

Do near-peers learn better by teaching junior colleagues? A qualitative study to assess perceptions

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ABSTRACT

Background: Near-peer assisted learning is well documented in literature. Peers have experience of going through a similar situation in the proximate past and have advantage of better conceptualization of basic concepts. This study aims to explore the experience of near-peer student tutors on learning as a consequence of their teaching, and to find out perceptions of staff tutors and tutees on perception of improvement, professionally.

Subjects and Methods: It was a qualitative study based on interviews carried out in Ameer ud Din Medical College/PGMI/ Lahore General Hospital, Lahore from January 2017 to June 2017. This study was designed using semi-structured in-depth interviews to collect data from Postgraduate Students Post-IMM (N=5) as student tutors, Pre-IMM students (N=2), final year medical students (N=2), fourth year medical students (N=2) as tutees and faculty members (N=2) as faculty staff tutors, selected on the basis of non-probability purposive sampling. The qualitative data was generated in interviews conducted in English, transcribed and organized into categories by using n-vivo. Participants were interviewed one more time to further explore their perceptions and experiences related to emergent categories. Grounded theory analysis technique was employed to generate qualitative data. It was then analyzed on n-vivo.

Results: Near-Peer Assisted Learning (NPAL) was perceived as rewarding in terms of promoting higher order thinking, improving teaching skills and in refining self-efficacy among tutors. Both student tutors and tutees learnt with the interaction in this way.

Conclusion: It was perceived that near-peer assisted learning had improvement in transfer of learning, when opportunities were provided through near-peer student tutors. Near-peer tutors, tutees and faculty staff tutors had similar perception, as it increased depth of their knowledge and skills.

Keywords:

Near-peer, Improve, Learning, Faculty, Training

INTRODUCTION

Near-peer assisted learning is well documented in literature. It was said that teaching was the best way to learn. This expression was given by faculty mostly. No clear view was available from students involved in teaching. Near-Peers have experience of going through similar situation in the proximate past. This exposure gives them advantage of better conceptualization of basic concepts. In different studies, variable perceptions of the students, peers and teachers were documented. Exploring the feelings of peer tutors could benefit our understanding, who were directly involved in this exercise. One can also explore the perceptions of students who were taught and faculty who gave them this task. The documented literature which favors that

teaching promotes learning, can be tested. There were many studies available, but still the answer to many questions was not clear.¹ Assistance from juniors was taken in the institutions, both planned and unplanned, and the practice was common.² There was difference between Near-Peer Assisted learning (NPAL) and Peer Assisted Learning (PAL). They were mixed up while using unknowingly, and also used in exchange for each other. Whereas a near-peer is a student, a year or more closer to the person being taught, peer is someone of the same category.³ It was a relaxed situation for both the teacher and learner in NPAL or PAL. They stay close and comfortable, resulting in a better transfer of information.

AMEE guide No: 30 have comprehensively addressed the Peer Assisted Learning (PAL).⁴ They gave 24 questions, and answered them one by one. Even the division of learners was done accordingly into student tutors, peer tutors and student tutees. It was

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helpful to us in addressing problem. However, guideline evaluated by formal testing, which was difficult in our circumstances. An interview-based assessment of perceptions could solve this aspect. Meller and coworkers documented role of near peer in the learning of third year residents.⁵ It was effective and comparable to the faculty teaching. They conducted training workshops for the voluntary near-peers, and then carried out the research. It resulted in improvement of learning comparable to faculty. However it was not documented clearly, whether how was it comparable with peer tutors.⁶ Nazha and colleagues concluded that students praised when peer assisted programs were carried out to enhance the learning and fill the curricular gap.⁷ They carried out research courses to develop interest in students which were organized and implemented by peers. It increased motivation in the students and interaction. However, it was lacking in clarity of the selection process.⁸ Rashid and coauthors carried out structured teaching program for final year medical students through junior doctors. This was appreciated and encouraged by the medical students who narrated good experience in revision. However, the experience of peers who were taught was lacking with no documentation of what attraction they had to participate.⁹ This study aims to fill such gap identified in the existing literature. The near-peer learning required more exploration. Tutees had diverse ideas about tutors. Tutors can have different views and clinical load makes it difficult for them to give appropriate time to students.^{10,11} In present scenario, near-peers were used as support for teaching informally as near-peer tutors. It gave them opportunity to learn and internalize subject.

The Postgraduate Trainees who are usually actively involved in teaching informally learn better than their colleagues. Peer learning is an effective tool for improvement in understanding of the teacher. This study explores the perceptions of near-peer tutors, faculty staff tutors and tutees about their learning experiences in terms of transfer of knowledge. If found better, one may suggest to include near-peer teaching in postgraduate trainee program formally.¹² The aim of this study was to explore the perception of near-peer tutors about their learning as a consequence of their teaching through qualitative study in Lahore General Hospital with objective to find out their own perceptions, and that of faculty staff tutors and tutees on this activity.

SUBJECTS AND METHODS

This qualitative study was carried out between January to June 2017. The study was based on interviews using employing a grounded theory approach.¹³ The semi structured open ended in-depth interviews were repeated to improve validity and understand ambiguities in description. Being a qualitative study, sample size was not calculated, and the total number of participants was subjected to the saturation of data achieved by in-depth face to face interviews. In this study, 13 participants saturated the data. Informed consent was obtained, and anonymity and confidentiality of participants was guaranteed and ensured. The interviews were carried out in the Medical Unit 2 of Lahore General Hospital (LGH). LGH is a 1648 bedded teaching hospital affiliated with Ameer ud Din Medical College. The medical college was newly established first batch of students were studying in the final year class at the time of study. The medical floor comprised of 3 units with total of 150 beds. Assignments were given informally in the institute to near peer tutors in place of staff tutors. It included assignments for both large and small groups, with lectures by some units under supervision of faculty staff tutors and ward teaching regarding history and physical examinations, both with and without supervision by faculty staff tutors. At times, simple procedural skills were also given to peer tutors, with initial close observation by the faculty. They were allowed to use power point, flip charts, white boards and real patient scenarios. This practice was utilized for assessment of perceptions in this study. For inclusion in study, only Medical unit 2 doctors involved in teaching were selected due to convenience. Postgraduate residents from Medical Unit 2 (N=5), who already had passed intermediate module (IMM) of College of Physicians and Surgeons of Pakistan (CPSP) in medicine and were actively involved in informal teaching of their junior peers, were included. They participated as near-peer tutors, helping in teaching. Interviews of students from fourth year (N=2) and final year (N=2) of Ameer-ud-Din Medical College, postgraduate trainees of year 1 and 2 in medical unit 2 (N=2), and faculty members of medical unit 2 (N=2), selected on the basis of non-probability purposive sampling, based on 'typical sampling' strategy were carried out.¹⁴ Participants who were well versed with written and spoken English language were included and interviews were carried out in English for 15 to 20 minutes with each candidate, as

it was more practical and easy to transcribe. The objective was to find out the perceptions of medical personals with increasing educational and training experience (from 4th year MBBS to faculty members) in a typical learning environment. The open-ended semi-structured questions asked included; 1. What is your view on near peer teaching? 2. Does it benefit the students, teaching younger colleagues? and 3. Should it be adopted for teaching? For one to one interview, office room in the ward was used with at least 2 audio recorders, a table and 2 or 3 chairs. These interviews were repeated more than once to clarify concepts emerging from them. Participants were interviewed to explore their perceptions and experiences related to growing categories from the data, followed by uniting similar patterns. This process led to clear, demonstrable and reliable results, which were used in the analysis to draw conclusions. Categories were coded using n-vivo software. No formal evaluation was done but the perception on feeling of improvement was recorded in this clinical situation.

RESULTS

In this study 13 participants were interviewed. Among them 2 were consultants, 5 were Post IMM students, 2 were pre IMM students, 2 were 5th year students of Ameer ud Din Medical College and 2 were 4th year students of Ameer ud din Medical College. Three aspects were inquired i.e. participants “view about Near-Peer teaching, its benefits or draw backs and should it be adapted as formal teaching method”. Overall Near-Peer tutor was found comparable and similar and was mentioned being practiced informally. Mix response was observed for adopting this method as formal teaching response (Table 1). Near-peer tutor was viewed positively, and there were no negative remarks about them. Regarding positive effect, it was considered to overcome barriers of fear of faculty, stress of a senior teacher taking class, absence from the class or asking him questions. They also found teaching as supportive in retaining subjects for their own learning. It helped in developing good rapport with the students, gaining respect from them and also building person skills like teaching skills and leadership. It gave immense boost to their confidence. Drawbacks were mentioned by few, which were more due to lack of confidence, visible while teaching and also noted by students due to knowledge deficiency. This also caused lack of interest in the students. Few participants agreed with adoption as such, and not formally. Majority was suggesting proper selection and

training of the students, with proper supervision of them during whole process.

DISCUSSION

Using peers as tutor was a process practiced from ancient times. Greeks used to apply this model, though perfected later with time.¹⁵ In modern era, this collaborative effort was utilized more effectively, but still there was lot to learn to make it more real. When a Near-peer starts teaching, it generates in high order thinking. New aspects became evident while teaching. Previous knowledge was consolidated, and the teacher became more effective if he learns new skills for this purpose. It improves his performance as a teacher by applying new experiences.¹⁶ Not only self-efficacy developed, but also reasoning and justification skill commonly known as critical thinking. A common saying “to teach is to learn twice” is documented in the literature.¹⁷ In this study, it was applied in a qualitative pattern, to know insight from the near-peer tutors and also from people around them who were doctors. Doing one to one interview gave a good understanding of the perspectives. One of the objectives was to know viewpoint of near-peer tutor. It was important to recognize what other side of the table has to say as students. Since faculty tutor asked them to teach, and the tutees were junior to teachers, it was important to know their viewpoints in this process. To cover this, two faculty members (staff tutors), two pre-IMM students, two final year students and two fourth year students (tutees) were interviewed. Five of the near-peer tutors were interviewed and were the ‘primary targets’ in this study.¹⁸ It was found that all tutors were in favor of near-peer teaching. They had different reasons for that, and the main was ‘overall good result’ in terms of transfer of learning. Some viewed it as an opportunity to go back and read, due to responsibility. They also took it as a bridge and filled the communication gap. Some were helped from the pointing of mistakes, while others had no fear in asking questions. Few of them felt it as a quick way to learn. Another reason was confidence while talking to students, which improved.⁹ Drawbacks pointed out included non-serious attitude of students and no formal teaching for majority of them before giving the responsibility.¹⁹ Majority agreed with the adoption of this methodology, and few disagreed. Justification given by them was lack of knowledge and no proper teaching.²⁰ View from the other side of the table were little different. Majority of them agreed with this method, stating different reasons. Likeable reasons were frankness with the near-peer tutor, giving more

Table 1: Categories emerged from interviews

Categories	Comments	Observations
View on near-peer teaching	<ol style="list-style-type: none"> 1. Good idea 2. Actually practiced with good results 3. Teaching is helpful 4. Seniors act as bridge 5. Great advantage to become a teacher 	It was viewed positively by all for implementation with certain merits and demerits, taken as benefits or drawbacks. Majority took it as an advantage to become a teacher.
Benefits of teaching	<ol style="list-style-type: none"> 1. Barriers are overcome including fear of teacher, stress and language 2. Availability is not an issue, easily contactable 3. Increases grasp on the subject by reading critically and recalling 4. Beneficial in start as we don't open books in start 5. Friendly atmosphere of teaching due to frankness. 6. Confidence boost occurs. 7. Comfortable for students to communicate 8. Respect is gained 9. We become self-regulated learners 10. Leadership learning by teaching 11. Same level while teaching 12. No communication gap 	Participants found many benefits, some of which can only be expressed, not measured, like fear, stress and inability to face faculty. Some got motivated by learning without effort, as they gained knowledge through discussions in question and answer, without opening books. Absence of major age difference, comfortable environment, confidence boost and friendly atmosphere were taken as advantages, adding to the benefits
Drawbacks of teaching	<ol style="list-style-type: none"> 1. No clear disadvantage 2. Students are unsure if they are taught right things 3. Irrelevant things are taught sometimes 4. Less experience for teaching 5. Students are less attentive 	Not many disadvantages were mentioned by participants. They were mainly due to lack of discipline, knowledge, experience of teaching and confidence. Information was transferred, but satisfaction was lacking.
Recommendation for adopting it as teaching formally	<ol style="list-style-type: none"> 1. Should be done after training 2. Adopted in specific areas like clinical settings and skill learning 3. Adoption is natural, as we always tend to teach juniors 4. Revision occurs by teaching 5. Teaching helps in time saving and systematic approach learning 6. Assess competence before assigning responsibility 	Some agreed with adoption as such, but majority pointed out importance of proper training and selection process. It was also mentioned that this can be more beneficial with clinical and procedural teaching, but under supervision.

time to them, answering questions appropriately without fear of penalization, discussions helping in recollecting old knowledge, creating close relationship with near-peers and ease to contact at will even after class. Drawbacks pointed out included lack of knowledge in some but not all, no in depth information about the subject with poor concepts of some near-peer tutors.²¹ Although majority of them agreed with the continuation of this process, some of them pointed out that it should be done after proper selection process, judging the aptitude and knowledge of tutor to be. Few completely disagreed for using it as a teaching

methodology, as they considered it a waste of their own time. They wanted faculty to take up this responsibility. Majority do agreed that it could be utilized for ward and other clinical setup teaching, but the class room teaching in clinical and basic sciences should always be taken up by the faculty.²² This study has given more insight into what stake holders think. It appeared that NPAL can be utilized in local setup, especially where a relative deficiency of senior faculty exists and patient number is much more, with lot of other clinical responsibilities of faculty teachers other than the teaching. However, there is a need to execute NPAL

appropriately. To achieve this, formal training of near-peer tutor is required. Before training, a proper selection of willing near-peer tutor is immensely important who is willing to support and facilitate the peers. It may minimize the problems indicated by the students sharing perspective from the other side of table.²³

Faculty tutor is no doubt responsible for teaching. It was observed that some of them were not properly trained. However, keeping faculty build up aside which was not objective of this study and remains an institutional responsibility, near-peer tutor training remained the focus of this study. Students learnt from their teachers. A near-peer is best placed to have good or bad experienced. Since one learns from **one's** mistakes, a bad experience would be expected to have taught more. Given the opportunity to teach immediately, it gave peers chance to improve on these mistakes and internalize them. Similarly, tutees who learnt from peers, stood better chance of learning. There were other reasons involved with near-peer tutors. Fear of teacher, easy access out of hours, comfort in communication and asking for tips to improve learning were other factors pointed out in this study also, as are documented in previous studies.^{24,25} Literature supported near-peer teaching as a powerful tool, if utilized appropriately. It gave diversity and good exposure to both the teacher as well as learner. Difficulties encountered with staff tutors could be overcome to some extent if near-peers are involved. Process could further improve if regular feedback is taken and evaluation of learning transfer is done frequently. A combination of staff and near-peer tutors was what should be considered in circumstances where there is more clinical and educational work load on the faculty. This teaching should be ideally done without supervision but could only be possible with trained near-peer tutors.²⁵ Current circumstances did not have training opportunities for near-peers, in every setup. Unless that takes place, it is advisable to closely supervise these learning experiences.²⁶ Improvements could be gained with less drawbacks if these opportunities are properly planned. Until that occurs, faculty tutor should take the responsibility and suggest mechanisms to delegate teaching jobs to near leers only if they can accept responsibility and are trained for such activities.²⁷

We carried out this research as qualitative study as perceptions had to be recorded and analyzed. We tried to minimize limitations by interviewing only in English and using two audio recorders, however there were

many technical problems. The quality of voice, volume of speaker and tone made problem, which had to be clarified with the speaker or interviewed again. Despite trying to have privacy, interviews had to be carried out in hospital setting, which caused unavoidable interference of patients at times. We tried to minimize it by keeping mobiles silent, not everyone was compliant, and we had to conduct the session again. There were constraints of time from interviewer and interviewee at times, and we tried to pre-plan sessions to reduce any inconvenience.

CONCLUSION

As perceived by the participants in interview, Near-Peer Assisted Learning improved learning opportunity for all stake holders including near-peer Tutors, Tutees and Staff Tutors, with more chances of improvement for the near-peer tutors. It increased the depth of knowledge and skills in the tutors according to their perception. Easy approach was possible due to lack of fear, which led to more exposure. Tutor learning was more perceived in clinical teaching and history taking, clinical methods and procedures, whereas it was less perceived for large group lecturing. There was difference in opinion about adoption formally, but majority favored it. Most thought that that it brings improvement due to more responsibility and better exposure. Formal training of near-peer Tutors was suggested before giving them opportunity.

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REFERENCES

1. Naqi SA. Peer assisted learning as a formal instructional tool. *J Coll Physicians Surg Pak.* 2014; 24(3): 169–72.
2. Factors Affecting the Tutoring Process - ProQuest [Internet]. [cited 2018 Jul 1]. Available from: <https://search.proquest.com/openview/b50fcd63070912036e11c9661c683d6f/1?pq-origsite=gscholar&cbl=2030483>
3. Alkhalil BA. Near-peer-assisted learning (NPAL) in undergraduate medical students and their perception of having medical interns as their near peer teacher. *Med Teach.* 2015; 37(sup1): S33–9.
4. Ross DMT, Cameron HS. Peer assisted learning: a planning and implementation framework: AMEE Guide no. 30. *Med Teach.* 2007; 29(6): 527–45.
5. Meller SM, Chen M, Chen R, Haeseler FD. Near-peer teaching in a required third-year clerkship. *Yale J Biol Med.* 2013; 86(4): 583–9.

6. Lai MMY, Roberts N, Martin J. Effectiveness of patient feedback as an educational intervention to improve medical student consultation (PTA Feedback Study): study protocol for a randomized controlled trial. *Trials*. 2014; 15:361.
7. Nazha B, Salloum RH, Fahed AC, Nabulsi M. Students' perceptions of peer-organized extra-curricular research course during medical school: A qualitative study. *PLoS ONE*. 2015; 10(3): e0119375.
8. Keith L, Hollar D. A social and academic enrichment program promotes medical school matriculation and graduation for disadvantaged students. *Educ Health*. 2012; 25(1): 55-63.
9. Rashid MS, Sobowale O, Gore D. A near-peer teaching program designed, developed and delivered exclusively by recent medical graduates for final year medical students sitting the final objective structured clinical examination (OSCE). *BMC Med Educ*. 2011; 11: 11-7.
10. Jowkar B, Kojuri J, Kohoulat N, Hayat AA. Academic resilience in education: the role of achievement goal orientations. *J Adv Med Educ Prof*. 2014; 2(1): 33-8.
11. Jackson TA, Evans DJR. Can medical students teach? A near-peer-led teaching program for year 1 students. *Adv Physiol Educ*. 2012; 36(3): 192-6.
12. Burgess AW, Roberts C, Black KI, Mellis C. Senior medical student perceived ability and experience in giving peer feedback in formative long case examinations. *BMC Med Educ*. 2013; 13: 79.
13. Stern PN. Grounded theory methodology: Its uses and processes. *Image (IN)*. 1980; 12(1): 20-3.
14. Pomey M-P, Ghadiri DP, Karazivan P, Fernandez N, Clavel N. Patients as partners: a qualitative study of patients' engagement in their health care. *PloS One*. 2015; 10(4): e0122499.
15. Hopf D, Hatzichristou C. Teacher gender-related influences in Greek schools. *Br J Educ Psychol*. 1999; 69(1): 1-18.
16. Anderson T, Howe C, Soden R, Halliday J, Low J. Peer interaction and the learning of critical thinking skills in further education students. *Instr Sci*. 2001; 29(1): 1-32.
17. Weiss V, Needlman R. To teach is to learn twice: resident teachers learn more. *Arch Pediatr Adolesc Med*. 1998; 152(2): 190-2.
18. Lockspeiser TM, O'Sullivan P, Teherani A, Muller J. Understanding the experience of being taught by peers: the value of social and cognitive congruence. *Adv Health Sci Educ*. 2008; 13(3): 361-72.
19. McLeod PJ, Steinert Y, Meagher T, McLeod A. The ABCs of pedagogy for clinical teachers. *Med Educ*. 2003; 37(7): 638-44.
20. Nelson AJ, Nelson SV, Linn AMJ, Raw LE, Kildea HB, Tonkin AL. Tomorrow's educators ... today? Implementing near-peer teaching for medical students. *Med Teach*. 2013; 35(2): 156-9.
21. Saleh M, Sinha Y, Weinberg D. Using peer-assisted learning to teach basic surgical skills: medical students' experiences. *Med Educ Online*. 2013; 18(1): 21065.
22. Whitman NA, Fife JD. Peer Teaching: To teach is to learn twice. ASHE-ERIC Higher Education Report No. 4, 1988 [Internet]. ASHE-ERIC Higher Education Reports, The George Washington University, One Dupont Circle, Suite 630, Dept; 1988 [cited 2018 Jul 2]. Available from: <https://eric.ed.gov/?id=ED305016>
23. Blecker NS, Boakes NJ. Creating a learning environment for all children: are teachers able and willing? *Int J Incl Educ*. 2010; 14(5): 435-47.
24. Berg EC. The effects of trained peer response on ESL students' revision types and writing quality. *J Second Lang Writ*. 1999; 8(3): 215-41.
25. Rodrigues J, Sengupta A, Mitchell A, Kane C, Kane C, Maxwell S, et al. The South-east Scotland Foundation Doctor Teaching Programme — Is "near-peer" teaching feasible, efficacious and sustainable on a regional scale? *Med Teach*. 2009; 31(2): e51-7.
26. Durán CEP, Bahena EN, Rodríguez M de los ÁG, Baca GJ, Uresti AS, Elizondo-Omaña RE, et al. Near-peer teaching in an anatomy course with a low faculty-to-student ratio. *Anat Sci Educ*. 2012; 5(3): 171-6.
27. Cate OT, Durning S. Peer teaching in medical education: twelve reasons to move from theory to practice. *Med Teach*. 2007; 29(6): 591-9.