

# Knowledge and Attitudes toward Basic Life Support among Medical Students in Oman

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## ABSTRACT

**Background:** This study aimed to assess the level of knowledge regarding the basic life support (BLS) and attitudes related to BLS training and to identify the factors affecting these among medical students in Oman.

**Materials and methods:** This prospective cross-sectional questionnaire-based study was carried out during the period July 2017 to February 2018 at Medical College of Sultan Qaboos University, Muscat, Oman. Validated questionnaires in English were distributed among undergraduate medical students from 1st to 7th years.

**Results:** A total of 304 medical students completed the questionnaire with a response rate of 82.7%. The mean knowledge score of the participants was slightly high ( $5.5 \pm 2.1$ ) and median score of 5. About 53.6% of the participants had insufficient knowledge level. The scores increased with increase in the year of training. More than half (64.5%) of the participants had no previous BLS training. Students who attended previous BLS training showed higher knowledge scores ( $p < 0.001$ ). Majority of the participants (97.4%) supported including of BLS in the undergraduate medical curriculum. Majority of the students (74%) were not reluctant to perform BLS on a stranger, although there was some reluctance among the female students.

**Conclusion:** Our findings show that medical students in Oman had insufficient knowledge about BLS. However, they showed positive attitudes toward BLS training and were not reluctant to provide BLS to a stranger if required. These highlights the importance to provide sufficient BLS training for medical students early in their course.

**Keywords:** Basic life support, Knowledge, Medical student.

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Dear Sir,

Out-of-hospital cardiac arrest (OHCA) is a major health concern associated with low survival rates worldwide.<sup>1</sup> Prompt recognition of cardiac arrest and early initiation of basic life support (BLS), which involves bystander cardiopulmonary resuscitation (CPR), is crucial for improved chances of survival.<sup>2</sup> The aim of our study was to assess the level of knowledge and the attitudes toward BLS among medical students at a teaching hospital in Oman.

This was a cross-sectional questionnaire-based survey carried out from July 2017 to February 2018. A pretested and validated questionnaire was used.<sup>3</sup> One part of the questionnaire was the demographics, the second part about knowledge, and the third part regarding their attitudes to BLS. A score of 5 (out of 10) in the knowledge section was considered to be good.

A total of 450 questionnaires were distributed and 346 were returned, of which 304 (42.4% female, mean age  $20.9 \pm 1.9$  years) were completely filled and used for analysis. The response rates were equally distributed among the various academic years.

Overall, the mean knowledge score of all the participants was good ( $5.5 \pm 2.1$ ), although more than half of participants (53.6%) had a score less than 5. Students of the 7th year demonstrated significantly greater knowledge scores in comparison to the 1st, 2nd, 3rd, 4th, 5th, and 6th years ( $8.4 \pm 1.0$  vs  $4.15 \pm 1.27$ ,  $4.4 \pm 1.4$ ,  $4.7 \pm 1.7$ , and  $7.2 \pm 1.6$ , respectively;  $p < 0.001$ ). The knowledge scores of those who attended BLS training within the last 3 years were significantly higher than those who had attended a course more than 3 years earlier or never attended a course ( $7.2 \pm 2.0$  vs  $4.5 \pm 1.0$ ,  $5.0 \pm 1.6$ , and  $4.7 \pm 1.7$ , respectively;  $p < 0.001$ ).

More than two-thirds of the study participants (64.8%) had never attended BLS training. However, most of them (94%) said that they were interested in attending a course in the future. All students

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who had received BLS training previously and majority of students who never had BLS training (95.5%) think that the BLS should be included in the university curriculum.

Most of the participants (74% overall and 71% of the male and 73% of the female students) were not reluctant to perform BLS for a stranger, if needed. Of those who were reluctant to perform, 40.5% were male and 59.5% were female. The main concern for those who were reluctant to perform BLS was fear of causing further harm to the patients compared to other reasons that were lack of confidence, fear of taking responsibility, and fear of acquiring infection (46.8% vs 26.6%, 22.8%, 3.8%). There was no difference in the willingness to perform BLS depending on whether they had attended a course previously or not (74% vs 72%,  $p = 0.6$ ).

To the best of our knowledge, this is the first study to assess the knowledge and attitudes toward BLS among medical students in Oman. The findings showed that most of the junior medical students had not attended a BLS course and had insufficient BLS knowledge. This is in keeping with many other studies from different countries.<sup>4</sup> At present, BLS training is provided just before the

students join their clinical years and this is reflected in the study. Perhaps it would be beneficial if this were provided at an earlier stage with refresher courses every year.<sup>5</sup>

Although the knowledge of BLS among medical students in Oman is low, their attitude toward BLS training is positive. More BLS training opportunities should be made available to medical students at an early stage of their curriculum.

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