near peers at every stage of their medical career.

> *"I think it's enjoyable. And I think all interns should actually have this experience because it will make you to actually like it, and pursue it in the future. It is a good experience."*

- *Interview, Participant 1*

Junior doctors also reflected on their own experiences as medical students receiving the most valuable type of teaching from their immediate seniors whom they often considered as their role models. Therefore the participants valued near-peer teaching and felt obliged to transfer the practical knowledge they gained from their seniors to their juniors. Thus, helping someone to learn and being a channel for transfer of clinical knowledge and practical skills is a very satisfying experience for most junior doctors. One participant said,

> *"I felt good. I felt like I'm helping someone. And I felt I'm doing something extra, which it was, and actually added to my job satisfaction."*

- *Interview, Participant 5*

Some participants verbalized that student behaviours like *'not turning up for teaching'*, *'being distracted on phone' ' rolling up the eyes' and 'wanting to go to the library instead'* were concerning and *demotivating*. These behaviours were more common amongst *final year medical students or peers who seemed to value less* the teaching by Interns - their immediate seniors or co-workers, respectively. Not everyone had such experiences and even those who had such experiences demonstrated a great deal of understanding of student behaviours and were very accommodating. *'Students who turned up for teaching always motivated me to teach'* says participant 5. Despite the occasional demotivating learner behaviours and the limited interactions with medical students during the COVID pandemic, near peer teaching is perceived to be an enjoyable and satisfying experience to junior doctors. (Fig.1)

Near-peer teaching perceived to be beneficial to both teachers and learners.

From personal experiences as learners and near-peer teachers, the participants asserted that near-peer teaching is *beneficial* to both parties involved (Table 2). Learner focused near-peer teaching is more relevant to learners because the teachers *had been in the learner's position not long ago*. Learners also get *practical advice* from their near-peers which *are often not accessible from textbooks*. The learners in addition to gaining clinical knowledge and skills, also *improve communication skills* and observe teaching practice which will empower them when they get to the teacher's position shortly. Thus, near-peer teaching is vital to this continual *transfer of personal practical experience from one generation of doctors to another*. The informal near-peer teaching that happens in smaller groups are thought to be *less intimidating to learners* and junior doctor-teachers. One participant reflecting on her own *struggle as a medical student* said

> *"I felt things were too fast paced in medical school. I had lots of questions, but I felt too stupid to ask them in lectures. I think small groups is the way to go. Definitely because everyone participates, everyone's voices heard. You can be more interactive that way. And it's less intimidating for tutors as well."*
>
> - *Interview, Participant 3*

Although near-peer teachers feel the *need to prepare well* for small group teaching and might *prefer to teach topics* of their *own interests* or specialty, they often accommodate students' learning preferences. Thus, reflecting on their own knowledge and understanding helps junior doctors involved in near-peer teaching *consolidate previous learning, identify knowledge gaps,* seek new information, and keep abreast with the expanding medical evidence base. While it is generally believed by the participants that only senior clinicians with *formal qualifications in teaching can do formal teaching*, all participants admonished that everyone regardless of their cadre in medical hierarchy must be involved in short informal teaching sessions with their near – peers. One participant said,

> *"Everyone has something to give, definitely everyone, there's always an experience that someone's had that, you know, won't necessarily be the same for everyone. So I think it's good to share."*
>
> - *Interview, Participant 2*

Although unsure of the extent of impact the teaching experience will add to their CV, all participants believed it will be a good add-on to their CV. Some participants shared experiences where they were able to reflect on and improve their teaching skills. Thus, the learner-led near-peer teaching sessions are perceived to be beneficial to both learners and teachers.

Knowing one's limitations is vital to safe teaching practice

The unified resounding answer to the question why someone shouldn't be teaching was 'don't teach something that you don't know.' Early on in their careers junior doctors had a deep insight into 'what they know and what they did not know', 'what they can teach and what they shouldn't teach'. Some participants shared their experiences where they had be honest in saying to their students 'I don't know I have to look up.' Any compromise in the accuracy of information shared was believed to be unethical and unacceptable by the near-peer teachers.

> *"Don't teach what you don't know; but that shouldn't keep you from teaching, as long as you're honest, and if you say you don't know, and you know what your limitations are, what you can and can't teach."*

- Interview, Participant 8

Near-peer teachers should also evaluate their own practices and have a professional commitment to demonstrate only best practices to learners who may be learning something for the first time.

> *"It's important to make sure, it's like well-informed teaching and that you're not passing on any bad habits or bad practices to the next generation of doctors, I guess, because we all do pick up little things here and there that maybe aren't the best."*

- *Interview, Participant 6*

Preparing in advance helps ensure the quality of the content and will also help self-examine one's own practice before teaching it to others. Furthermore to knowing one's own practice and limitations, peer assessments and having senior clinicians supervise teaching sessions were suggested as potential solutions to ensuring safe teaching practice.

Structured approach to improve efficiency and participation

Every participant echoed the challenges with the lack of time to prepare, deliver and evaluate near-peer teaching especially while rotating through busy teams. Junior Doctors find lack of protected teaching time as *'distracting', 'tough', 'very difficult', really hard', 'very bad' and 'the biggest challenge'* in near-peer teaching. Therefore, having scheduled dedicated time for near-peer teaching will help 'get co-operation from teams' and improve participation from learners and near-peer teachers.

> *"I know, this probably isn't always possible. But I think if there was time assigned to teaching, if you could have half an hour or 45 minutes or something where it was protected time, your team were aware that you were to participate in this, and the students were told that you would be given this time or whatever that would be massively beneficial."*

- *Interview, Participant 7*

Furthermore, knowing the learner's topics of interest beforehand helps teachers *come prepared for the teaching sessions*. However, learners often approach near-peer teachers with no prior notice due to gaps in communication. Participants did acknowledge the *logistical issues* like teachers '*being away on nights or Leave'* and learners '*not turning up for teaching sessions'* but organizing a structured near-peer teaching programme with allocated time, place, resources and students to

teachers and keeping the students, teachers and teams informed of such arrangements will help facilitate .

> *"I think having that routine teaching scheduled really, really important, just for myself, even to gain more knowledge on topics beforehand … and develop the skills. And that's the most important thing."*
>
> - *Interview, Participant 4*

The junior doctors felt that neither clinical teams nor training bodies valued near-peer teaching. For instance, *"all the marks you get on a scheme is for how many hours you spend in theatre, your clinics, and you barely have time for inpatients. No one seems to care about how many hours you spent teaching".* Even though teaching is an integral part of a practicing clinician, it is "*not formally taught or evaluated in medical school."* Therefore*, Incentivising* near-peer teaching by making it a *part of the medical school* and *specialty training curriculums* was suggested to promote near-peer teaching amongst learners, teachers and Organizations.

DISCUSSION

Several studies have explored the learner benefits of near-peer teaching (Bulte et al. 2007; Hall et al. 2013; Davies et al. 2016; Gottlieb et al. 2017; Kalsi 2018; Pintér et al. 2021) but this study exploring the attitude of junior doctors towards near-peer teaching has identified the teacher's perceived benefits of near-peer teaching to both teachers and learners. A questionnaire-based quantitative study by Hall. et.al., identified improving communication skills as the most common benefit by the teachers who participated in NPT.(Hall et al. 2018) While only a few participants mentioned communication skills improvement as a perceived benefit in our study, a more qualitative approach has helped identify other motivational factors and perceived benefits of NPT. A mixed methods approach by Nelson et.al., identified similar perceived benefits of consolidation of prior learning and improving teaching skills.(Nelson et al. 2013) Despite the social and cognitive congruencies of the learners and teachers which are influenced by the learner teacher distance (Stephens et al. 2016) near-pear teaching was more valued by distant juniors than immediate juniors. In addition to the several perceived teacher-benefits, it was also restated that teachers at all levels must be rewarded appropriately by institutions and regulatory bodies. (Ramani et al. 2016)

Near pear teachers who are only a few years senior to the learners are able to empathize and relate to them more on a personal level. Near-peer teachers are seen as Information providers, role models and facilitators by students (Bulte et al. 2007) Reflecting on their own experience as learners involved in Near-peer teaching, junior doctors are able to pass on this practical experience that they

have benefited from their seniors to their juniors in a very enjoyable and satisfying role. Lack of such role models and influential near-peer teachers will break this chain of near-peer teaching. Especially the COVID pandemic has reduced the amount of time spent by medical students in clinical settings(Savage et al. 2020; Theoret & Ming 2020) and their opportunities to participate in near-peer teaching. Hence it is vital for senior clinicians also to participate in near-peer teaching and promote the culture of near-peer teaching in the post-COVID era.

In addition to clinical knowledge and teaching skills, near peer teachers should also develop self-awareness and evaluation. Motivated near-peer teachers are the key players in the sustenance and progression of the medical profession. However, unchecked motivation could lead to erratic and reckless teaching behaviours. It is reassuring to know that the cohort of junior doctors who participated in this study emphasized the importance of the accuracy of information and the awareness of one's limitations. Nonetheless, junior doctors must be formally educated about the consequences of reckless teaching behaviours and their near-peer teaching sessions should be supervised(Ince-Cushman et al. 2015) and feedbacked on a regular basis.

The sub-optimal involvement of highly motivated junior doctors in near-peer teaching is largely due to the lack of time. Teaching in itself is time consuming. It slows down the clinical duties of the junior doctors. The pressure to complete high priority clinical jobs competing against the motivation to teach students or juniors leads to internal conflicts.(Hayden et al. 2021) The teachers need for time to prepare, deliver teaching and get feedback on their teaching were echoed by all participants. In an environment of busy clinical workflow, integration of protected time for junior doctors to participate in near-peer teaching was the suggested solution.(Shayne et al. 2002; Jung et al. 2012) In addition to time, the availability of teaching space and resources also play a key role in facilitating NPT.(MacDonald et al. 2020)

Underutilized NPT lacks structural support (van de Mortel et al. 2016) and the need to have a well-established structured near-peer teaching programme to encourage teacher participation (Z. Qureshi et al. 2013) was identified in this study. Cumberworth et.al., recommended certain key steps in organizing a structured near peer teaching programme. Recruiting near-peer teachers, assigning learners to teachers and arranging dedicated time, place and resources will help advertise the programme and encourage participation. Early identification of teaching/learning goals, content development and supervision will help ensure efficient, beneficial and safe teaching practice. Post participation feedback from all stakeholders will help evaluate and improve the near-peer teaching programme.(Cumberworth et al. 2020)

Strengths and limitations

This study explores the attitude of junior doctors towards near-peer teaching drawing from their own teaching experience underpinned by their learning experiences. The participants were interviewed in a relaxed, non-judgemental environment by a peer-interviewer rather than a non-peer expert interviewer. Unlike Quantitative studies, the interpretation of qualitative data is subject to the conscious or sub-conscious biases of the researcher. Nevertheless, a comprehensive approach with a range of reflexivity in interpreting data including the social contexts of teaching practice can help in a holistic understanding of the attitude cultivated by junior doctors towards teaching.

The study focused on the experience of the teachers who participated in near-peer teaching and the experience of the learners involved in the same sessions were unexplored. Purposive sampling also meant that the challenges faced by those less involved in teaching may be different to the findings of this study and remains to be investigated. Although the original design planned to triangulate data using the reflective writing assignment submitted by participants after completion of their Intern-led teaching program, only 2 such reflective pieces could be retrieved and were not included in the final data analysis.

Implications for practice

Four levels of opportunities for improvement were identified. Firstly, training bodies should consider recognising and incentivising near-peer teaching. Mandatory near-peer teaching hours for junior doctors in training, could help steer organisations towards facilitation of dedicated teaching time. Secondly, organisations should appreciate the value of near-peer teaching and have a structured teaching program that would benefit both near-peer teachers and learners. Appropriate resources including protected-time, man power, space and materials should be allocated to facilitate this structured teaching program. The availability of resources and the arrangements for near-peer teaching programme should be communicated to learners, teachers and their teams in an efficient and timely manner.

Teams should respect the protected teaching time of junior doctors and facilitate their teaching activities. Senior clinicians in the team should also help supervise and give feedback to junior doctors involved in near-peer teaching whenever possible. Finally, on a teacher-learner level, near-peer teachers should work collaboratively with their learners in identifying their educational needs, clinical interests and knowledge gaps. Evaluating these in the lights of one's own strengths and weaknesses, junior doctors should prepare in advance, deliver

short targeted teaching sessions, give and receive feedback; re-evaluating and improving one's clinical, communication and teaching skills.

CONCLUSION

This qualitative study explored the attitude of junior doctors towards near-peer teaching and identified various motivational factors, challenges and suggestions to improve teacher and learner participation.

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None

DECLARATION OF INTEREST STATEMENT

Ethics approval and consent to participate

Ethical approval was granted from the Swansea University Ethics Sub-Committee (SUMS RESC ref number 2021-0047) Written consent was provided by participants before taking part in this study.

Consent for publication

Participants in this study gave informed written consent to publication of their anonymised data.

Competing interests

The authors declare that they have no competing interests.

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PRACTICE POINTS

1. Near-peer teachers should work collaboratively with their learners in identifying their educational needs, clinical interests and knowledge gaps.

2. Junior doctors should prepare in advance, deliver short targeted NPT sessions, give and receive feedback.

3. Senior members of the teams should respect the protected teaching time of junior doctors and facilitate and/or supervise their teaching activities.

4. Organisations should appreciate the value of NPT and have a structured teaching program with appropriate resources including protected-time, man power, space and materials.

5. Higher education training bodies should consider recognising and incentivising near-peer teaching.

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APPENDIX 1

Interview Guide

Period	Aspects	Duration
Preliminary work up	Self-introduce and thank the participant for participation Ensure participant has read the 'Information for the participants' Clarify any questions participant might have Participant to sign the consent form and fill the Personal proforma Give a copy of the consent form to the participant	3 mins
Warm up	Advice the participant of when the audio recording begins Explain the structure of the Interview Describe experience of the Intern Teaching programme	3 mins
Motivation	Why do you think you should teach? How did you feel after teaching medical students? Goals / Plans for teaching next year and long term.	4 mins
Challenges	What challenges do you expect in achieving your teaching goals Why think these will be potential challenges? Any negative experiences or feelings towards teaching?	4 mins
Suggestions	What makes you think you should continue teaching ? How will you deal with your negative experiences or feelings? What can help you increase your participation in teaching?	4 mins
Finish	Summarization Feedback on completeness End recording, acknowledgement and leave taking	2 mins

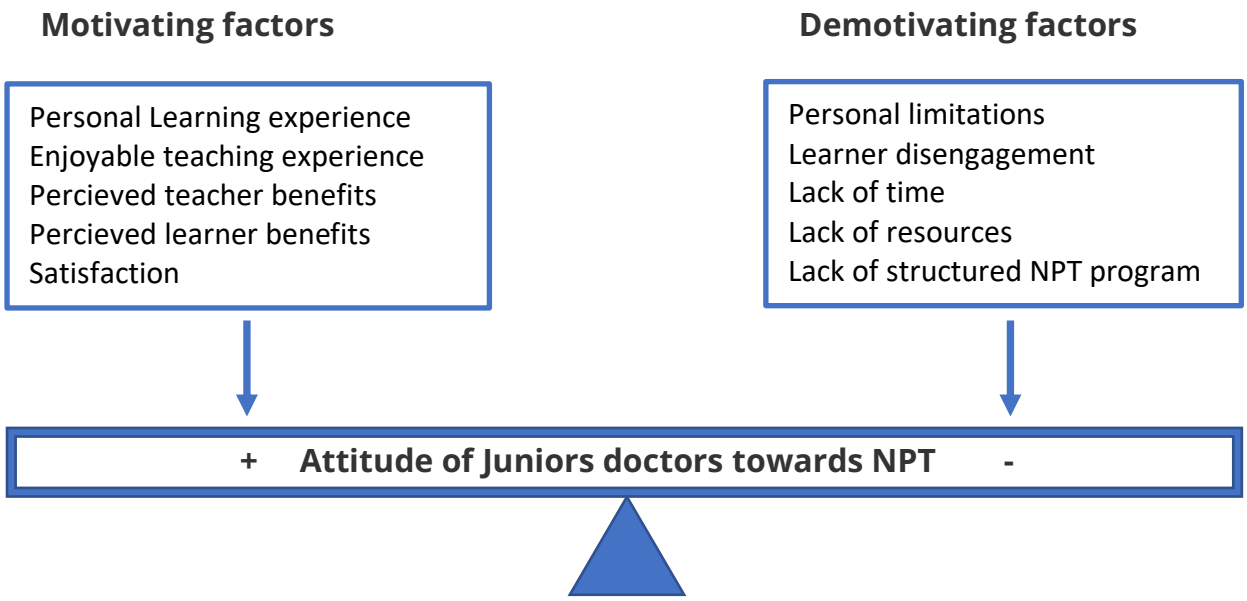
TABLE 1: Framework for the interview guide

	Motivation	Challenges	Solutions
Cognition	Why do you think you should teach?	Why do you think you should not teach?	What reasons can you think of to increase your participation in teaching?
Affect	Describe a teaching experience. What were your feelings afterwards?	What factors discourage you from being involved in teaching?	What can be done to make you feel more motivated towards clinical teaching?
Behaviour	What are your teaching goals / plans for next year?	What challenges will you have to overcome to achieve your goals?	What can be done to help you overcome these challenges?

TABLE 2: Perceived teacher and learner benefits of near-peer teaching

Teacher benefits	Learner benefits
• Consolidate previous learning • Identify knowledge gaps • Keep up-to-date with EBM • Improve teaching skills • Good experience for CV	• Cognitive congruence • Practical advice from teachers • Improve communication skills • Empowerment to teach • Less intimidating learning mileu

FIGURE 1: Attitude of junior doctors towards near-peer teaching



Figures

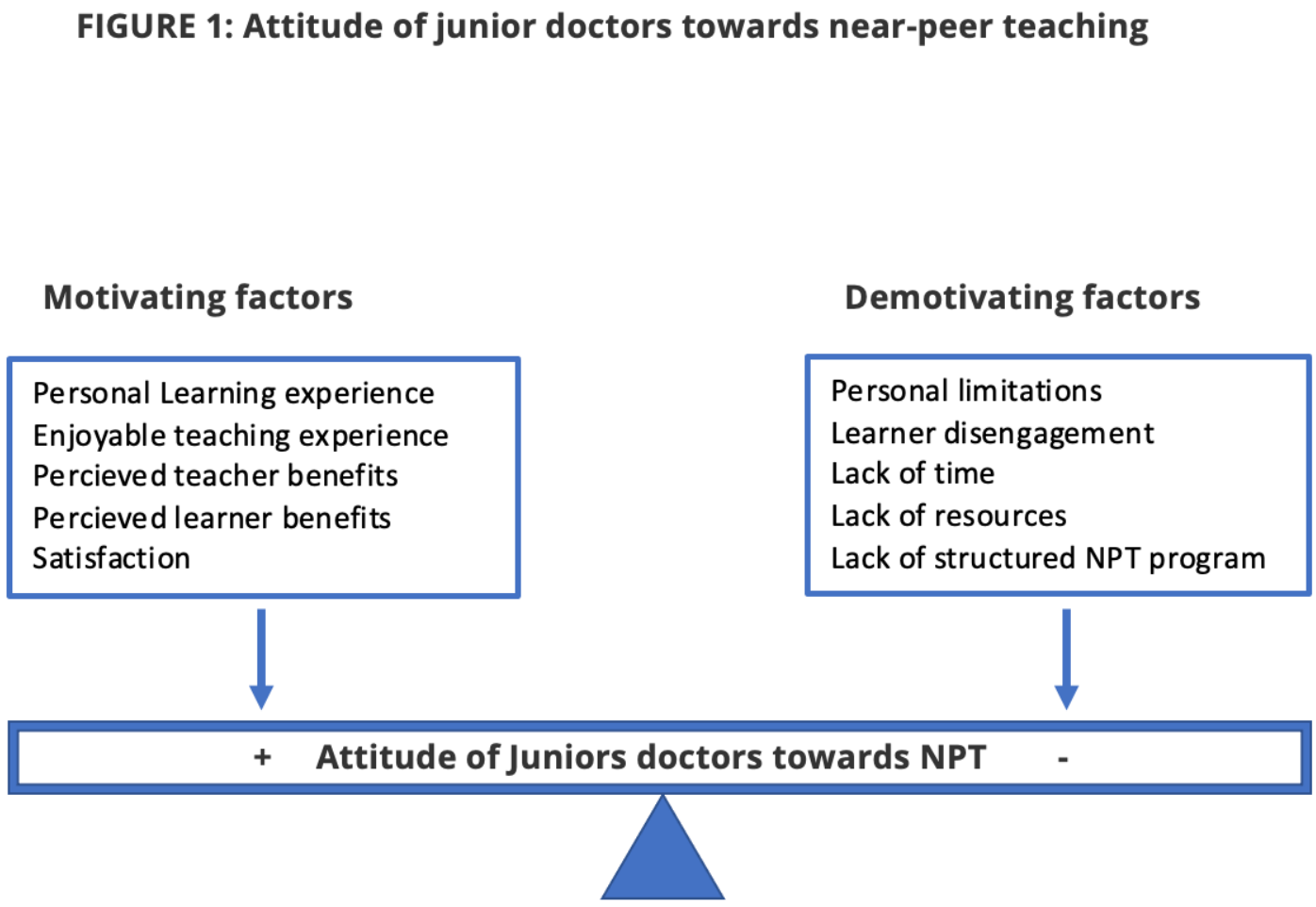


Figure 1

Attitude of junior doctors towards near peer teaching