

## ORIGINAL ARTICLE

## PEER ASSISTED LEARNING (PAL): VIEWS AND PERSPECTIVES

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**Background:** Peer Assisted Learning (PAL) is a student-centric learning method in which selected students (peer leaders, PLs) assume the role of teachers after proper training to teach their fellow-mates. Aim of this study was to know viewpoints of facilitators, PLs and peer learners (Pls) about PAL model introduced in Gastrointestinal module for year 1 medical students at Aga Khan University. **Methods:** Three focused group discussions (FGDs) were conducted to acquire opinion of facilitators, PLs and Pls. Written informed consent was acquired from all participants, FGDs were conducted for 40 to 60 minutes, audio recorded and transcribed. The opinion was acquired from 3 faculty members, 9 Pls and 10 PLs. **Results:** All participants agreed to usefulness of PAL for teaching and learning. The model developed better understanding and clarification of different concepts and flourished leadership and communication skills in PLs. The Pls were indeed more comfortable and less hesitant in asking questions from the PLs compared to faculty members. They got engaged in open discussions with PLs and cleared their concepts much more effectively. The PLs were very enthusiastic about the project and mentioned that the training sessions and mock labs helped them to clear their own concepts. **Conclusion:** This mode of teaching promoted active engaged learning, better understanding of knowledge and active participation between both groups of students. The model developed professional attitude and leadership qualities in PLs. It enhanced psychomotor skills and cognitive development not only in PLs but also stimulated that in the learners.

**Keywords:** Peer Assisted Learning (PAL), Peer leaders, Peer learners

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## INTRODUCTION

One of the most highlighted transformation in the education system regarding teaching and delivering the relevant content to students has been the introduction of a technique called peer assisted learning (PAL).<sup>1</sup> PAL model has widened its horizon of practice from United States since 1990s to institutions of United Kingdom and now is being practiced in most of the institutions worldwide.<sup>2</sup>

PAL is an extension of the empirical and independent learning in which concepts are applied practically by the process of constructivism.<sup>3</sup> This model has been used in Monash University as part of their vertical study programs for medical students.<sup>4</sup> It has opened a pathway to deal with the limitation of cost-effective teaching methods and highlights the lacking in the part of the curriculum being taught<sup>5</sup>. It fulfils aim of providing a comfortable environment for productive discussion where clarity of concepts can be acquired through questioning.<sup>6,7</sup>

This methodology has been implemented in dental education,<sup>3</sup> and 'Skills Lab' in German sessions in universities with productive results.<sup>8</sup> Birjand University of Medicine applied this technique in the discipline of pharmacology, and concluded this to be a better learning method as compared to lectures.<sup>9</sup> A peer assisted case study done in University College London Medical School, aimed at filling the gaps in the preclinical curriculum and deduced that the tutorials

were well received and there was significant improvement in the knowledge of the tutees.<sup>10</sup>

PAL has been used as a teaching method for history-taking by medical students which improved their history-taking skills.<sup>11</sup> Implementation of PAL in evidence based medicine had a significant impact on the learning of the students involved in the study done at the University of Glasgow.<sup>12</sup> A research done in Sri Lankan medical universities cites the importance of PAL in filling gaps by formal teaching and its beneficial impacts specifically on second year students.<sup>13</sup>

A PAL environment can be more fruitful in universities, specifically medical ones as it opens up routes for the students to develop their communication and practical skills, which are an important asset of their profession. We aimed to analyse the usefulness of PAL in terms of viewpoints of facilitators, peer leaders (PLs) and peer learners (Pls) about PAL model of teaching introduced in lab sessions of gastrointestinal module for year I medical students at Aga Khan University.

## METHODOLOGY

A mixed method design was adopted on PAL model of teaching introduced for year I medical students at Aga Khan University after approval from Ethical Review Committee of Aga Khan University (ERC#: 4585-BBS-ERC-16). The qualitative arm of the research was acquired by Focused Group Discussions (FGDs) involving faculty, PLs and Pls. It assessed responses of faculty, PLs and Pls by three distinct FGDs. In the

faculty FGD, three faculty members participated. Ten PLs contributed to the PLs FGD which was moderated by three same faculty members. In the Pls FGD, nine students took part, moderated by the 2 same faculty members. Each FGD continued for 40 to 60 minutes, on specific questions (annexures no. 1, 2 and 3), were audio recorded and transcribed with consent. The data was subjected to NVivo for qualitative content analysis and identifying recurring themes. Faculty was labelled from alpha ( $\alpha$ ), beta ( $\beta$ ) and gamma ( $\gamma$ ), PLs were demarcated from: 1-10 whereas labelling of Pls: A-I.

## RESULTS

Following themes and subthemes emerged after analysis of data from all FGDs:

### 1. PAL in Teaching and Learning Sessions

There was consensus among the faculty members, PLs and Pls on the usefulness of PAL sessions. Faculty members,  $\alpha$  and  $\beta$  agreed that: *“core ideas were integrated with the practical aspect of the concept”*. The PLs, 1 and 2 stated that contrary to their expectation, they received less naughtiness from the group and there was a sense of unified co-learning. *“And we are the same rank and we went through the process just a week ago so we knew where we’ll get stuck and which areas require greater explanation and via which path”*. The application of PAL by PL#3 was further augmented by the statement; *“In the lab skills people are usually not that much interested in those skills because they are not tested. So maybe the areas that are tested, if we can help them in those areas, that might give a good outcome”*.

### 2. PAL for small group discussions:

Pls commented: *“Starting off with lab sessions was a deal since the class is divided into smaller groups and is therefore better to handle. Moreover, as compared to an LCF which has around 10–12 objectives, a lab has 3–4 which again is manageable by the PL”*. Faculty  $\alpha$ : They all agreed up on *“smaller groups are better to learn in and wanted to continue with the small group format”*.

#### a. PAL and Team Based Learning

In the FGD with PLs it was heard that: *“The entire group worked as a team with unity”*. Overall, they felt a strong sense of community develop amongst them. “A” Pl responded: *“I think this is a good project and its working out and we’re learning as a team and afterwards after lab is done if we have a few questions we can just go up and just talk about and discuss”*

#### b. PAL and Educational Environment

Facilitators,  $\beta$  and  $\gamma$  commented: *“Active learning was facilitated in PAL sessions”*, while one Pl “C” also called it *“the best part about the project.”* The Pls were very content with the fact that the PLs were available and accessible even after class hours; *“We didn’t have to hesitate to contact them at all as a result, there was a sense of comfort in the group”*, Pl “C”. They added

*“were not afraid of asking questions without the fear of sounding stupid.”* Moreover, PL were happy (3, 4) because; *“Pls listened to us with greater interest and seriousness”*.

PLs 2 and 3 mentioned: *“Our friends were very curious as to how would the project go about since it is a one of a kind projects and they hadn’t experienced anything similar before”*. The PLs also felt that *“some of the questions addressed to them were asked for the sake of asking questions”* so they felt that their peers were trying to test their knowledge to see how well prepared the PLs are. Faculty  $\gamma$  responded that: *“Direct interaction improved the active and enabled a conducive learning environment, where the Pls were comfortable to ask questions, feel involved”*, *“PLs were constantly on their feet”* and *“They all were genuinely engaged and enjoyed learning”*.

### c. Learning by Fun

There was also the element of fun and curiosity. Students (Pl G and I) responded that *“when we learn from teachers, it gets boring; fun learning, when have our own batch mate who’s doing this and our batch mate was explaining this they have an interest in explaining it in the best way possible”*. One of the PLs (PL8) replied: *“we’re in the same age group, we can understand each other and that is how we can communicate and become more accessible to one another”*. Faculty member  $\beta$  observed that: *“it was a very nice way I saw the whole group’s attention being captured”*.

## 3. PAL and Skills

### a. Leadership and PAL

PAL project was a great learning experience for PLs *“I learnt better as well but also we learnt to teach other people and grow as leaders ourselves”*. The Pls perceived the project as an excellent way of instilling in the class the idea of helping each other. The faculty (all) unanimously agreed that they could sense a renewed spirit of leadership amongst the PLs cohort post the training and mock experiments. PL 3 responded: *“I feel this actually helped us try to get what we know out and try to explain it to others because it’s one thing learning it yourself which is very easy to do but then there’s one thing teaching other’s”*. Moreover, referring to a system crash at one desk, one faculty member mentioned that PLs developed skills of problem solving and troubleshooting. The faculty also recognized skills of time management and punctuality to training sessions and experiments.

### b. Art of expression and Writing Skills:

The faculty  $\beta$ , mentioned that apart from using the PLs for labs, they have also utilized them for data entry and were very impressed by their compassionate work; *“We are looking into using them for article writing and publications as well”*. They believed that the skill set

they will gain through these endeavours will help them conduct their own independent projects.

### c. Communication Skills

Indeed, the PLs learnt the valuable skill of effective communication. F  $\gamma$  responded: *“while communicating this knowledge to the Pls, of course they learn the communication skills”*. She (F  $\gamma$ ) stated that it is *“crucial for trust to be built between the student and the teacher”*. The PLs shared *“We had to be extra prepared and learn things outside the domain of the lab just in case a question related to it is asked”*.

### 4. Interaction of PLS with Pls

PLs found the Pls to be *“very respectful, well behaved and keen on learning”*. However, one PL mentioned; *“some students in my group were least bothered about who was teaching them and were generally very disinterested”*. PLs (4 and 5) mentioned: *“we had to exhibit tolerance towards the Pls and acknowledge that they too are learning”*. The PLs (5 and 6) learnt to impart knowledge rather than keep it with them for selfish purposes. *“I believe it's not only important for us to understand the concept, it's good to help people”* was heard from PL7.

### 5. Future of PAL

The faculty was very enthusiastic about expanding this project in other labs and modules like Respiration and Circulation and Renal Physiology. The Pls were very keen on continuing PAL and suggested that this should be expanded in Anatomy Demonstrations and not restricted to labs only. The PLs 5 and 7 also mentioned *“PAL is already being practiced in some PBL groups wherein each day one person acts as a facilitator and leads the discussion”*. The PLs 7 and 8 were very much in the favour of introducing PAL as an inter-batch activity wherein seniors teach juniors. They believed that this would not only save up on time since the seniors would already know about the topic, *“would also help in developing a relationship with the senior whom you can approach even after PAL is over what personal and academic issues both”*.

### 6. Interest/concerns in becoming a PL

There was unanimous agreement upon interest in becoming a PL. Even though all Pls expressed their interest in becoming a PL, they did have some concerns regarding *“the time and effort that needs to be invested into it”*. One of the Pls was even concerned if they would have to come on Saturdays if they become PLs.

## DISCUSSION

There was consensus amongst the faculty members, PLs and Pls regarding the effectiveness of PAL in integration of theory and the practical application of the knowledge. A unified sense of co-learning was also reported. A finding which was sonorous with the findings of other studies which reported that Pls had a

better understanding of the concepts, felt comfortable clarifying their confusions and felt that they needed lesser time to revise at home.<sup>14</sup> The provision of an open environment for peer-to-peer feedback, has also been reported by many researchers.<sup>15</sup>

Being age matched it was convenient for both the learners and leaders to communicate in terms of clarifying queries about confusing concepts or theories with transfer of knowledge from PLs to Pls. Knowing the Pls personally along with their weaknesses and strengths, PLs adapted their method of teaching and achieved the objectives of the session with an element of fun. Peers communicate in a language that Pls are likely to understand and can relate to, since their mental level and environment of learning is similar in many ways, therefore they can retain information more readily.<sup>16</sup> Pls gained knowledge during the session and grasped that concept in a very proficient manner.<sup>17</sup>

The familiarity factor played a very significant role in learning capabilities of Pls and they felt existence of a two-sided communication especially when all the concerns and queries. The most appreciated factor amongst the Pls was the idea of approaching the PLs outside of PAL sessions, where they could converse and learn in further informal and fun atmosphere. However, other studies reported that Pls were more comfortable and confident when being taught by a senior student or graduate.<sup>18</sup> Many studies strongly supported this finding wherein Pls felt the environment to be conducive for discussions, active learning was promoted, mistakes were not feared, and breaks were taken as peer need.<sup>14</sup> Some studies reported Pls to score equivalent scores in comparison to students' expert assisted learning.<sup>16,19</sup>

We observed that the PAL model was an excellent way on inculcating the hidden curriculum and soft skills of leadership and teamwork within the group. The element of fostering team work has been reported by various other studies too.<sup>5</sup> PAL inculcated the idea of individuals taking ownership and responsibility for their own learning.<sup>20</sup> There was unanimous agreement amongst the participants regarding the small group format of PAL being suitable for the sessions which was supported by many studies done elsewhere.<sup>20</sup> These studies also reported that tutorial based PAL sessions were effective for more targeted, individualized sessions which was in accordance to our findings too.<sup>20,21</sup>

PAL permits peers to make use standards of practice, gain a deeper understanding of them, and develop skills of positive and constructive criticism.<sup>15,19</sup> Our study also exhibited how PAL could promote a fun learning environment wherein there is autonomy and ownership of the knowledge being imparted. The findings that the students were genuinely engaged is supported by many studies,<sup>18</sup> while in one study, the Pls rated both competence and fun to be higher with faculty members than PLs.<sup>5</sup>

Post training, the PLs felt more confident about the content, ended up with a good command on the content however some studies reported that the PLs felt anxious for being held responsible for their peer learning and were apprehensive of their own grades dropping.<sup>22</sup> As an extension of the responsibility on their shoulders, the PLs exhibited time management skills and worked on their troubleshooting skills which many studies mentioned would help them in clinical problem solving.<sup>19</sup> Other studies reported PLs developing people skills of social management.<sup>18</sup> Many studies<sup>5,18,19</sup> reported an enhancement in the communication skills of the PLs, which were in line with our findings.

PLs were of the opinion that the substance for teaching in the PAL model was limited and they would have given a much better yield if the content were more detailed.

## CONCLUSION

This mode of teaching promoted active engaged learning, better understanding of knowledge and active participation between both groups of students. The model developed professional attitude and leadership qualities in PLs. It was unique in the domain of the extensive utilization of the PLs and their competencies who also benefitted by being an active part of data entry, literature review and manuscript writing which further developed their skills.

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