

Effectiveness of a Brief Chest Compression-Only CPR Video on Knowledge of and Willingness to Perform Bystander CPR Among College Students in Malaysia

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ABSTRACT:

Introduction: Out-of-hospital cardiac arrest is a major public health concern with millions of people dying of sudden cardiac arrest every year. While many studies show that CPR undertaken prior to the arrival of EMS significantly increases survival rates, the frequency of bystander CPR performed by the public remains low. As such, the Basic Life Support algorithm has been simplified to chest compression-only CPR, which is easier to learn and perform compared to conventional CPR. This study evaluated the effectiveness of a brief video on improving the knowledge of and the willingness to perform Hands-only CPR among college students in Malaysia. This was the first study that was conducted in Malaysia using a video on Hands-only CPR as an intervention tool.

Methods: A pre and post intervention study was carried out using a one-minute video on chest compression-only CPR as the intervention tool. Data were collected using a self-administered online questionnaire at baseline and immediately post intervention among college students in Malaysia. Data were analyzed using IBM SPSS Statistics for Windows Version 26.0.

Results: At baseline, knowledge on CPR was poor, as the average score was 9.41 ± 2.55 from a maximum score of 15. Less than half (46.3%) were willing to perform bystander CPR on a stranger, only 32.8% for victims of trauma, and 40.9% for elderly victims. More students were willing to deliver chest compression-only CPR on a family member in an emergency (65.9%). Among those who were unwilling to perform CPR, the main reason was due to poor knowledge or technique. The higher the knowledge score, the higher the willingness to perform bystander CPR on a stranger (aOR = 1.363, 95% CI 1.224, 1.519), a trauma victim, (aOR = 1.438, 95% CI 1.269, 1.629), an elderly person (aOR = 1.472 (1.305, 1.661), and a family member (aOR = 1.387, 95% CI 1.246, 1.543). Post intervention, there was a significant improvement in knowledge on CPR ($p < 0.001$) and on willingness to perform chest compression-only CPR in all four scenarios ($p < 0.001$).

Conclusion: Overall knowledge level was inadequate and those with better knowledge were found to be more willing to perform chest compression-only CPR. A brief CPR video training resulted in improved knowledge and willingness to perform chest-compression only CPR among college students in Malaysia. This suggests that the dissemination of brief educational interventions could be beneficial as a long-term strategy to expand the CPR benefits to the wider community.

KEYWORDS: