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OPEN PEER REVIEW

Assessment of the Value of the PAT as the First Step in the Triage Process in a Pediatric Emergency Room

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About this report

This open peer review (OPR) report shows the public comments made on this article during peer review, by the reviewers, the associate editor and the editor-in-chief, for every revision round, together with the authors' replies. Comments appear only with the consent of the people who wrote them. Reviewers who chose to sign their report are named; the others are shown as "Referee". Comments are edited for language only, and confidential remarks to the editors are not included.

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1 Original submission

1 comment · 11 Jul 2022

Referee 1 Reviewer

MAJOR REVISION 11 Jul 2022

Dear author
1- The study design is quite ambiguous.
2- The outcomes are wrongly stated. The extent of hospitalization is never analyzed using logistic regression.
3- A major revision in the way the study is reported is necessary.
Regards

2

Revision 1

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear Editor of Journal of Archives of Pediatric Infectious Diseases

We would like to thank you and give our respects to honorable reviewers for their valuable comments. Following is a list of our actions done to correct and revise this submission based on the comments received from reviewers:

Reviewer 1:

Dear author

1- The study design is quite ambiguous.

Answer: Attempts have been made to make the text more comprehensible and complete by making corrections and completing the content. Corrections in the text are marked in yellow.

2- The outcomes are wrongly stated. The extent of hospitalization is never analyzed by the logistic regression method.

Answer: The idea of title of the study is taken from the reference study Fernandez 2017 (No. 18). In this study, the logistic regression method was used for analysis. The same statistical method has been chosen in this article, which was reviewed by the professor of statistics.

3- A major revision in the way the study is reported is necessary.

Answer: An attempt has been made to revise the text by making corrections. Corrections in the text are marked in yellow.

Regards

Reviewer 2:

Dear Author

Thank you for submission of “Assessing the Value of the PAT Triangle as the First Step in the Triage Process in a Pediatric Emergency Room” article

Totally:

This article needs extensive English edition. PAT should be explained briefly and its components should be explained as variables of the study.

Answer: In the introduction section, PAT and its components are explained as study variables. This section is marked in yellow.

Abnormal PAT should be clearly identified in different categories for example two criteria and one criteria or specific criteria.

Answer: This study was derived from the reference study Fernandez 2017 (No. 18). A similar level of work has been done with that study. Only four variables are considered. One is only impaired blood circulation, the second is only impaired specialized work, the third is only impaired general appearance, and the fourth is more than one impaired criterion. Which was explained in the table of variables in the modified version.

Due to poor English many sentences are not understandable for example what is the meaning of the time of ejaculation?

Answer: The word adjustment replaced ejaculation.

Abstract:

Result

1-please rearrange all the variables. PAT on its own has different components and impaired PAT should be used for comparison. Specify each variable and give a P value for your results.

Answer: The table of all variables was included in the text and the comparison table of disturbed variables for each outcome with p values was given in the article.

2- “Also, hospitalization with impaired PAT was significantly different from hospitalization with normal PAT. Appearance and more than one defective criterion were most associated with blood testing.” These sentences has no academic meaning.

Answer: This means that several people were identified with PAT disordered variables. A large number of these people were hospitalized and some patients did not have abnormal PAT variables, but some of them were hospitalized. Finally, the ratio of hospitalization of patients who had PAT abnormal variable was higher than that of patients who did not have PAT abnormal variable, which was statistically significant.

3-Quid-19 What is this?

Answer: The word COVID-19 was replaced by Quid-19.

Introduction:

1-A description about PAT criteria and the importance of PAT analysis of patients should be emphasized. Articles about PAT evaluation and its power in distinguishing bad condition patients is required. Obvious description of study objective is needed at the end.

Answer: Articles about PAT evaluation were given and PAT criteria and study objectives were explained.

Material and Method:

1-In this sentence the author says normal PAT children may send home but in the results part some of these children are admitted" In the meantime, they have a normal PAT and go home. Other cases are admitted according to non-PAT criteria. Some patients have impaired PAT criteria and are admitted accordingly."

Answer: This paragraph was corrected in the text.

2- it seems blood test is done in all cases so its importance in analysis is less than other PAT variables, on the other hand if the author is testing PAT variables with blood tests and their relationship with type of admission it should be clearly mentioned in objectives and method.

Answer: The blood test tables were modified.

3- What is the ethical code?

Answer: Ethical code is IR.SBMU.MSP.REC.1398.743.

4- Is more than one criteria equal to impair PAT, or each components of the PAT triangle is equal to impaired PAT? What is the definition of abnormal finding?

Answer: The variable introduction table was presented in the explanation section of the work method.

5- What was the strategy to decrease the bias of different observers in your study?

Answer: The bias of different observers due to being done in a teaching hospital by the resident was minimized by minimizing the residents in filling out the questionnaires. Of course, in previous similar studies, it was done by a specialist doctor and a family doctor.

6- Please explain the inclusion criteria and exclusion criteria. Were patients referred from another hospitals with bad condition included in exclusion criteria?

Answer: There were no specific restrictions regarding the criteria for patient entry and exit, and all patients referred to Mofid Hospital's emergency room within four months were included in the study. This relationship was true even for referred patients.

Results:

1- How many cases are referred from other centers and how many come for the first time.

Answer: Considering the diversity of emergency room visitors and our goal, which was the rate of hospitalization, and considering the variables given in the table, the isolation variable and the limitation of entering the study did not add anything to the purpose of the study, but also increased the error rate. And therefore, reference cases were not measured separately.

Discussion:

1- The discussion part is directly a translation from Persian to English and this factor made the sentences hard to understand

Answer: An effort was made to correct the English text as much as possible.

2- How the author could confirm the diagnosis of MISC in the study cases.

Answer: This study was conducted at the height of the COVID-19 pandemic. During 4 months, over 90% of patients were infected with COVID-19. That the percentage of MISC patients was very high, and the diagnosis was confirmed based on the criteria and opinions of the emergency room professors.

Due to the fact that the appearance and more than an abnormal PAT criterion was the most effective factor in hospitalization and due to the peak of the COVID-19 period and its manifestation mostly in the form of diarrhea and vomiting and decrease in body volume, paleness and rash and the effect on the appearance and even more than the abnormal standard of PAT and in most cases in the end MISC diagnosis, even its effect in hospitalization at the peak of a pandemic was also proven in addition to previous studies.

3- “This study was a follow-up to a previous study in a center,” from which study?

Answer: It was corrected in the text. Reference No. 18. refers to Fernandez's study in Spain in 2017.

4- Performing of review of literature and comparing with other results is very important. The discussion part has no reference.

Answer: Comparing paper results with other references are added to the discussion. Some related references were also referred to in the discussion.

5- What are the limitation of study?

Answer: The limitation of the study was added to the article.

Conclusion:

1- Please give the exact results of your study “The results show training effectiveness and its use in crowded emergencies. Which in critical situations also determines the urgency of treatment” this finding was not assessed in this study.

Answer: The effect of training in the study was removed and the results were modified.

References:

1- The number of references is not enough for this important study.

Answer: Related references were added to the article.

Best Regards

2 Revision 1

3 comments · 2 Sep 2022 – 6 Sep 2022

Referee 2 Reviewer

MINOR REVISION 2 Sep 2022

Dear author
Thank you for correcting this article.
Overall:
English editing is strongly needed. Some sentences are not understandable.
Abstract:
The results section is not comprehensive, and the variables are not defined at the outset. This means that one must read the whole article to understand the variables and their relationships described in the abstract. The abstract should be scientifically self-contained.
Material and Methods:
1-Based on this sentence: " Patients with impaired PAT are admitted to pediatric wards or PICUs or (2) emergency departments, and some undergo blood tests." It would be better to have three study groups. What is the purpose of 2 in this sentence?
2- Please explain this sentence: "It was in the last rank of respiration."
3- In table 3, the results show that abnormal findings in more than 1 component were inversely related to emergency hospitalization. Is this result correct?
Discussion:
1- How did the author obtain the results described in this sentence in the discussion? " it was shown that the use of PAT by a pediatric resident was most likely associated with hospitalization."
2- What is the meaning of this part of the sentence: "and later In the form of respiratory symptoms that have been less, and this in itself conveys the importance of appearance and blood circulation."
3- What are volume reduction and MICS?
4- What is your reference for this statement: " Of course, appearance is the most important component in the PAT triad. It indicates primary brain dysfunction and systemic and metabolic problems that include brain damage, brain infection, hypoglycemia (electrolyte disturbance), intoxication, adequate ventilation, oxygenation, and homeostasis and function. It Shows the CNS." And how do these variables show the CNS?
5- What do you mean by this part of the sentence? "and increased its statistics the hospital." Please don't translate the text directly from Persian into English.
6- Please remove the limitations section.
7- Please describe the advantages of the study.
8- I really don't understand what you mean by this sentence: " Of course, a percentage of more than one abnormal criterion after stabilization in emergency CPR and without hospitalization under the supervision and a percentage due to patient transfer from other hospitals for admission to the PICU directly into this ward, and this is perhaps a high figure of more than was an abnormal criterion in the PICU." Understanding this sentence requires a reader who is familiar with the Emergency Ward of Mofid Hospital. For example, where is the " Emergency CPR"?
9- What do you mean by "The reason" in this part? This sentence has a poor English structure. I don't understand it. " The reason was that the sampling time was long due to the busy emergency of the useful hospital. The reason was the prevalence of the COVID-19 pandemic and patients did not go to the hospital, and the volume of patients referred to the hospital was greatly reduced. Of course, some patients were admitted directly to the ward with a doctor's order, and some did not need to be monitored and were sent directly to the ward due to the high number of hospitalizations and the low number of some cases of disrupted PAT. Was under the supervision of the Emergency and PICU.

Non-cooperation of the patient or parents in the evaluation of the PAT
Personal consent of the patient for discharge
The study was conducted in a specialized pediatric center
A patient in the emergency room may have been visited several times”
10- What is Useful Hospital?
11- Please provide coherent text in the discussion and conclusion, and don’t use bullets.
12- The conclusion section repeats the results. This section should give your brief impression of the study, important findings that can be used from this study, and recommendations for further studies.

Best regards

Referee 1 Reviewer

MINOR REVISION 5 Sep 2022

Dear author
1- The study design is quite ambiguous.
2- The outcomes are wrongly stated. The extent of hospitalization is never analyzed using logistic regression. The extent of hospitalization usually refers to the length of stay in the hospital, which was not among the outcomes in this study. What has been analyzed as an outcome in this study is the probability/rate of hospitalization.
Regards

Associate Editor

MINOR REVISION 6 Sep 2022

Dear Author:
Thank you for the corrections.
1- It is important to arrange the variables correctly and give a precise explanation of your variables, and the results should be directly related to your variables.
2- Important results should be reported in the results section.
3- Please provide a clear explanation of the hospital sectors from which the variables in your article were obtained.
4- Some words and sentences should be revised for better understanding. For example, what does "USEFUL HOSPITAL" mean?
5- English editing is needed.
6- The format of the article is not well designed yet.
BEST REGARDS

3

Revision 2

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

Dear Editor of Journal of Archives of Pediatric Infectious Diseases

Associate Editor 1:

Dear Author:

Thank you for correction

1- It is important to arrange the variables correclty and give precise explanation of your variables and the results should be straitly related to your variables.

Answer: Tables and working methods were modified.

2- Important results should be recorded in the result part.

Answer: The results were corrected.

3- Please give good declaration about sectors of hospital that your article variables come from.

Answer: The variable table and working method were modified.

4- Some words and sentences should be revised for better understanding for example what is useful hospital.

Answer: Was corrected.

5- English edition is needed.

Answer: Was corrected.

6- The format of article is not well designed yet.

Answer: Was corrected.

Best regards

We would like to thank you and give our respects to honorable reviewers for their valuable comments. Following is a list of our actions done to correct and revise this submission based on the comments received from reviewers:

Reviewer 1:

Dear author

1- The study design is quite ambiguous.

Answer: The work method was revised.

2- The outcomes are wrongly stated. The extent of hospitalization is never analyzed by logistic regression method. The extent of hospitalization usually refers to the length of stay in hospital, which was not among the outcomes in this study. What has been analyzed as an outcome in this study is the probability/ rate of hospitalization.

Answer: All data were evaluated by statistician Dr. Armin Shirvani using logistic regression method. In Mofid Hospital, which was the subject of our study, there is no such thing as hospitalization time per hour. We have a ward under observation in the emergency department, where the patient is admitted based on the degree of instability of the case and is transferred to the ward after stabilization. There have been no possible statistics. All the statistics given in the tables are completely definitive.

Regards

Reviewer 2:

Dear author

Thank you for correction of this article

Totally:

English edition is needed strongly. Some sentences are not understandable.

Answer: Tried to correct the text as much as possible.

Abstract:

The results part is not comprehensive and the variables are not specified originally. It means one should read the whole article to be able to understand the variables and their relationships that are described in abstract. Abstract should have independent scientific characteristic.

Answer: Was corrected.

Material and Methods:

1-Based on this sentence:” Patients with impaired PAT are admitted to pediatric wards or PICUs or (2) emergency departments, and some undergo blood tests.” It is better to have three groups of study. What is the place of 2 in this sentence?

Answer: Our aim in the study was to investigate the rate of hospitalization of patients with each component of disturbed PET in each part of the hospital under the title of two outcomes. The first outcome of hospitalization in the whole hospital and the second outcome of hospitalization in (1) PICU, pediatric special care department and (2) monitored department in emergency and separately, as well as patients who were tested in the first step of entering the hospital. We included patients under test because we wanted to evaluate the value of PAT compared to Blood Test in the first step. which is a criterion for deciding whether or not to be hospitalized. According to logistic regression analysis, it was a stronger criterion for hospitalization than Blood Test in the first step.

2- Please give explanation for this sentence “It was in the last rank of respiration.”

Answer: This sentence was removed from the text.

3- In table 3 the results shows abnormal findings in more than 1 component was inversely related to emergency hospitalization. Is this result correct?

Answer: More than one impaired measure of the PAT was inversely associated with hospitalization. That is, the higher the number of impaired criteria, the lower the hospital admission, but the higher the PICU admission.

Discussion:

1- How the author found the results shown in this sentence in discussion?” it was shown that the use of PAT by a pediatric resident was most likely associated with hospitalization.”

Answer: Was corrected. The word "definitely" was used instead of "most likely"..

2- What is the meaning of this part of sentence: “and later In the form of respiratory symptoms that have been less, and this in itself conveys the importance of appearance and blood circulation.”

Answer: The meaning of this sentence was that patients with respiratory symptoms, i.e. with disorder in the respiratory component of PAT, were less related to hospitalization than the other two parameters of PAT (appearance and blood circulation).

3- What is volume reduction and MICS?

Answer: MICS is a typo and was corrected to MISC. The word dehydration replaced volume reduction..

4- What is your reference for this declaration:” Of course, appearance is the most important component in the PAT triad. It indicates primary brain dysfunction and systemic and metabolic problems that include brain damage, brain infection, hypoglycemia (electrolyte disturbance), intoxication, adequate ventilation, oxygenation, and homeostasis and function. It Shows the CNS.” And how these variables show the CNS?

Answer: This part of the text was removed.

5- What do you mean by this part of sentence? “and increased its statistics the hospital.” Plz Don’t translate the text from Persian straightly to English.

Answer: This sentence was corrected in the text.

6- Plz remove the limitation topic.

Answer: Removed.

7- Plz give the advantages of study.

Answer: The advantages added to text:

1- Establishing an efficient PAT system as a primary tool in evaluating children referred to pediatric emergency.

2- Avoiding the confusion of patients and frequent visits and spending money on families and the health system and improving the outcome of the disease.

8- Really I don’t understand what is your meaning by this sentence” Of course, a percentage of more than one abnormal criterion after stabilization in emergency CPR and without hospitalization under the supervision and a percentage due to patient transfer from other hospitals for admission to the PICU directly into this ward, and this is perhaps a high figure of more than was an abnormal criterion in the PICU.” This sentence needs a familiar reader with good awareness with Emergency Ward of Mofid Hospital.For example Where is the “ Emergency CPR”.

Answer: This means a number of patients who are transferred to the PICU after being resuscitated in the emergency room, and a number of hospital admissions from other hospitals for the PICU, and this increases the PICU statistics.

9- In this part The reason of what was your meaning.? This sentence has poor English structure. I don’t understand it.” The reason was that the sampling time was long due to the busy emergency of the useful hospital. The reason was the prevalence of the COVID-19 pandemic and patients did not go to the hospital, and the volume of patients referred to the hospital was greatly reduced. Of course, some patients were admitted directly to the ward with a doctor's order, and some did not need to be monitored and were sent directly to the ward due to the high number of hospitalizations and the low number of some cases of disrupted PAT. Was under the supervision of the Emergency and PICU.

Non-cooperation of the patient or parents in the evaluation of the PAT

Personal consent of the patient for discharge

The study was conducted in a specialized pediatric center

A patient in the emergency room may have been visited several times”

Answer: It means that in the Mofid hospital that has a lot of clients. Although the sampling time was prolonged, the samples were very few, the reason was the chroma pandemic, which resulted in few hospital visitors. Because we studied all the patients admitted to the hospital during a period of four months.

The number of hospitalizations in WARD was higher because the doctor admitted patients directly to the ward and did not need to be stabilized in the emergency department.

The low statistics of hospitalization in PICU and under emergency care was also the reason.

Most of the patients left the hospital with their own consent and this reduced the number of hospitalizations.

“The study was conducted in a specialized pediatric center” was removed from the text.

10- What is Useful Hospital?

Answer: It was wrongly stated in the Limitation section and was removed from the text.

11- Please give a confluent text in discussion and conclusion and don’t use Bullets.

Answer: Our aim was to investigate the hospitalization rate of patients with impaired PAT. Finally, based on the results of the PAT criteria, in the first step, it directly and completely leads to the admission of patients to the hospital.

12- The conclsion part gives the results repeatedly. This part should give your brief impression of study and important facts that can be used from this study and recommendation for another studies

Answer: Corrected in the conclusion section.

Best regards

3 Revision 2

1 comment · 8 Jun 2023

Associate Editor

MINOR REVISION 8 Jun 2023

Dear Author:
Thank you for your correction.
Overall, this article needs English editing in all parts. For example, in “This study showed that out of 622 patients in the statistical population”, what is the meaning of statistical population?
The sentences are not comprehensive, and understanding the design of the study is hard for the reader. The results section has a better format.
Introduction:
What do APLS, ENPC, and APC stand for?
At the end of this part, please give the objective of your study.
Material and Method:
1-This part is a direct translation from Persian into English; please check it.
2-What is the meaning of violation in this sentence: “Violations of the three components of the PAT are included in the information form.”?
3-Violations of the three components of the PAT are included in the information form. Lines 95-97 talk about the goal of the study; it is better to move this to the introduction section.
4- Lines 114-116 should be moved to the discussion section.
5- The dependent and independent variables should be in the proposal; please check with your statistical advisor.
6- Performance is not a good word to convey your purpose in table titles.
7- The results section may not include any judgment, so it is recommended that important results be included in the main paragraph without using bullets.
Discussion:
1- Line 205 needs revision.
2- The first paragraph can be moved to the introduction section.
3- In line 220, do we have “happy patient”?
4- The majority of the discussion section consists of the author's judgments. It is recommended that you compare the results of other studies with your results; there are few references in this part.
Best wishes

4

Revision 3

AUTHORS' RESPONSE TO REVIEWERS

Authors' reply to reviewers

The next pages contain the authors' point-by-point reply to the comments of this revision round, as submitted with the revised manuscript. It is published as the authors wrote it.

ID: 128551

Assessing the Value of the PAT Triangle as the First Step in the Triage Process in a Pediatric Emergency Room

Dear Author:
Thank you for your correction
Totally this article needs English edition in all parts, for example in “This study showed that out of 622 patients in the statistical population” what is the meaning of statistical population?
The sentences are not comprehensive and understanding the design of the study is hard for reader. The result part has a better format.

Thanks for your comment on the article. We apologize for any confusion caused by the language used in the sentence you mentioned. We have carefully reviewed your suggestions and made corrections to improve the clarity and understanding of the sentences.

We understand your concern about the comprehensibility of the sentences and the difficulty of understanding the study plan. Writing clearly and concisely in scientific papers is very important to ensure that readers can easily understand the information presented. We have taken note of your feedback and have worked to improve the clarity and comprehensibility of the paper, particularly in the study design section. All changed items are highlighted in blue in the text

Thanks again for your valuable feedback

Introduction:
What APLS, ENPC, and APC stands for? The text of complete sentences was rewritten to include abbreviations in a more fluent manner.

At the end of this part please give your objective of study. Thanks to your opinion, we have added this sentence to the end of the introduction to improve the level of the text

The objective of this study was to evaluate the effectiveness of the PAT Triangle as the initial step in the triage process within a pediatric emergency room.

Material and Method:
1-This part is directly translation from Persian to English, plz check it. The text of the results section was completely edited and written in fluent English

2-What is the meaning of violation in this sentence" Violations of the three components of the PAT are included in the information form."

In the context of the sentence you provided, "violations" refers to any abnormalities or deviations from the normal expected findings in the three components of the Pediatric Assessment Triangle (PAT). If any of the components, namely skin circulation, respiration, or appearance, are found to be abnormal or outside the expected range during the initial evaluation of a child, those findings are considered violations and are documented in the information form. These violations serve as important indicators for further assessment and potential medical intervention. Of course, we changed this word in the revised text to avoid ambiguity in the reader

3-Violations of the three components of the PAT are included in the information form.line 95-97 talks about the goal of the study, it is better to move to introduction part

This sentence was removed from the result section and added to the introduction section

4- 114-116 line should move to discussion part

This sentence was removed from the results section and added to the discussion section
5- the place of Dependent and independent variables should be in proposal, pls check with your statistical advisor

As you mentioned, this article should not appear in the article and we removed it. also removed all related sentences from the article

6- performance is not a good word to show your purpose in table titles.

All phrases were changed with this word

7- giving the result part may not include any judgment so important result part is recommended to be a component of the main paragraph without using bullets.

This part was written differently

Discussion:
1- Line 205 needs revision

corrections were made

The findings of this study indicate that Pediatric Ankle-Brachial Index (PAT) has the potential to serve as a valuable tool for pediatricians in assessing the need for hospitalization in patients.
2- First paragraph can move to introduction part

The sentences that had the potential of the previous part were removed

3- In line 220 do we have “happy patient”?

Thanks to your careful comment, the sentence was changed and the concept was presented in other words

4- The majority of discussion part is the judgments of author, it is recommended to compare the results of other studies with your results, there is few references in this part. We added the following comparative parts to the topic

our research indicates that impaired PAT findings, when utilized by pediatricians, are associated with increased hospitalization rates even during the peak of the COVID-19 pandemic. This finding emphasizes the importance of physician training in effectively utilizing PAT as the initial step in evaluating pediatric patients in the emergency room. By doing so, unnecessary additional testing can potentially be reduced, enabling physicians to make more confident decisions.

Overall, our study aligns with the previous research in highlighting the significance of PAT in pediatric emergency care. It reinforces the notion that PAT can be a valuable tool for assessing the severity of various conditions and determining the need for hospitalization. However, it is essential to acknowledge that PAT should not be considered as the sole determinant for hospitalization decisions, as other factors may also come into play.

Further research and collaboration among healthcare professionals are necessary to continue exploring the potential benefits and limitations of PAT pediatric emergency care. By building upon the existing knowledge base, we can enhance patient outcomes and optimize the use resources in emergency settings.

Thank you for consideration

4 Revision 3

1 comment · 31 Jul 2023

Associate Editor

ACCEPT 31 Jul 2023

The article is accepted.