# Team-based learning as a teaching strategy for first-year medical students

Dhiren Punja[1], Shivananda N Kalludi[2], Kirtana M Pai[1], Raghavendra K Rao[1], Murali Dhar[3]

1. Dept. of Physiology, Kasturba Medical College, Manipal University, Manipal, India
2. Dept. of Physiology, Akash Institute of Medical Sciences & Research Centre, Bangalore, India
3. Dept. of Population Policies and Programmes, International Institute for Population Sciences, Mumbai, India

## RESEARCH

**Corresponding Author:**
Dr Dhiren Punja
Department of Physiology,
Kasturba Medical College,
Manipal -576104
India
Email: dhiren.punja@manipal.edu

## ABSTRACT

**Background**
Teaching programmes in medical education are now routinely employing active learning strategies to enhance the learning process and engage students in higher levels of learning. Team-based learning (TBL) is one active learning strategy that builds on individuals' strengths by allowing them to collaborate and work as a team to achieve a common learning objective.

**Aims**
The present study aims to evaluate the impact of TBL on student performance. It also aims to assess students' attitudes towards TBL and the feasibility of its incorporation into the course curriculum.

**Methods**
From a class of 241 students, 128 who agreed to participate in the study underwent two sessions of TBL each consisting of Individual and Group Readiness Assurance Tests (IRATs and GRATs). The readiness assurance tests each had 13 multiple choice questions (MCQ). To analyse the impact of TBL supplementation, the median sessional MCQ scores of students who underwent TBL supplementation (group 1) were compared with those who did not undergo the session (group 2). Students' experiences with TBL and their attitudes towards incorporation of TBL into the course curriculum were analysed using a feedback questionnaire that was given to students who underwent TBL.

**Results**
Students belonging to the TBL group performed significantly better than the students who did not undergo TBL ($p$<0.001). The median sessional MCQ score of the TBL group was seven and non-TBL group was six. The overall mean attitude score obtained from feedback questionnaires was 3.57, which indicates a positive attitude towards TBL.

**Conclusion**
The team-based learning session improved student engagement with course content. The majority of the students felt that TBL supplementation enhanced their understanding of course content and believe that it will help them perform better in their exams.

**Key Words**
Team-based learning, medical students, individual readiness assurance test, group readiness assurance test, active learning

## What this study adds:

**1. What is known about this subject?**
Team-based learning as a learning strategy has replaced didactic lectures with many studies showing either comparable or improved student performance following intervention with TBL.

**2. What new information is offered in this study?**
This study gives an objective assessment on whether supplementing didactic lectures with TBL offers students additional benefit in terms of greater engagement with course content. The study also gives information on the perceived usefulness of TBL among students and their attitude towards TBL being introduced as a supplementary teaching aid.

**3. What are the implications for research, policy, or practice?**

TBL could serve as a useful active learning strategy to supplement didactic lectures in our institution. Because TBL requires fewer faculty members compared to other active learning strategies (e.g., self-directed learning and problem-based learning), and because it promotes greater student accountability in learning, it could serve as a useful alternative to other active learning strategies.

## Background

Medical education in many countries increasingly focuses on developing teaching strategies that help students achieve higher levels of learning. With easier access to web-based learning materials, classrooms may not necessarily be the place where students get their first exposure to novel content. The flipped classroom model now being practised in many universities aims to encourage students to learn to analyse, apply, and evaluate concepts in the classroom from information they have learnt and comprehended outside or before class.

Team-based learning (TBL) is a collaborative learning strategy that was introduced to encourage students to become active learners rather than be passive recipients of information. Collaborative learning strategies are generally based on the principle that students working together as a cohesive team are able to achieve higher levels of learning. The strategy builds on the strengths of individual students by allowing them to work together as a team to achieve a common goal.[1]

The TBL format supports the development of high performance working teams and provides opportunities for these teams to engage in significant learning tasks.[2] TBL encourages students to be more accountable for their own learning process. In TBL, the instructor's role essentially shifts from being a primary instructor to a facilitator and expert. In team-based learning, students are organised into small groups comprising five to seven members.[3] TBL encompasses four essential elements: teams, accountability, feedback, and assignment design.

1) Teams: Student teams need to be formed and managed carefully. Heterogenous teams that are formed by random assignment promote greater exchange of ideas between diverse team members.[3] Also, an optimally sized team comprising five to seven members will maximise team dynamics and ensure the presence of adequate knowledge resources in the team to promote effective discussions.[4]

2) Accountability: Individuals are accountable for both their individual work and the quality of the teamwork.

3) Feedback: Frequent and timely feedback during learning is necessary.

4) Assignment design: Team assignments encourage learning through discussion, problem solving, concept application, and teamwork.[2]

The structure of TBL has three sequential phases: pre-class preparation, readiness assurance, and a set of application exercises. Prior to each class students are assigned a specific learning objective and have to read relevant material on the topic. The intent is for students to get a brief overview of the fundamental concept that is to be covered in the team-based learning session. Studies have shown that when students are truly prepared for the class activity, interacting with them ensures a more stimulating discussion at a higher level of learning, rather than them remaining passive, inattentive listeners.[5]

The class begins with an individual readiness assurance test (IRAT), a short test on the prepared course content, which the students take individually. The IRAT tests their individual preparedness on the topic. Students then take the same test again as a team; it is called a group readiness assurance test (GRAT) where they are given time to discuss and arrive at a consensus on team answers. This facilitates peer learning and teaching, and encourages higher levels of content understanding via discussion.[1] Students are exposed to alternative views and perspectives on the content. The process of simultaneous reporting of groups' answers promotes easy comparison and immediate feedback. Another important advantage of TBL is that the instructor does not waste time delivering the entire lecture content, most of which the students would have an understanding of by the end of the team discussions.

Studies of team-based learning have shown that students felt actively involved, which helped them both in their learning and in developing team work and communication skills.[6] Seidel and Richards reported that in addition to increased student engagement, there was an impressive level of student reasoning when teams were discussing physiology problems.[7] Tan et al. observed that TBL improves knowledge scores in undergraduate neurology education, with sustained and continuing improvement.[8] Vasan et al. concluded that students performed better in all exams following the TBL approach compared to traditional lecture-

based teaching.[9] TBL advocates self-directed learning of course content and student application of this new knowledge within small collaborative teams and full classroom discussions. Use of the TBL strategy can reduce content delivery time by 40 per cent and increase time spent in application activities without a detrimental effect on the acquisition of knowledge.[10] Students in our medical college routinely have active learning sessions of problem-based learning (PBL) and self-directed learning (SDL) with each session being managed by more than one faculty at a time. TBL has been shown to foster meaningful active learning through small group activities, within a large group setting with a single instructor, all this without increasing class time.[11]

Differences exist between TBL and other active learning strategies like problem-based learning. PBL encourages students to learn to identify the knowledge they need to acquire in order to solve the clinical case presented. In TBL, students learn to apply the knowledge already acquired through pre-class preparation to solve problems, with a purpose of achieving specific learning objectives. In PBL, the instructor provides student groups with feedback and guidance regarding their reasoning. In TBL, faculty also serve as content experts for the session and address the learners' questions and misconceptions, summarise key points, and offer additional insights at the time of simultaneous reporting that follows GRAT.[3] Also, unlike PBL where individual groups are tutor led and require more faculty, TBL groups are more autonomous and one course instructor is sufficient to facilitate a session regardless of class size.[2,3,12] Considering this, team-based learning would have a significant advantage over other active learning strategies especially in cases where the teacher-student ratio exceeds 1:7.

Our study was aimed at evaluating if TBL supplementation had a positive impact on students' performance. The sessional MCQ scores of students who had attended TBL sessions along with the didactic lectures were compared with the scores of students who had only attended didactic lectures. In doing so, we intended to assess if TBL sessions had the ability to enhance engagement with the course content that students had already been exposed to in didactic lectures. We also intended to see if TBL promotes better understanding and application of course content.

Using a questionnaire we aimed to assess students' attitudes towards TBL. The questionnaire assessed students' views on incorporation of team-based learning sessions in the course curriculum and if they preferred TBL as a supplement or a replacement for didactic lectures.

The team-based learning sessions were conducted in the lecture halls of Kasturba Medical College, Manipal, India. Separate time was assigned at the end of the week for TBL sessions. The lecture halls used were the same ones where regular didactic lectures were conducted. The sessions were conducted in the second term of the first year, by which time students had completed eight months of medical education. During that time, the students were exposed to two self-directed learning sessions in haematology and cardiovascular physiology.

Ethical approval for the present study was obtained from the Institutional Ethics Committee, Manipal (no. IEC 113/2014). Students were given detailed information about the plan and purpose of the study two weeks in advance and were invited to participate. Students were advised of the topics to be covered in the TBL sessions 10 days prior to them. Learning objectives for each session were clearly specified by the principal investigator and the students were instructed to come prepared for each TBL session by going through recommended physiology textbooks.

The first year Bachelor of Medicine and Bachelor of Surgery (MBBS) course consists of two batches each with around 120 students. All students were invited to participate in the study. Of these, 128 students volunteered to participate; informed verbal consent was obtained from the students in advance. The students involved in this study did not have prior exposure to TBL.

The team-based learning sessions were conducted for the topics pituitary gland, thyroid gland, parathyroid hormones, endocrine pancreas, adrenal gland and its hormones, and male and female reproductive systems. The students who participated in the study already had didactic lectures on the topics. Two sessions of TBL were conducted for the same group of students using the same TBL format in both sessions. The didactic lectures on the topics covered in each TBL session were taken a week prior to the TBL session. Faculty members who conducted didactic lectures were not involved with the TBL sessions. No other active learning strategies apart from TBL were conducted for the mentioned topics.

Since the student count was large, 128 students were randomly divided into two approximately equal-sized groups. Each group had an instructor who was a faculty member from the physiology department. At the onset of the session, students took the IRAT consisting of 13 MCQs. Fifteen minutes of time was allotted for this test at the end of which the students were asked to submit their answer sheets. Immediately following the IRAT, the students were randomly assigned into teams of five to seven members. There were approximately nine teams in each lecture hall. The students were requested to rearrange their seats to facilitate group discussion.

As students had already received the course content in didactic lectures, the individual and group readiness assurance tests had questions that encouraged application and analysis of information rather than simple recall. Following team formation, the students were given 30 minutes for the GRAT. During this time, individual group members were not assigned any particular role and all members were encouraged to collaborate. The students were instructed not to access study material in any form during the entire period of the IRAT and GRAT sessions.

After the GRAT, all teams were encouraged to simultaneously report the response for each MCQ using placards. The instructor provided the correct response and the reasoning for it after each simultaneous response from the groups. Teams that did not agree or were unable to give the correct answer were allowed to appeal, and the instructor immediately clarified any misconceptions regarding the answers. This interaction between the instructor and the teams took about 15 minutes. The team-based learning sessions were followed by a session of application-based exercises following the 4 S's of TBL: 1) significant problem—authentic and relevant problems that capture students' interest; 2) same problem—all teams simultaneously work on the same problem, case, or question; 3) specific choice—use of course concepts to make a specific choice; and 4) simultaneous report—all teams report their choices simultaneously.[3,12] The score for each student was calculated by giving 60 per cent weightage to their IRAT scores and 40 per cent weightage to each team's GRAT score. However, these scores were not included in their regular curriculum evaluation.

At the end of the last TBL session, the students were asked to complete a feedback questionnaire that was intended to assess their attitudes towards TBL.

All 250 students took their sessional theory exams two weeks after the last TBL session. The physiology sessional theory examination had an MCQ test consisting of 20 questions out of which 10 MCQs were from the topics covered in the TBL sessions. To analyse if TBL supplementation had an impact on student performance, the scores obtained in these 10 MCQs were compared between the TBL and non-TBL groups. All 10 assessed questions in the MCQ paper were application-based questions and not of recall type. Every correct response in the MCQ test was awarded a score of one with no marks awarded for an incorrect response.

**Figure 1**: **Study design in a flow chart**
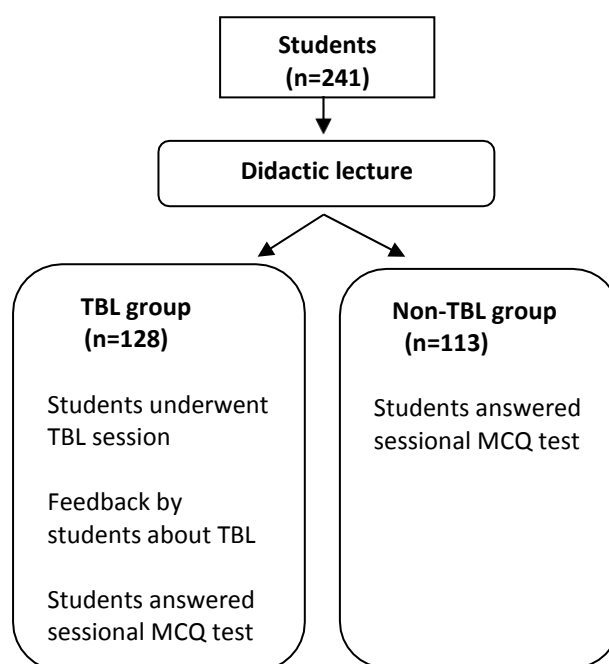


**Data analysis**

The students' sessional MCQ scores were compiled in Microsoft excel. Data were analysed using SPSS software 16.0 for Windows (SPSS Inc., Chicago, Illinois), and a Kolmogrov-Smirnov test was done to assess for normalcy of sessional MCQ scores. The sessional MCQ scores did not follow a normal distribution. The median sessional MCQ score of the 128 students who underwent TBL (TBL group) were compared with those who did not participate in the TBL session (non-TBL group) using Mann-Whitney U test. Further, the students in each group were ranked based on their annual internal assessment scores and compared between the two groups. Annual internal assessment scores are for 20 marks and are usually calculated by taking the average score from the three sessional theory exams conducted in the first year.

The feedback questionnaire containing 10 statements was e-mailed to five faculty members of the physiology

department to validate the questions. Modifications of the statements by faculty members were incorporated in the final questionnaire given to the students. Using a differential grading procedure, Likert-type statements were scored, from 1 (strongly agree) to 5 (strongly disagree) for negative items (statements numbered 3, 5, 7, 9, and 10). For positive items (statements numbered 1, 2, 4, 6, and 8) scoring was 1 (strongly disagree), 2 (disagree), 3 (cannot say), 4 (agree), and 5 (strongly agree). In order to assess the internal consistency of the feedback questionnaire Cronbach's alpha was worked out, and it gave a value of 0.671, indicating reasonably good consistency.

## Results

The average age of the students in this study was 18.4 years. All students involved in the study had completed their higher secondary education (Class 11 and 12) with the language of instruction being English. Mann-Whitney U test showed that students who were supplemented with TBL (n=128) performed significantly better than students who did not undergo the TBL sessions (n=113). The median MCQ score of the TBL group was 7.0 (2.0) and for the non-TBL group it was 6.0 (3.0) with $p<0.001$ (Table 1). To assess if the two groups were comparable, the median internal assessment score of the intervention group was compared with the control group using Mann-Whitney U test. While the intervention group had a median internal assessment score of 13.0 (4.0), the control group had a median internal assessment score of 12 (3.0) with $p=0.368$ indicating that the two groups were not significantly different with regard to their average performance over the academic year.

Table 2 shows the comparison in the median sessional MCQ scores between the TBL and non-TBL group for varying internal assessment scores of students. A significant difference in the median MCQ scores between TBL and non-TBL group was seen only in group 1 and 2 (students with an internal assessment score of 13 or less) suggesting that mainly these students benefited from the TBL intervention.

Analysis of variance and post-hoc test were also performed to compare the significant differences in the median sessional MCQ scores between group 1, group 2, and group 3. A significant difference was observed when group 1 was compared with group 2 ($p<0.001$) and group 3 ($p<0.001$). When group 2 was compared with group 3 using the above-mentioned statistical test, no significant difference was observed.

Table 3 shows the percentage of students in the TBL group who responded to each questionnaire statement. The questionnaire statements are shown in Table 4. Median and

quartile attitude scores for each questionnaire statement are shown in Table 5.

The inclination of the students to work as a team and their overall experience with TBL was assessed using the questionnaire. Eighty-five of the 128 students who participated in the study gave their feedback. Sixty-one per cent of the students did not mind taking part in the group discussions, which is an essential element of TBL. Although the students were randomly split into teams, 83 per cent found their interaction with their team members to be satisfactory.

The students' attitude towards TBL being used as the sole instructional strategy replacing didactic lectures was assessed. Fifty-nine per cent of the students felt that team-based learning was not useful unless the same topic was introduced first in a didactic lecture format. Forty-seven per cent were not comfortable with physiology topics taken as TBL sessions alone without didactic lectures, while 20 per cent responded with a "cannot say". Thirty-eight per cent wanted TBL to be taken for all topics in physiology, 36 per cent responded to the same statement with a "cannot say".

## Discussion

In our study we found that students who underwent team-based learning sessions performed significantly better in the sessional MCQs than students in the non-TBL group (Table 1). Further analysis showed that the significant difference in performance between the two groups was observed mainly in students having an annual internal assessment score of 13 or less (Table 2) with greatest impact of TBL supplementation seen in students with an internal assessment of 10 or less (ANOVA and post-hoc).

The results are similar to those of Koles et al., who found that participation in TBL improved exam scores and increased mastery over course content.[13] A study by Kolluru et al. observed better performance among students after team-based learning; however, in the same study students were exposed to pathophysiology, pharmacology, and medicinal chemistry.[14] Incorporation of different subjects pertaining to a system or disease might have an added advantage. The results of our study also agree with those of Vasan et al., who found that departmental and national board of medical examiners subject examination scores over five years for TBL-based anatomy were higher than those for lecture-based anatomy.[15]

In contrast, Bleske et al. found that for the recall questions, students taught through traditional lectures scored significantly higher compared to students who underwent

TBL sessions.[16] However, for the questions assessing application of knowledge, no differences were seen between the two groups. Scores on essay questions also revealed no significant difference between the two groups.[16] In another study, Malone et al. observed no significant difference in examination scores of TBL groups when compared to non-TBL groups.[17] Nieder et al. did not find any significant difference in examination scores of students who underwent TBL when compared to previous year examination scores. However, there was an improvement in students' day-to-day preparedness and group problem-solving skills.[18]

The timing of the TBL and method of assessment of performance after TBL intervention may also have an impact on the overall assessment of TBL. Students may be more receptive to supplementary teaching strategies at the end of the term closer to their exams if they believe it will enhance their understanding of course content and hence help improve their exam performance. Additionally, as team-based learning targets higher aspects of learning, TBL sessions may reflect a better impact on student performance if the evaluation process predominantly involves questions that test analysis and application of information rather than simple fact and recall.[16]

The format of TBL has been suitably modified in studies such as those done by Inuwa et al.[5] and Vasan et al.[9] In our study we decided against peer evaluation, which is done mainly to increase student accountability. Studies have shown resistance to peer evaluation with few viewing it as a professionally developmental experience.[3,19] By choosing to give greater importance to the IRAT scores we aimed to enhance individual preparedness and accountability.

Analysis of the questionnaire revealed that 98 per cent of the students agreed or strongly agreed that TBL was useful as it helped them discuss topics with their group members. Adam et al. found that 77 per cent of students reported they "agree" or "strongly agree" that concepts covered during TBL are more effectively learnt than through independent study alone.[20] Factors such as students' prior exposure to collaborative active learning strategies may have an impact on TBL performance.[21] In our study, although students had not been exposed to active learning strategies prior to entering medical school, their familiarity with problem-based learning and self-directed learning sessions conducted during the medical programme may have made them more receptive to a new active learning strategy such as TBL.

Ninety-one per cent of students in the study agreed that TBL helped them understand course concepts better.[18] Similar feedback was observed by Malone et al.[17] Adam et al. showed that 84 per cent of students agreed or strongly agreed that TBL fosters the use of critical reasoning and clinical problem-solving more so than other active methods of teaching and learning.[20] Learners seek to create meaningful uses of knowledge regardless of the quantity and quality of information presented.[11] Active learning strategies that give an opportunity to engage in higher levels of learning and allow students to assume greater responsibility for their learning process enhance student satisfaction and perceived learning.[22] More than 80 per cent of the students in the present study, agreed or strongly agreed that TBL will help them perform better in their exams.

A significant percentage of students felt that interaction with their team members was satisfactory even though they were randomly split into groups. This may be due to the TBL sessions being in the second term of the first year, which would have allowed students to develop a certain degree of familiarity with most of their group mates. Thirty-one per cent of students felt that they would be comfortable with physiology topics taken as TBL sessions alone without didactic lectures.

Traditionally, in the physiology curriculum of our institution, active learning strategies like self-directed learning have always been conducted following a didactic lecture on the same topic and students may expect the same with a new strategy like TBL.

The culture of medical education has traditionally emphasised the value and legitimacy of didactic lectures. Learners who find themselves in a situation where interactive learning and peer teaching have replaced traditional methods might perceive these new formats to be less useful. Furthermore, didactic presentations provide an "expert" to simplify and deliver a complex concept.[23] Students may tend to seek the comfort of attending didactic lectures that deliver information and facts in the sequence and format in which they answer their theory question.

Based on the results of this study we are of the opinion that supplementing regular didactic lectures with TBL in our institution would be advantageous to the students in terms of enhancing their engagement with course content especially among students with lower internal assessment scores. It would also serve to enhance students' ability to analyse and apply concepts from information that they have

received in a didactic lecture. This is evident by the improved performance of the TBL-supplemented group of students in the MCQ test, which consisted of application-based questions.

Based on the feedback, we propose to introduce TBL on a trial basis and as a supplement rather than a replacement for didactic lectures. In this study, however, the students did not have the opportunity to take the TBL sessions without attending didactic lectures on the same topic. Also, TBL sessions covered topics from only a section of the yearly course content. A long-term study to assess the impact of replacing didactic lectures with TBL could be undertaken in the future.

## Conclusion

Supplementing didactic lectures with team-based learning has the ability to improve student engagement with and mastery of course content, and to enhance student performance in examinations. TBL is particularly useful for application-based learning. Also, students have a positive attitude towards team-based learning, and consider it as a useful supplement to didactic lectures. Based on our study findings, we will implement TBL on a trial basis as a supplement to, not replacement for, didactic lectures.

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## PEER REVIEW

Not commissioned. Externally peer reviewed.

## CONFLICTS OF INTEREST

The authors declare that they have no competing interests.

## ETHICS COMMITTEE APPROVAL

Institutional Ethics Committee Manipal (no. IEC 113/2014)

**Table 1: Distribution of median sessional MCQ scores for females and males in intervention and control group**

|  | Group | Sample size | Median (IQR) | *P* value |
|---|---|---|---|---|
| Females | Intervention | 59 | 7.0 (3.0) | 0.006 |
|  | Control | 59 | 6.0 (3.0) |  |
| Males | Intervention | 69 | 7.0 (2.0) | 0.000 |
|  | Control | 54 | 6.0 (2.0) |  |

*Since p value is < 0.05 in females as well as males, the median MCQ score is statistically significant.*

**Table 2: Median sessional MCQ scores of TBL and non-TBL group of students with varying internal assessment marks**

| Internal assessment marks | Median MCQ score (IQR) in the TBL group | Median MCQ score (IQR) in the non-TBL group | *P* value |
|---|---|---|---|
| **Group 1**: Students who obtained 10 or < 10 | 6.0 (2.0) | 5.0 (4.0) | 0.005 |
| **Group 2**: Students who obtained 11, 12 or 13 | 8.0 (2.0) | 6.0 (2.0) | 0.000 |
| **Group 3**: Students who obtained > 13 to < 20 | 8.0 (2.0) | 8.0 (2.0) | 0.134 |

**Table 3: Percentage of students in the TBL group who responded to each statement in the questionnaire**

| Questionnaire statement number | Students who "strongly disagree" (%) | Students who "disagree" (%) | Students who "cannot say" (%) | Students who "agree" (%) | Students who "strongly agree" (%) |
|---|---|---|---|---|---|
| 1 | 0 | 0 | 2.4 | 41.2 | 56.5 |
| 2 | 1.2 | 1.2 | 11.8 | 43.5 | 42.4 |
| 3 | 21.2 | 40 | 30.6 | 5.9 | 2.4 |
| 4 | 15.3 | 11.8 | 14.1 | 35.3 | 23.5 |
| 5 | 12.9 | 35.3 | 20.0 | 20.0 | 11.8 |
| 6 | 8.2 | 4.7 | 12.9 | 38.8 | 35.3 |
| 7 | 3.5 | 1.2 | 8.2 | 51.8 | 35.3 |
| 8 | 4.7 | 20.0 | 36.5 | 21.2 | 17.6 |
| 9 | 4.7 | 3.5 | 7.1 | 45.9 | 38.8 |
| 10 | 1.2 | 0 | 15.3 | 47.1 | 36.5 |

**Table 4: Mean attitude score of students in the intervention group for each statement in the questionnaire**

| Questionnaire statement number | Statements | Mean attitude score (Standard deviation) |
|---|---|---|
| 1 | Team-based learning is useful as it helps me discuss difficult topics with my group members. | 4.54 (0.5) |
| 2 | Team-based learning is absolutely essential to understand difficult topics in physiology. | 4.25 (0.8) |
| 3 | I don't prefer team-based learning as I prefer to study individually rather than discuss in groups. | 3.72 (0.9) |
| 4 | Team-based learning is not useful, unless the same topic is first covered in a regular didactic lecture. | 2.60 (1.3) |
| 5 | I would like specific topics in physiology to be taken only as team-based learning sessions without didactic lectures. | 2.82 (1.2) |
| 6 | I would like specific topics in physiology to be taken first as a didactic lecture and then again as team-based learning session. | 2.12 (1.1) |
| 7 | Team-based learning is useful as it gives me immediate feedback and clears doubts about the answers that I have chosen as a team. | 4.14 (0.8) |
| 8 | Team-based learning sessions should not be taken for all topics in physiology. | 3.27 (1.1) |
| 9 | My interaction with my group members during the team-based learning session was satisfactory. | 4.11 (1.0) |
| 10 | Team-based learning will help me perform better in my exams. | 4.18 (0.7) |
| | Overall mean score | 3.57 |

**Table 5: Median and quartile attitude score for each statement in the questionnaire**

| Questionnaire statement number | First quartile | Median | Third quartile |
|---|---|---|---|
| 1 | 4.0 | 5.0 | 5.0 |
| 2 | 40 | 4.0 | 5.0 |
| 3 | 3.0 | 4.0 | 4.0 |
| 4 | 2.0 | 2.0 | 4.0 |
| 5 | 2.0 | 3.0 | 4.0 |
| 6 | 1.0 | 2.0 | 3.0 |
| 7 | 4.0 | 4.0 | 5.0 |
| 8 | 2.5 | 3.0 | 4.0 |
| 9 | 4.0 | 4.0 | 5.0 |
| 10 | 4.0 | 4.0 | 5.0 |