

Effectiveness of Video Teaching on Basic Life Support Knowledge and its Retention among Non-health Professional Students at the University of Rwanda

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Abstract

Background: If basic life support is initiated early, chances of rescuing the victim increase. The study intends to decrease the chances of cardiac arrest outside the hospital.

Objective: To evaluate the effectiveness of video teaching on basic life support knowledge, attitude and its retention among non-health professional students at the University of Rwanda.

Method: A quantitative quasi-experimental study of 382 students attend video teaching education session and sat for pre, post and after three months knowledge retention test, conducted at the University of Rwanda. Inferential statistics analyzed using paired T test at a level of 95% of confidence interval, (p value of <0.05).

Results: There was a significant increase in the total score ($p < 0.0001$) from mean total of pretest of 9.102% to 79.420%. Participants performed significantly better in all items of our questionnaire both in posttest and three months later, there was a none significant regression of mean total percentage from 79.420 % to 77.145% after three months probable due to memory lapse.

Conclusion: Non-health profession students attending video teaching on BLS course have a significantly improved BLS performance post session and after 3 months knowledge performance.

Keywords: Effectiveness; Video teaching; Basic life support; Knowledge; Retention; Non-health professional students

Introduction

With early basic life support initiated, the chance is to rescue the victim. Every minute CPR is delayed, a victim's chance of survival decreases by 10%. Immediate CPR from someone nearby can double – even triple - their chance of survival [1]

In the United States more than 350,000 out of the hospital cardiac arrests occurred in 2016 whereby 46.1% of the victims received by stander CPR. The survival rate was 12% [1]. Video teaching on basic life support to young students is one of the key pillars to manage out of hospital cardiac arrest [1]

A study done by Contri et al. in Italy on video-based compression only CPR (CO CPR) concluded that CO-CPR training in schools may be feasible and effective with rather good performance results [2]

A study done in Switzerland on “Novices learning BLS with a commercially available self-learning video kit with and without instructor support” A randomized controlled trial with the purpose to investigate whether pure self-learning without instructor support results in the same BLS competencies as instructor led learning when using the same commercially available video BLS teaching kit revealed no difference between the two groups. No difference was found between the competencies at baseline and 3 months later in each group [3]

The American Heart Association suggests that, effective from 2018, all students from the United States of America should not graduate high school without completing basic life support training [1]

A study done in Kenya east Africa on teaching basic life support to the digital generation (randomized trial comparing video assisted versus practical simulation) has shown that there is no substantial difference in knowledge retention of BLS between those who received Low-

Fidelity Simulation (DVD assisted) and Moderate-Fidelity Simulation education and training. However, there is significant difference in resource allocation and time in Low-Fidelity Simulation compared to Moderate-Fidelity simulation [4].

Access to health care service is still limited in the middle and low income countries. Rwanda is one of low income countries with an adult mortality rate at age of 15 to 60 years old of 33.36 per 1000 [5]

The researcher clinical experience has been marked with brought in Died body or patient in cardio-pulmonary arrest status without any attempt of CPR.

Young people constitute a large number of the Rwandan population. This means that to create public awareness about out of the hospital cardiac arrest (OHCA) we might also have to revise our methods of education and adapt them in relation to different age groups.

In Rwanda Red Cross Rwanda, the only recognized institution that offers training on first aid and BLS target to provide one first aider for every 50-100 people for high risk interventions, and two first aiders for every 200-500 people for low risk interventions [6] As the world is struggling to achieve education for all, we should start giving training

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about basic life support to as many as possible starting from our students, for them to take this knowledge to their communities and families. The evaluation of effectiveness of video teaching of basic life support among non- health professional students at the University of Rwanda was the aim of this study.

Methods

Design

The researcher used a quasi-experimental research design, whereby a test on knowledge regarding basic life support was conducted using a questionnaire then the students were shown a video teaching (Manipulation) and the same questionnaire was distributed and answered. Three months later the researcher collected same data to analyze knowledge retention. The three results were captured and analyzed using a statistical test.

Participant's recruitment

The sampling strategy involved students current enrolled in year one, year two and year three. the researcher invited the students in collaboration with students' representatives. The procedure was class by class.

The researcher arranged the classroom to accommodate students for watching using the video in collaboration with information and technology (IT) department, Director of Estate and Student Welfare Directorate. Information document before the consent form were given to the Students who accepted to sign the consent.

They were put together in a prepared room to watch the video. Students who constituted the sample filled the questionnaires, just before the presentation of the video. Then the researcher conducted the post-test immediately after a complete manipulation and three months later our participants were assembled together and did the retention test. Sample was 382 students, composed by three strata first year 170 students, second year 124 students and third year 88 students.

Measures

In this study the researcher used a Questionnaire adapted and adopted from the previous similar published research.

The tool was requested from the researcher who accepted and provided authorization in writing to use his tool (See appendix VI) The instrument is composed of section I which is identification of

participants (demographic data) section II which is information related to Basic life support knowledge and section III that covers participant self-evaluation(attitude). Permission was granted from the corresponding authors *via* email on 27th april 2018, in order to obtain a single tool related to the objectives, the questionnaire was translated into Kinyarwanda language such that it can be easily understood by participants. The semi-structured questionnaire consisted three sections

Section 1: included five items of socio-demographic characteristics; identification initials age, gender, education level, origin (department/faculty). These variables were measured in frequencies (Table 1)

Section 2: related to basic life support knowledge included 14 items as well as how to verify if the victim needs CPR, how to call for help, I don't know, when would you stop CPR, how is it possible to facilitate the victim's respiration in case backbone damage is under

Suspicion, how is the mouth-to-mouth respiration performed, would you perform mouth-to-mouth respiration in an unknown person, without protective equipment, would you perform a cardiac massage, even when not having performed mouth-to-mouth respiration, the function of the cardiac massage (CPR) is to push blood to vital organ such as brain, in what position must the victim be, so that a cardiac massage is performed, what is the appropriate body location for the performance of a cardiac massage, do you know how the cardiac massage should be performed, among the following tick the quality of CPR, an AED can be used safely in which of the following situations, a patient is choking and do not respond to choking maneuver what next (Table 2).

Section 3: self-evaluation session (attitude) included delivery of education contents, education materials may be delivered in the following modes, which one do you prefer, how would you rate your BLS skills prior to participating, how would you rate your bls skills after completing the, following completion of the program, if you were now required to perform bls in an emergency do you think you could, how confident do you feel (Tables 3 and 4)

Data collection

Approval from the UR Institutional Review Board (IRB) and University of Rwanda, School of Business and Economics were obtained prior to data collection. After receiving permission from university of Rwanda authorities the researcher put selected sample into four groups

Level of skills	Prior to training		Post training	
	fi	%	fi	%
Not competent	347	90.8	2	0.5
Quit competent	29	7.6	1	0.3
Average	4	1.0	7	1.8
Competent	1	0.3	122	31.9
Outstanding	1	0.3	249	65.2
Total	382	100.0	381	99.7

Table 1: Participants attitude on skills prior and after participating in training. Source: Field data, 2019.

Modes by which education materials may be delivered	Status of the answer	Frequency	Percent
	Face to face	23	6.0
	Print based	28	7.3
	Self-directed on CD room	307	80.4
	Self-directed on internet	24	6.3
	Total	382	100.0

Table 2: Modes preferred by respondent in which Education materials may be delivered. Source: Field data, 2019.

Parameters		Gender					
		Male		Female		Total	
		fi	%	fi	%	fi	%
Age of participant	17-20	31	8.1	20	5.2	51	13.4
	21-25	155	40.6	136	35.6	291	76.2
	26-30	21	5.5	15	3.9	36	9.4
	30-35	2	0.5	1	0.3	3	0.8
	36 and above	0	0.0	1	0.3	1	0.3
	Total	209	54.7	173	45.3	382	100.0
Year of education level	Year one	91	23.8	79	20.7	170	44.5
	Year two	70	18.3	54	14.1	124	32.5
	Year three	48	12.6	40	10.5	88	23.0
	Total	209	54.7	173	45.3	382	100.0
Academic department/faculty	Marketing	39	10.2	46	12.0	85	22.3
	Insurance	58	15.2	48	12.6	106	27.7
	Finance	63	16.5	40	10.5	103	27.0
	Banking	24	6.3	19	5.0	43	11.3
	BIT	23	6.0	19	5.0	42	11.0
	Department not mentioned	2	0.5	1	0.3	3	0.8
	Total	209	54.7	173	45.3	382	100.0

Table 3: Demographic characteristics of the respondents. Source: Field data, 2019.

Variables	N	Prior to training (%)	Post training (%)	p-Value	N	Post Training (%)	After 3 month (%)	p-Value
Verifying if the victim needs CPR	382	3.14%	88.7%	0.000	382	88.7%	87.2%	0.447
How to call for help	382	6.5%	75.9%	0.000	382	75.9%	75.1%	0.785
When would you stop CPR	382	11.5%	72.5%	0.000	382	72.5%	72.8%	0.930
Facilitating the victim's respiration in case backbone damage is under suspicion	382	4.7%	79.8%	0.000	382	79.8%	79.6%	0.923
How is the mouth-to-mouth respiration performed	381	8.4%	83.7%	0.000	380	83.7%	77.9%	0.036
Would you perform mouth-to-mouth respiration in an unknown person, without protective equipment?	382	41.9%	81.7%	0.000	382	81.7%	78.0%	0.202
Would you perform a cardiac massage, even when not having performed mouth-to-mouth respiration	382	8.4%	78.5%	0.000	382	78.5%	76.4%	0.487
The function of the cardiac massage (CPR) is to push blood to vital organ such as brain	382	2.9%	79.6%	0.000	382	79.6%	76.7%	0.341
In what position must the victim be, so that a cardiac massage is performed?	382	14.1%	79.1%	0.000	382	79.1%	74.3%	0.139
What is the appropriate body location for the performance of a cardiac massage	382	3.7%	81.2%	0.000	382	81.2%	76.4%	0.109
Ticking the quality of CPR	382	4.2%	81.4%	0.000	382	81.4%	79.8%	0.588
Situations in which an AED can be used safely	382	2.4%	76.4%	0.000	382	76.4%	75.9%	0.868
A patient is choking and do not respond to choking maneuver what next?	382	6.5%	73.8%	0.000	382	73.8%	73.0%	0.804

Table 4: Knowledge of respondents on Basic Life Support before and after video teaching, and after three month by variable. Source: Field data, 2019. 95% Confidence Interval of the Difference.

in prepared classroom. The researcher reminded participant the right to withdraw from the research at any time. Questionnaires were distributed for pre-test assessment. After collection of questionnaire the video was played and projected for all group. Participants were allowed to request to stop and replay a part of video. The researcher administers the questionnaire after video played for post-test assessment. The researcher communicated to participants the venue and time of retention assessment. After three months participant were put into the same group and questionnaire was administered to assess the retention knowledge and attitude.

Data analysis

Questionnaires were collected and data entered as descriptive data, in the computer as nominal and categorical variables. Categorical variables were coded to enable the statistical analysis. Descriptive data were entered into the Statistical Package of Social Sciences (SPSS) version 20 and then analyzed using frequencies, and means. Paired T test at a level of 95% of confidence interval were calculated to determine

associations between variables and statistical significance using p value <0.05. Data were presented in the form of tables.

Ethical considerations

A letter for ethics clearance was acquired from the Independent Review Board (IRB), and was presented to the College of Business and Economics authorities, where the study was carried out, with permission.

The researcher observed the ethical principles such as non-Malefeasance, **beneficence**, and obtained **informed consent** from the research participants including confidentiality.

The researcher also gave participants the **right to withdraw** from this research at any point of the study process. Prior to data collection, the researcher explained the nature of the study to the participants, and clarified that the participation was voluntary. This was also clearly explained in an Information document before the consent form was given for signature (Appendix IV and V).

The participants were distributed an informed consent form in English or Kinyarwanda aversion based on participant choice.

Those who agreed to participate were explained their full right to withdraw at any stage of the study. Questionnaires were in respect of anonymity whereby participants were assigned codes to use on their questionnaire. For the pre-test the code preceded by the letter (A) post-test questionnaire code were the same preceded with letter (B) retaining test were the same preceded by letter (C). Although this study was by its nature of a minimum potential harm such as student study revision interruption, the researcher ensured that there was no harm to the participants by not taking too much time as the video is only thirty minutes. Consent form was translated in local language to facilitate a well understanding before consenting.

Results

Demographic characteristics of respondents

The demographic characteristics of the participants are represented by age, year of education and the academic department or faculty and by gender of the respondents.

From the Table 3 below, it is clear that the majority of the participants 54.7% are males while 45.3 are females.

The findings illustrated in the Table 3 shows that the majority of the respondents 76.2% were aged between 21 and 25 years of age where 40.6% of them are males and 35.6% are female of the same age group. At the second place we have respondents aged between 17 and 20 years old equaling to 13.4% where 8.1% of them are males and 5.2% are female of the same age group. The age group coming on the third place is between 26 and 30 years old encompassing 9.4% of the respondents (5.5% male and 3.9% female), 0.8% of the participants are aged between 30 and 35 years old while 0.3% are aged 36 years and above. It is deduced that the participants of this study are youth of less than thirty years old.

With regard to year of education level, the majority of respondents 44.5% were in the year one, followed by 32.5% studying in the year two, while 23.0% were studying in year three. The dominant percentage of male respondents (23.8%) were registered in year one while 20.7% where female registered in year one too.

Slightly concerning the departments from which the participants were studying, the study highlights that the majority of respondents 27.7% were studying in Insurance, followed by 27.0% studying in Finance, 22.3% were in marketing while 11.3% were in banking, 11.0% studied BIT and only 0.8% did not mention their respective department.

Presentation of findings

This section contains the results on the questions assessing the knowledge of the respondents on basic life support. The performance of respondents on each variable is analyzed and presented in the Table 2 below, where the percentage marks during three round visits and p-values have been analyzed. The test used here is paired sample T Test.

In the assessment of the performance of respondents before video teaching and after video teaching, the researcher compared their performance before and after video teaching. Then, the comparison between their performance after video teaching and after three months was made to evaluate the capacity of the participants in retaining what they had known three months before. The sample size was 382 respondents. The output of the analysis is highlighted herein.

The respondents were asked to answer how to verify if the victim needs CPR, the percent mark they scored prior to training is 3.14% while post training they got 88.7% and p-value is 0.000 indicating the significance of mean score on the mentioned question. This reveals that video teaching they received had increased their knowledge on the way of verifying if victim needs CPR. The findings indicate that after three months, respondents still remembered what they were trained at an average of 87.2%, this is justified by $p=0.447$ which is not significant. It is clear that slight difference observed in the results obtained after video teaching and after three months is not significant to that they had forgotten what they had learnt.

When asked on how to call for help, mean percentage mark registered before training program was 6.5% and after training 75.9% ($p=0.000$) are very significant since p-value is less than 0.05. By comparing mean percentage registered after training (75.9%) and three months later 75.1% ($p=0.785$) the study prove that slight difference of percentage marks is not significant since its p value is greater than 0.05.

The researcher wanted to know if the respondents had some information on when to stop CPR. The percentage marks got by respondents are (prior to training: 11.5%, Post training: 72.5%, $p=0.000$). The study revealed that training program has increased knowledge of respondents on when they would stop CPR since p value is 0.000. By analyzing the difference recorded between percentage marks of after training and in three months later (Post Training: 72.5%, three months later: 72.8%, $p=0.930$) it is not statistically significant as p-value is greater than 0.05. This implies that knowledge acquired during training facilitation remained even after some period of time.

Though Table 4 below, it is clear that the training facilities increase the knowledge of respondents on: Facilitating the victim's respiration in case of backbone damage, How is the mouth-to-mouth respiration performed, if they should perform mouth-to-mouth respiration in an unknown person, without protective equipment, if they would perform a cardiac massage, even when not having performed mouth-to-mouth respiration, function of the cardiac massage (CPR), position in which the victim must be, so that a cardiac massage is performed, appropriate body location for the performance of a cardiac massage, quality of CPR, situations in which an AED can be used safely, and to what should be done next if a patient is choking and does not respond to choking maneuver as approved by the increasing mean percentage marks from prior to training to post training, $p=0.000$.

The difference between scores obtained in post training evaluation and after three months later is not statistically significant since p-values are greater than 0.05 for all variables analyzed except for the question "How is the mouth-to-mouth respiration performed" where $p=0.036$ by comparing test mean scores of post training and after three months. Here, one respondent did not answer the question before and after video teaching on basic life support and 2 of them left the same question not answered three months later. This is why their p value ($p=0.036$) seemed to be significant.

The study therefore deduces that video teachings on basic life support indeed greatly improved the knowledge of respondents, as overwhelmingly attested to by the findings, going by the high levels of agreement from respondent

Overall performance score of respondents before and after video teaching and then after three months period.

To assess the overall performance of all respondents prior to training, post training and after three months, the researcher used

paired sample T Test of percentage marks accumulated before video teaching, after video teaching and after three months. As illustrated in Table 5 below, the mean percentage marks registered before video teaching (9.102%) and after video teachings (79.4%) is statistically significant as $p=0.000$. Even after three months, 77.145% the difference mean remain statistically significant ($p=0.000$).

Performance by gender, age, year of education, and academic department

It is important to analyze the performance of respondents by their demographic characteristics because we will be aware about which population sector in terms of age, gender and year of study or departments will be keen to learn and target for capacitating with BLS.

Results from the Table 6 below, shows that the performance of respondents by gender have been recorded. Male scored 9.275% prior to video teachings while female got 8.893% before. Post video teaching percentage marks (male: 79.131%, female: 79.769%), after three months percentage marks (male: 76.886%, female: 77.457). it is deduced that female performed well more than male during the study.

The performance by age also has been highlighted where respondents aged above 30 years old performed well more than other age groups; performance by level of the study the respondents is cleared where respondents demonstrated that year three performed well generally. Performance by academic department shows that also respondents from department not mentioned performed well after video teaching and three month later.

Self-evaluation session (attitude)

In the evaluation of BLS skills/knowledge/attitude, the researcher

had asked the respondents to rank their skills or knowledge of BLS prior and after participating in training. Only 0.6% highlighted competent and outstanding when answering together (Prior to training) but after training 97.1% reported that they were competent or outstanding in the BLS skills. Therefore, it is evident that video teachings increase the competence, knowledge and skills of participants about basic life support as attested by high levels of agreement from the respondents.

Modes preferred by respondent in which education materials may be delivered

Respondents were asked to tick modes of choice preferred by them in which education materials may be derived to them. The study revealed that the majority of respondents (80.4%) highlighted “self-directed on CD room” while 7.3% said “print based”, 6.3% preferred “self-directed on internet” and finally only 6.0% marked that they prefer “face to face” mode.

Findings, analysis were done using the data were entered in SPSS 20.0, descriptive and inferential statistical analyses were used to analyze demographic characteristics of the respondents and performance scores of the participants respectively. Paired sample T Test was used to test the significance. Cronbach’s alpha was calculated to ensure reliability Statistics (coefficient alpha) of: 0.615 which is acceptable. Tables in this chapter shows: Demographic characteristics of respondents, knowledge of respondents on basic life support before and after video teaching, and after three month by variable, Performance by gender, age, year of education, and academic department, participants attitude on skills prior and after participating in training, modes preferred by respondent in which education materials may be delivered. There was a significant increase in the total score ($p < 0.0001$) from mean total percentage of pretest of 9.102% to 79.420%. The participants

Variables	Prior to training (%)	Post training (%)	p-Value	Post training (%)	After 3 months (%)	p-Value
Comparison of percentage marks of prior and post video teaching and after three months	9.102%	79.420%	0.000	79.420%	77.145%	0.000

Table 5: Overall performance scores of respondents before and after video teaching and then after three months period. Source: Field data, 2019. 95% Confidence Interval of the Difference.

Variables	Response categories	Prior to video teaching percentage marks	post video teaching percentage marks	After three months percentage marks
		Mean (%)	Mean (%)	Mean (%)
Gender	Male	9.275	79.131	76.886
	Female	8.893	79.769	77.457
	Total	9.102	79.420	77.145
Age of participant	17-20	9.502	78.431	77.074
	21-25	9.040	79.593	77.187
	26-30	9.188	79.274	76.709
	30-35	7.692	82.051	76.923
	36 and above	7.692	76.923	84.615
	Total	9.102	79.420	77.145
Year of education level	Year one	9.502	79.321	76.923
	Year two	8.623	79.467	76.861
	Year three	9.003	79.545	77.972
	Total	9.102	79.420	77.145
Academic department/faculty	Marketing	9.774	79.367	77.828
	Insurance	9.361	79.971	77.068
	Finance	9.037	79.313	76.923
	Banking	8.766	78.354	76.386
	BIT	7.875	79.304	77.106
	Department not mentioned	5.128	82.051	79.487
	Total	9.102	79.420	77.145

Table 6: Respondents' performance by gender, age, year of education, and academic department. Source: Field data, 2019.

performed significantly better in all items of our questionnaire both in posttest and three months later therefore there was a none significant regression of mean total percentage from 79.420 % to 77.145 after three months which probable due to memory lapse

Discussion

Discussion of demographic findings

In this study the performance of respondents by gender has been recorded. Male scored 9.275% during the prior to video teachings while female got 8.893% before. Post video teaching percentage marks (male: 79.131%, female: 79.769%), after three months percentage marks (male: 76.886%, female: 77.457).

It is therefore deduced that females slightly performed better than males which is contrary to the study done by Stroobants [7] titled Schoolchildren as BLS instructors for relatives and friends: Impact on attitude towards bystander CPR which revealed that Gender had a significant difference (males scored better – $P = 0.008$).

Discussion on effectiveness of video teaching on knowledge regarding BLS

In this study the overall performance of all respondents prior to training, post training and after three months, the researcher used paired sample T Test to compare the means of overall percentage marks accumulated before video teaching, after video teaching and after three months. The mean percentage marks registered before video teaching (9.102%) and after video teachings (79.4%) is statistically significant as $p=0.000$. Even after three months, 77.145% the difference mean remain statistically significant ($p=0.000$).

This is similar to the study done by Nielsen [8] titled Acquisition and retention of basic life support skills in an untrained population using a personal resuscitation manikin and video self-instruction (VSI). They found a significant increase in the total score 3–4 months after the course ($p < 0.0001$) from 26.5 (39% of the maximum score) to 34 (61% of the maximum score) points

The present study also has similar results with the study done by Contri, [2] Titled Video-based compression-only CPR teaching: A feasible and effective way to spread CPR in secondary schools. The study results showed that 100% of students knew when to perform chest compressions and when to call EMS, 98% how to evaluate if a person had a cardiac arrest; 96% knew the correct BLS sequence (check safety – check consciousness and breath – call EMS – start CO-CPR); 92% knew the right chest compression depth and rate. During the practice assessment, we found a median C depth of 45.5 mm (95%CI, 40.3–50.3), a median C rate of 118 cpm (95%CI, 113.7–127), a median C hand% of 100% (95%CI, 100–100) and a median Crel% of 90% (95%CI, 74.3–97). In this study the researchers Concluded in their study that video-based only CO-CPR training in schools may be feasible and effective with rather good performance results. The researcher highlighted that, it is reasonable to consider a short instructor course for teachers that could improve students CPR quality.

This study is Contrary to Mardegan [9], in their study titled Comparison of an interactive CD-based and traditional instructor-led Basic Life Support skills training for nurses Results indicate that there was very low retention of skill competence at eight weeks post training with no statistically significant differences ($p \leq 0.05$), between those who undertook the CD or traditional programme for the Novice (39–42%), Practicing Nurses (38–44%) and when the cohorts were combined (41%).

Saša Sopka [10] in their study titled Evaluation of a newly developed media-supported 4-step approach for basic life support training concluded that the “media-supported 4-step approach” leads to comparable practical ECC-performance compared to standard teaching, even with respect to retention of skills. Therefore, this approach could be useful in special educational settings where, for example, instructors’ resources are sparse or large-group sessions have to be prepared.

Discussion on attitude of student before and after video teaching

In this study the evaluation of respondent’s attitude was assessed, the researcher asked the respondents to rank their skills or knowledge of BLS prior and after participating in training. Only 0.6 % highlighted competent and outstanding when answering (Prior to training) but after training 97.1% reported that they were competent or outstanding in the BLS skills. Therefore, it is evident that video teachings increase the competence, knowledge and skills of participants about basic life support as attested by high levels of agreement from respondents. Similarly to the study done by Stroobants [7] on Schoolchildren as BLS instructors for relatives and friends: Impact on attitude towards bystander CPR – Instructing schoolchildren to teach their relatives and friends in Basic Life Support (BLS) led to a more positive attitude towards BCPR.

In the same context the study done by Saša Sopka [10], on “Evaluation of a newly developed media-supported 4-step approach for basic life support training” Overall, at least 99% of the intervention group ($n = 99$; mean 1.5 ± 0.8 ; 6-point Likert scale: 1 = completely agree, 6 = completely disagree) agreed that the video provided an adequate introduction to BLS skills.

Limitations

This study was limited to none health professional students therefore cannot be generalized to health professional students.

The fact that the number of people who attended university is still low in low income countries, which can be the case in Rwanda, constituted a limitation to the study.

Financial means to buy the video constitute a limitation though means created themselves. Time factors also, the researcher was as studying course work too, constituted a limitation to the research process.

Conclusion

Non-health profession students attending video teaching on BLS course have a significantly improved BLS performance post session and after 3 months compared to pre-test knowledge performance. Therefore there was a none significant regression of mean total percentage from 79.420 % to 77.145 after three months which probable due to memory lapse.

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