OPEN PEER REVIEW

Open Peer Review (OPR)

As a new feature for progressing towards transparency, we decided to open a new window for all of our editors as well as authors titled "**Open Peer Review**". We hope by this new facility, our reviewers will be more motivated and authors will be more satisfied with the review process. We believe that publishing our peer review reports could make a transparent and clear environment for all our efforts within a journal, but not all reviewers tend to publish their comments.

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- Prevents reviewers from following their individual agendas and leading to the detection of reviewers' conflicts of interests

You can find out more at:
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KOWSAR
Anesthesiology and Pain Medicine
Article DOI: 10.5812/aapm.111074
Published in: Anesthesiology and Pain Medicine: 11(1); e111074

Peer Review Report for "The Effect of Repeated Direct Observation of Procedural Skills (R-DOPS) Assessment Method on the Clinical Skills of

Anesthesiology Residents"

Author(s): Shideh Dabir, Mohammad Hoseinzadeh , Faramarz Mosaffa, Behnam Hosseini, Mastaneh Dahi, Maryam Vosoughian, Mohammadreza Moshari, Soodeh Tabashi, Ali Dabbagh

Review Timeline:

Submit Date:	12 Nov 2020
Revised Date:	11 Jan 2021
Accepted Date:	12 Jan 2021

Revision (0)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: Reviewer | **Revision** (0) 6 Dec 2020

Dear AE,
According to the review of the received article entitled "The Effect of Repeated Direct Observation of Procedural Skills (RDOPS) Assessment Method on the Clinical Skills of Anesthesiology Residents; " it should be said:
The manuscript is approved and can be published.
with respect

REFEREE: Reviewer | **Revision** (0) 12 Dec 2020

Dear AE,
1- DOPS is a clinical evaluation that aims to identify weaknesses in indibiduals' clinical skills. Identifying weaknesses and giving feedback is only part of the assessment process and the other important part is designing the necessary strategy to eliminate the weaknesses. Therefore, a second evaluation is necessary to evaluate the effectiveness of our strategy in eliminating weaknesses. The authors of this article did not mention the strategies (educational & clinical programs) used to strengthen the weaknesses. However, they emphasized the number of evaluations as a valuable factor. I mean, the quality of strategies is sacrificed by the quantity of evaluation.
2- In the abstract, CA is not defined!?!
3- The type of study is not mentioned. The evaluators are not known. The method of data collection and analysis is not clear.
4- Serious structural defects are seen in methodology.
5- The english writing is not fluent.
Thanks.

Behrooz Zaman: Reviewer | **Revision** (0) 14 Dec 2020

Dear AE,
Thanks to the researchers and authors of the article, there are several questions as well as some minor and sometimes fundamental objections in the article, which I will state in order:
+ It is better to identify the participants in the research with one name throughout the article. For example, "assistant" or "trainee". Also, please avoid using the non-standard abbreviation of CA for anesthesia residents.
+ In the summary of the article in the results section, instead of writing a conclusion, the summarized statistical results should be written.
+ The type of study and the number of samples and the sampling method and the target

population should be mentioned in the method section.
+ While the number of participants in the study is 20, but the total of different levels is 18.
+ Using DOPS for each Procedure requires its own Checklist and Items, and one checklist cannot be used for all procedures. This is one of the major drawbacks of this research.
+ Please clearly state the meaning of "the time for feedback". Does it mean time to explain the problems to the participants?
+ In some parts, it is written "feedback to the CA" and in some, it is written "feedback from the CA". please correct them.
+ The existence of Table 1 in the article is unnecessary.
+ It is better to write the exact P-value obtained in statistical calculations and to avoid > or <.
+ P-value should be written inside the article in its proper place.
+ What is certain, appropriate feedback to learners can play an important role in improving their skills and the educational effects of each test cannot be denied, but:
- Was it just the repetition of DOPS that improved the skill?
- During the six months, there was no other training?
- Do we expect an assistant to have the same skills after six months?
+ If reference 10 is under review, it cannot be considered as a reference.
+ The authors of reference number 22 are not correct.
+ According to Tables 4 and 5, where the sample size of 45 DOPS is actually done on 20 people (somewhere in the text the number of people is 18), the results show that no significant improvement has been observed after repeating DOPS, and the researcher, by separating regional techniques from the rest, has concluded from only 11 cases that this small number of samples is a great weakness for the conclusion.
Finally, while emphasizing the value of research and articles that are written in the field of education, in my opinion, this article needs fundamental reforms, especially in the areas of discussion and conclusion.
Sincerely yours,

REFEREE: Reviewer | **Revision** (**0**) 16 Dec 2020

Dear AE,
I really appreciate the opportunity for reviewing this manuscript.
The investigators conducted a research to assess “TheEffectofRepeatedDirectObservationofProceduralSkills(RDOPS)AssessmentMethodontheClinicalSkillsofAnesthesiol
Research in the field of medical education is valuable and can provide the ground for further clinical studies, so the conclusions should be done properly.
It does not seem that this study adds any more to the body of knowledge. Moreover, it is not well-developed and well- written and the method and discussion of the study are vague.
1. The amount of the residents’ knowledge about DOPS before the study is important in the first test’s score and improvement in R-DOPS can be related to how residents know how to perform the test and what is important for the investigators.
2. It is not mentioned in the study whether the re-evaluation was carried out by the same investigator, because the supervisor's knowledge about the procedure is important in the assessment of it.
3. It is simply impossible to say that the improvement in residents ' ability to perform tasks is due to the periodic assessment byDOPS. Several factors have an impact on performance improvement, including the residents' knowledge level, how they trained before the test and during the 6months
4. The difference between the p-value of peripheral blocks in comparison to other skills can be due to fewer blocks being done by residents in their residency courses.
5. What rotations students are in is also effective in improving their performance But it has not been mentioned in this study
I think this study should be revised to be published in your journal.
Sincerely yours,

Behrooz Zaman: Associate Editor | **Revision** (**0**) 18 Dec 2020

Dear EIC
This research doesn't have new content and idea to present and has critical and fundamental problems in the method, discussion, and conclusion. Nevertheless, I hope that by allowing respected authors and researchers to answer the questions and if possible, by revising and rewriting the article, they can provide convincing reasons and changes that make the article publishable.
Respectfully,

REFEREE: EIC | **Revision** (**0**) 19 Dec 2020

Dear Author,
The reviewers' comments are mentioned. Please correct the details as mentioned above carefully according to reviewers' request.
Thanks.

OPEN PEER REVIEW

Revision (1)

Reply to Reviewers

Ideally, the reviewing process can significantly improve the submitted manuscripts by allowing the authors to take into account the advice of reviewers. Author(s) must reply to all reviewers' comments in a separate Word file, point by point. A "**Reply to Reviewers**" document is submitted along with revised manuscript during submission of revised files, summarizing the changes that the authors made in response to the reviewers' comments. The responses to reviewers' comments specifies how the authors addressed each comment the reviewers made.

You can read the authors' responses to the reviewers' comments in the next page.

Dear Professor Imani

Editor in Chief

Anesthesiology and Pain Medicine

Thank you for considering our manuscript for review in the journal titled: "**The Effect of Repeated Direct Observation of Procedural Skills (R-DOPS) Assessment Method on the Clinical Skills of Anesthesiology Residents**". We appreciate the great comments by *Esteemed Reviewers*. We have used the comments to revise the manuscript. Kindly please see the response to each comment here.

Sincerely Yours

Corresponding Author

Reviewer comment	Author Response	The response is addressed in….??
Reviewer 1:		
The manuscript is approved and can be published.	Thank you for your great kindness.	-------
Reviewer 2:		
1- DOPS is a clinical evaluation that aims to identify weaknesses in individuals' clinical skills…..	Thank you for this wise, great, and interesting comment. This was one of the study limitations which is mentioned at the end of the discussion as a limitation	At the end of the discussion under the title "study limitations"
2- In the abstract, CA is not defined	Thank you for this comment. We have corrected the issue.	In the Abstract.
3- The type of study is not mentioned. The evaluators are not known. The method of data collection and analysis is not clear.	Thank you for this comment. This is added to the methods section.	At the beginning of the METHODS. Data analysis is discussed at the end of the METHODS.
4- Serious structural defects are seen in the methodology	Thank you for this great and important comment. We tried to compensate for the weaknesses. We wish they are now improved.	METHODS
5- English writing is not fluent.	This is a great and completely correct comment. We have tried to improve the text regarding English writing and we wish now it could be appropriate.	All over the text
Reviewer 3:		
1- It is better to identify the participants in the research with one name throughout the article. For example, "assistant" or "trainee". Also, please avoid using the non-standard abbreviation of CA for anesthesia residents	This is a great and completely correct comment. We have used the term "anesthesiology residents" all over the text	All over the text
2- In the summary of the article in the results section, instead of writing a conclusion, the summarized	Thank you for this wise comment. It is corrected.	The end lines of Results

statistical results should be written		
3- The type of study is not mentioned. The evaluators are not known. The method of data collection and analysis is not clear.	This is a great and completely correct comment; we have addressed all these comments throughout the manuscript.	------
4- The type of study and the number of samples and the sampling method and the target population should be mentioned in the method section.	Thank you for this great and wise comment. It is mentioned in the methods. Of course, this method of sampling is always associated with some bias which is mentioned as one of the study limitations at the end of the manuscript	METHODS & Limitations
5- While the number of participants in the study is 20, but the total of different levels is 18.	Thank you! This is correct. We corrected our mistake.	Results
6- Using DOPS for each Procedure requires its Checklist and Items, and one checklist cannot be used for all procedures. This is one of the major drawbacks of this research.	Thank you very much for this great comment. We did exactly what you have correctly recommended. We exactly used a separate checklist for each procedure. However, for sake of briefness, we did not add the individual checklists to the text. These checklists were standard DOPS checklists.	Methods
7- Please clearly state the meaning of "the time for feedback". Does it mean time to explain the problems to the participants?	Thank you for this clarifying comment. It means time to explain the problems to the residents.	All over the text
8- In some parts, it is written "feedback to the CA" and in some, it is written "feedback from the CA". please correct them.	Thank you for this great and wise comment. We revised and corrected this comment and changed it to feedback to the anesthesiology residents. This explanation is added to the text in the	All over the text
9- The existence of Table 1 in the article is unnecessary.	Thank you for this interesting suggestion. We have deleted Table 1 and Table 3 and have transferred their contents to text.	----------
10- It is better to write the exact P-value obtained in	Thank you for this important comment. This is revised in tables 3 and 4 and 5	Table 3 Table 4

statistical calculations and to avoid > or <.		Table 5
11- P-value should be written inside the article in its proper place.	Thank you for this interesting comment. We have deleted Table 3 and have mentioned all its P values in the Text	Results
12- What is certain, appropriate feedback to learners can play an important role in improving their skills and the educational effects of each test cannot be denied, but: Was it just the repetition of DOPS that improved the skill?	It is a very wise and exact comment. We could not assess the effects of other factors; however, your GREAT comment is one of our study limitations which has been declared at the end of the article as “study limitation”	At the end of the manuscript; before CONCLUSION
13- During the six months, there was no other training? Do we expect an assistant to have the same skills after six months?	Thank you for this great comment. During the six months, there was no specific focus on training of the items of DOPS; this time lag though inevitable could be a potential limitation of the study, so, your GREAT comment is added as a potential limitation at the end of the manuscript.	At the end of the manuscript; before CONCLUSION
14- If reference 10 is under review, it cannot be considered as a reference.	Thank you for this wise comment. We have deleted that reference and have used another published one.	Reference 12
15- The authors of reference number 22 are not correct.	Thank you very much for this comment. We have double checked the reference which is now Ref 23 in the revised version. The current reference with the following items is checked: PMID: 29575967 DOI: 10.1080/0142159X.2018.1450940	Reference 24
16- According to Tables 4 and 5, where the sample size of 45 DOPS is done on 20 people (somewhere in the text the number of people is 18), the results show that no significant improvement has been observed after repeating DOPS, and the researcher, by separating regional techniques from the rest, has	Thank you for this great comment. The majority of the results in both peripheral nerve blocks and other procedures are meaningful. Besides, the sample size (i.e. 18 residents) is supplanted by the relatively considerable number of the DOPS procedures; however, your GREAT comment is added to the study limitations.	Number 4 of the “study limitations”

concluded from only 11 cases that this small number of samples is a great weakness for the conclusion.		
Reviewer 4		
1.The amount of the residents' knowledge about DOPS before the study is important in the first test's score and improvement in R-DOPS can be related to how residents know how to perform the test and what is important for the investigators.	Thank you very much for this great comment. We have added this as our study limitation	5th study limitation
2. It is not mentioned in the study whether the re-evaluation was carried out by the same investigator, because supervisor knowledge about the procedure is important in the assessment of it.	Thank you for this exact and wise comment. We have corrected your comment on the methods	2nd page of methods
3. It is simply impossible to say that the improvement in residents ' ability to perform tasks is due to the periodic assessment byDOPS. Several factors have an impact on performance improvement, including the residents' knowledge level, how they trained before the test and during the 6months	Thank you for this great comment. We have added your comment as our study limitation. Also, we modified our conclusion	6th study limitation
4. The difference between the p-value of peripheral blocks in comparison to other skills can be due to fewer blocks being done by residents in their residency course.	Thank you for your great comment. We added this great comment to one of the explanations in the discussion.	First lines of the 2nd page of discussion
5. What rotations students are in is also effective in improving their performance But it has not been mentioned in this study	Thank you for this exact comment. They were in general anesthesia rotation. We have added this comment to the methods	on the 1st page of methods, in the 6th line

OPEN PEER REVIEW

Revision (1)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: Associate Editor | **Revision** (1) 6 Jan 2021

Dear EIC
The authors of the article have considered and corrected the comments related to the writing of the article, but the fundamental flaws related to the research and method have been considered as limitations in the study. However, in most cases, these limitations are not convincing and it seems that the research design is flawed.
Respectfully,

REFEREE: Associate Editor | **Revision** (1) 9 Jan 2021

Dear EIC,
Based on reviewers' comments some of the requested items were corrected but recommended considering below references:
- Dabbagh A, Sezari P, Tabashi S, Tajbakhsh A, Massoudi N, Vosoghian M, et al. Attitudes of Anesthesiology Residents Toward a Small Group Blended Learning Class. Anesth Pain Med. 2020;10(3). e103148. doi: 10.5812/aapm.103148.
- Dabbagh A, Abtahi D, Aghamohammadi H, Ahmadizadeh SN, Ardehali SH. Relationship Between “Simulated Patient Scenarios and Role-Playing” Method and OSCE Performance in Senior Anesthesiology Residents: A Correlation Assessment Study. Anesth Pain Med. 2020;10(5). doi: 10.5812/aapm.106640.
- Dabbagh A, Elyassi H, Sabouri AS, Vahidshahi K; Ziaee. AnesthesiologyDepartment. The Role of Integrative Educational Intervention Package (Monthly ITE, Mentoring, Mocked OSCE) in Improving Successfulness for Anesthesiology Residents in the National Board Exam. Anesth Pain Med. 2020;10(2). e98566. doi: 10.5812/aapm.98566.
- Dabbagh A, Massoudi N, Vosoghian M, Mottaghi K, Mirkheshti A, Tajbakhsh A, et al. Improving the Training Process of Anesthesiology Residents Through the Mentorship-Based Approach. Anesth Pain Med. 2019;9(1). e88657. doi: 10.5812/aapm.88657. [PubMed: 30881915]. [PubMed Central: PMC6412912].
- Jalali ZM, Farghadani A, Ejlali-Vardoogh M. Effect of Cognitive-Behavioral Training on Pain Self-Efficacy, Self-Discovery, and Perception in Patients with Chronic Low-Back Pain: A Quasi-Experimental Study, Anesth Pain Med. 2019;9(2):e78905.
- Sedighie L, Bolourchifard F, Rassouli M, Zayeri F. Effect of Comprehensive Pain Management Training Program on Awareness and Attitude of ICU Nurses, Anesth Pain Med. 2020;10(2):e98679.
- Quraishi MK, - Khateeb Hanif U, Parmar R. Improvement in Confidence Levels for the

Management of Paediatric Cardiac Arrests in Medical Students Following a Training Course, Anesth Pain Med. 2018;8(2):e14867.

Sincerely yours

REFEREE: EIC | **Revision (1)**

9 Jan 2021

Dear Author,

The reviewers' comments are mentioned. Please correct the details as mentioned above carefully according to reviewers' request.

Thanks.

OPEN PEER REVIEW

Revision (2)

Reply to Reviewers

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You can read the authors' responses to the reviewers' comments in the next page.

Dear Professor Imani

Editor in Chief

Anesthesiology and Pain Medicine

Thank you for considering our manuscript for review in the journal titled: "**The Effect of Repeated Direct Observation of Procedural Skills (R-DOPS) Assessment Method on the Clinical Skills of Anesthesiology Residents**".

We appreciate the great comments by *Esteemed Reviewers*. We have used the comments to revise the manuscript and prepare the 2nd revision. Kindly please see the response to each comment here.

Sincerely Yours

Corresponding Author

AE comment	Author Response	The response is addressed in….??
Associate Editor 1:		
Dear EIC The authors of the article have considered and corrected the comments related to the writing of the article, but the fundamental flaws related to the research and method have been considered as limitations in the study. However, in most cases, these limitations are not convincing and it seems that the research design is flawed. Respectfully,	Thank you for your great kindness. We wish our explanations could compensate for these shortcomings.	-------
Associate Editor:		
Based on reviewers' comments some of requested items were corrected but recommend to consider below references:	Thank you for this wise, great, and interesting comment. We have added all the references, ONE-BY-ONE to our study	References 4, 11, 23, 24, 25, 26, 30

OPEN PEER REVIEW

Revision (2)

Here, you can see the **Reviewers**, **Associate Editors** and **EICs'** comments from the beginning to the end of the revision process.

REFEREE: Reviewer | **Revision** (2) 12 Jan 2021

Dear AE,
I read with interest this revised format of manuscript ID#111074. The author could correct the majority of the requested items, and now it is ready for publishing.
Sincerely

REFEREE: Associate Editor | **Revision** (2) 12 Jan 2021

Dear EIC
Based on reviewers' comments this article can be considered for publishing at Anesth Pain Med.
Final decision: Acceptance
Regards

REFEREE: EIC | **Revision** (2) 12 Jan 2021

Dear Author,
The document is reviewed carefully by the reviewers. According to their comments and your revisions as requested, this manuscript is accepted.
Thanks.