

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Is the admission test for the course in Medicine a good predictor of academic performance? A 'case-control' experience at the School of Medicine of Turin
AUTHORS	Migliaretti, Giuseppe; Bozzaro, Salvatore; Siliquini, Roberta; Costa, Giuseppe; Cavallo, Franco

VERSION 1 – REVIEW

REVIEWER	Rashmi Kusurkar VUmc School of Medical Sciences, Amsterdam, the Netherlands No Competing Interest
REVIEW RETURNED	13-Jun-2017

GENERAL COMMENTS	<p>This paper is about investigating the predictive ability of a medical admissions test for the academic performance in the medical study using a comparative design with the inclusion of a control group. The study has been conceived well and performed well. I especially liked the idea of the control group in the paper. The writing is quite poor, but this can be fixed. I have provided specific comments below. The grammar in many sentences is not correct. Professional copy editing is required.</p> <ol style="list-style-type: none">1. The abstract is written well.2. The introduction can benefit from a good summary of the literature. Just saying that all the previous studies have been conducted outside Italy is not enough explanation. Also this ends up giving a local flair to the study instead of really adding to the literature. As it currently stands the introduction is a mere description of the setting of the study. I would have preferred seeing research questions instead of objectives of the study.3. The methods section does not provide complete information about the study. The first question that came to my mind was how did students having lower grades win their appeals in a Court of Law. Without this information I was unable to judge if the grouping used was real. There was no justification provided for the use of ROC, sensitivity specificity etc. for the objectives provided in the paper.4. The results section did not walk the reader through the meaning of each test used. As the kind of statistical analysis used is not usual in medical education research, the authors should describe the results clearly and spell out the interpretations for the readers.5. There was no discussion section. Due to this there was no indepth analysis of the results and what they meant in practice.
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	<p>This has to be added.</p> <p>6. The conclusion is too long.</p> <p>7. Limitations have not been addressed fully.</p> <p>8. Information on ethical approval and informed consent of participants is missing.</p> <p>9. The first two references are not really complete and the style of references is not entirely correct.</p> <p>10. Overall the writing gives the study a local flair. In its current form the paper has little to offer to an international audience.</p> <p>I wish the authors luck with the paper.</p>
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REVIEWER	Ruth Sladek Flinders University, Australia
REVIEW RETURNED	15-Jun-2017

GENERAL COMMENTS	<p>The authors present a naturalistic opportunity to examine the predictive ability of their admission test, given an appeal process effectively provided them with comparison groups of medical school entrants 'selected' and 'originally not selected' into their medical school.</p> <p>This has the potential to be of interest to an international audience. The appeal process described has provided a unique opportunity to examine the important question of whether an admission test is predictive of performance. Most schools want to know how to select those most likely to success and exclude those who don't.</p> <p>However I don't think the authors have written the paper in way that makes it relevant or accessible for an international audience. As it is currently presented, it is a local evaluation with limited clear relevance outside of Italy and is difficult to follow due to the lack of precision in expression and failure to contextualise it in the broader literature.</p> <p>The focus of the paper is on "the admission test" – but there is no description of what it is. I do not know how it compares with such tests in Australia, UK, USA or Canada so can't assess whether it is relevant. The references cited are somewhat dated and eclectic, and the quality of in text referencing is not at a level the reader needs. For example, saying "Many studies..." and then referencing only two papers dated 2005 and 2009 doesn't inspire my confidence that the authors know what the research says and are able to consider their findings in the context of same. The referencing also misses a couple of key reviews.</p> <p>I note the English needs some attention in terms of its expression which at times is imprecise, eg p4, 'The initial results of our study seem to confirm the capacity of the admission test....School of Medicine". Another example is the bullet points - the first point is the same as fourth point. But there are other examples so this comment relates to the entire manuscript.</p>
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	<p>The spelling is generally good but please note the title uses the misspelled word ACAMEDIC which should have been picked up by a word checker. There is no clear Discussion section</p> <p>I haven't assessed the statistics given my assessment of the paper.</p>
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VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Comments and Responses:

1. Just saying that all the previous studies have been conducted outside Italy is not enough explanation

answ: We agree with the referee's comment. The Introduction section has been revised with a detailed description of the literature. (see pag.4-5 and pag.6 rows 1-6)

2. The introduction is a mere description of the setting of the study. I would have preferred seeing research questions instead of objectives of the study.

answ: We re-wrote the section accordingly with the suggestions of the reviewers. (see pag.4-5 and pag.6 rows 1-6)

3. The methods section does not provide complete information about the study. There was no justification provided for the use of ROC, sensitivity specificity etc. for the objectives provided in the paper. The results section did not walk the reader through the meaning of each test used. As the kind of statistical analysis used is not usual in medical education research, the authors should describe the results clearly and spell out the interpretations for the readers

answ: In the new version of the paper, the Statistical methods section has been completely revised and bibliographical references have been added (see pag.7 rows 1-24). The results section has been revised (pag.7-9); more details about the interpretation of the data have been inserted (see pag.9 rows 24-31). Also the Tables have been completely revised

4. The first question that came to my mind was how did students having lower grades win their appeals in a Court of Law. Without this information I was unable to judge if the grouping used was real.

answ: Many students who did not pass the test appealed to the court (named Tribunale Amministrativo Regionale-TAR) for supposed irregularities in the examination. The court accepted the appeal of recursive students with the grounds for supposed 'anonymity principle violation'. Moreover, we want to emphasize that the 80% of the TAR students reached a score between 20 and 30 points in the test, while the threshold to be Regular was 33.9 in Turin. For this reasons the TAR group can be considered a good reference also because it has a score slightly lower than the minimum required for admission.

In the revised version of the paper more details have been added (see pag.5 rows 26-31 and pag.10 rows 31-33)

5. There was no discussion section. Due to this there was no indepth analysis of the results and what they meant in practice. This has to be added.

answ: In the new versione of the paper the Discussion section has been added. (see pag.10-11)

6. The conclusion is too long.

answ: A Discussion section has been inserted and the Conclusion section has been revised (see pag.10-12)

7. Limitations have not been addressed fully.

answ: More details about the limitations of the study have been inserted in the Discussion section (see pag.11 rows 19-27)

8. Information on ethical approval and informed consent of participants is missing.

answ: The study was approved by the degree course Council of the School in Medicine and the analysis were based on anonymized database (i.e. without sensitive data). We inserted details in the revised version of the paper in the section 'Database' (see pag.6 rows 14-17)

9. The first two references are not really complete and the style of references is not entirely correct.

answ: We carefully re-wrote bibliography, choosing also more recent papers (see pag.14-15)

10. Overall the writing gives the study a local flair. In its current form the paper has little to offer to an international audience.

answ: The paper has been completely revised. In particular we re-wrote the Introduction and Discussion sections in order to highlight the international interest about the topic. Moreover we highlight the similarities between Italian admission test and other countries situations as concerns questions type and duration can allow the extension of our results to a more international context (see pag.4 row 7-22, pag.5 rows 1-31 and pag.10 rows 34-36 and pag.11 rows 1-10 and pag. 11 rows 20-27)

Reviewer: 2

1. As it is currently presented, it is a local evaluation with limited clear relevance outside of Italy and is difficult to follow due to the lack of precision in expression and failure to contextualise it in the broader literature.

answ: The paper has been completely revised. The Introduction (see pag.4), Discussion (see pag.10-11) and Conclusion (see pag.12) sections have been revised with a detailed description of the literature and more details about the similarities between Italian admission test and other countries situations have been added in order to insert our results in a more international context (see pag.4 rows 8-22 and pag.5 rows 1-25 and pag.10 rows 34-36 and pag.11 rows 1-10 and pag.11 rows 20-27)

2. The focus of the paper is on "the admission test" – but there is no description of what it is. I do not know how it compares with such tests in Australia, UK, USA or Canada so can't assess whether it is relevant.

answ: The Introduction and Discussion sections have been modified with an accurate review of the literature. A description of the admission tests used in other country has been inserted (see pag.4-5)

3. Referencing only two papers dated 2005 and 2009 doesn't inspire my confidence that the authors know what the research says and are able to consider their findings in the context of same. The referencing also misses a couple of key reviews.

answ: We agree with the referee's comment. The Introduction and the Discussion sections with an accurate review of the literature, choosing also more recent papers (see pag.14-15), trying to provide an adequate detail (see pag.4-5 and pag.10-11)

4. English needs some attention

answ: The English quality in the paper has been completely revised and verified by native English speaking

5. There is no clear Discussion section

answ: A Discussion section has been inserted and the Conclusion section has been revised (see pag.10-12)

VERSION 2 – REVIEW

REVIEWER	Rashmi Kusurkar VUmc School of Medical Sciences, Amsterdam, the Netherlands
REVIEW RETURNED	06-Sep-2017
GENERAL COMMENTS	The authors have carried out all the revisions I have requested. So I am satisfied with their effort. A few minor suggestions: - The last paragraph from the introduction should be moved to the Methods section as "Setting". - Cohort or year should be written as 2015-2016 instead of 2015/16. - A few grammatical corrections are still required. - I am not happy with the ethical approval details added. If there is no possibility to obtain ethical approval from an Ethical Approval body in Italy, the authors should clearly state this. Also the authors need to explain how they followed the rules specified by the Declaration of Helsinki in order to take care of the participants' interests.

VERSION 2 – AUTHOR RESPONSE

Reviewer: 1

Reviewer Name: Rashmi Kusurkar

Comment: The last paragraph from the introduction should be moved to the Methods section as "Setting".

Answer: done

Comment: Cohort or year should be written as 2015-2016 instead of 2015/16.

Answer: done

Comment: A few grammatical corrections are still required.

Answer: The paper has been revised and corrected by a professional copyediting agency as documented by the attached certification

Comment: I am not happy with the ethical approval details added. If there is no possibility to obtain ethical approval from an Ethical Approval body in Italy, the authors should clearly state this. Also the authors need to explain how they followed the rules specified by the Declaration of Helsinki in order to take care of the participants' interests.

Answer: In the new version of the paper more details and clarifications have been added as follows
Approval by an ethical board is not explicitly required in Italy when the analysis of retrospective data is carried out, especially when data do not deal with disease conditions or use of pharmaceutical products. In order to meet the requirements of the Helsinki Declaration, the analyses were performed on an anonymized database (without sensitive data) provided directly by the Medical Schools.