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.

What is "Open Peer Review" process?

An "Open Peer Review" process is making the details of all review process (including reviewers, associate editors, and EICs comments) as "Public" as it is agreed by EIC, Authors, and reviewers.

Advantages of "Open Peer Review" process

- More transparency, constructiveness and tactful comments of the peer review process: leads to an increase in the quality of reviews
- More motivations for all involved roles in the review process
- Authors' satisfactions from the review process: Increases honesty between authors and reviewers
- Education of both authors and new students
- Prevents reviewers from following their individual agendas and leading to the detection of reviewers' conflicts of interests

You can find out more at:
https://sites.kowsarpub.com/kowsar/knowledgebase/category/tree.html#opr.html

Health Scope
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Peer Review Report for "Application of Intelligent Technologies on Response to Covid-19 and Occupational Safety in Healthcare Workers"

Author(s): Vida Zaroushani, Farahnaz Khajehnasiri

Review Timeline:

Submit Date: 20 Sep 2020
Revised Date: 4 Nov 2020
Accepted Date: 27 Nov 2020

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) — 14 Oct 2020

Dear Author
I added some comments on the manuscript.
The content was perfect, but there were some questions.
Please correct the items.
Thank you

REFEREE: Reviewer | **Revision** (0) — 20 Oct 2020

1- Explain more about Industry 4.0 technologies .
2- Please clearly state the aim of study in first paragraph.
3- The English writing of the manuscript need to be improved.
4- Explain more about sterilization devices and their mechanism.
5- How 3D scanning of thoracic chest quantify COVID 19 virus and improve safety in HCV.
6- Have these technologies been used in the past to control nosocomial infections?

REFEREE: Associate Editor | **Revision** (0) — 21 Oct 2020

1- Explain more about Industry 4.0 technologies.

2- Please clearly state the aim of study in first paragraph.

3- The English writing of the manuscript need to be improved.

4- Explain more about sterilization devices and their mechanism.

5- How 3D scanning of thoracic chest quantify COVID 19 virus and improve safety in HCV.

6- Have these technologies been used in the past to control nosocomial infections?

REFEREE: EIC | **Revision** (0) 29 Oct 2020

Dear author:

Public Comment:

1- Explain more about Industry 4.0 technologies.

2- Please clearly state the aim of study in first paragraph.

3- The English writing of the manuscript need to be improved.

4- Explain more about sterilization devices and their mechanism.

5- How 3D scanning of thoracic chest quantify COVID 19 virus and improve safety in HCV.

6- Have these technologies been used in the past to control nosocomial infections?

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 editor

We are very grateful to the reviewers for their complete and precise review. We have revised our present research paper (ID: 109604) in the light of their useful suggestions and comments (implemented revisions were shown by yellow and green highlights for reviewer 1 and 2 respectively, and English edition was done by blue highlight). We hope that our revision has improved the paper to a level of their satisfaction. The responses are presented with the comments of the reviewers as follows.

Sincerely,

Dr.Vida zaroushani

Reply to Reviewer 1:

1. This sentence needs to be rewritten: which may **help in COVID 19 outbreaks**

That sentence was revised to: There are significant technologies of Industry 4.0, that could be useful to fighting the COVID 19 that including….

2. Please explain more about this technology (artificial intelligent) and how do you want to get help from that?

Artificial intelligence (AI) is a broad concept of computer software designed to mimic or improve human decision-making. They enhance the power of the imaging tools and assist medical professionals. Achieving an image by empowering artificial intelligence can significantly help automate the scanning process, as well as transform workflows with minimal contact with patients, the best protecting imaging technicians. Artificial intelligence can also improve the efficiency of the work by accurately identifying the infection in X - ray images and CT.

3. How can the Industries access to these information or Big Data? Is it Possible?

Big data is an analytic technique in the fourth industrial revolution that can store a large amount of infected patient's data and provides a real-time evaluation as a power tool to recognize, explain, predict the pattern of the COVID-19 infections and identify effective treatment and health policy making to fighting against the virus. In this technology, raw data (structured and unstructured) are collected by researchers and analysed by learning machines and artificial intelligence so that they can use replicated algorithms to find repetitive patterns and then process and analyse them. Ultimately, the technology helps companies improve their operations and make faster and smarter decisions by examining large amounts of data.

4. It seems that you should present some information about the costs of conducting these technologies. For example, how much is required of at least costs for these technologies?

The articles do not mention costs

Reply to Reviewer 2:

1- Explain more about Industry 4.0 technologies.

More explanation was added: This industry focuses on some key factors such as automation, communications and monitoring to lead an intelligent technology that can analyze and diagnose problems with less time and without the need for human intervention.

2- Please clearly state the aim of study firth paragraph

The firth paragraph was edited: Big data is an analytic technique in the fourth industrial revolution that can store a large amount of infected patient's data and provides a real-time evaluation as a power tool to recognize, explain, predict the pattern of the COVID-19 infections and identify effective treatment and health policy making to fighting against the virus. In this technology, raw data (structured and unstructured) are collected by researchers and analysed by learning machines and artificial intelligence so that they can use replicated algorithms to find repetitive patterns and then process and analyse them. Ultimately, the technology helps companies improve their operations and make faster and smarter decisions by examining large amounts of data.

3- The English writing of the manuscript need to be improved.

The English writing was edited and highlighted by blue colour.

4- Explain more about sterilization devices and their mechanism.

Regarding sterilization, that is one aspect of cleaning healthcare facilities, an autonomous wheeled mobile system that is called UV sterilization robots can be used to disinfect hospital equipment and surfaces using ultraviolet (such as PX-UV). It also could be used to remove bedding and other contaminated materials from hospital rooms before autonomously disinfecting the equipment.

5- How 3D scanning of thoracic chest quantify COVID 19 virus and improve safety in HCV.

3D scanning of thoracic chest with combination of artificial intelligent (AI) is a useful tool to detect and quantify COVID-19 virus.3D scanning is an intelligent and non-contact technology that sensors are equipped with one/two cameras, which take several images of the exact shape and size of the physical object and record these data. Finally, these images are analysed through a high-end computer for converting to the digital data

6- Have these technologies been used in the past to control nosocomial infections?

The phrase Fourth Industrial Revolution was first introduced by Klaus Schwab, executive chairman of the World Economic Forum, in an article published in 2015 by Foreign Affairs, and after that quickly developed and used in various science and application. Recently, during the covid-19 pandemic application of industry 4.0 in infection prevention seriously presented.(*Schwab, Klaus (12 December 2015). "The Fourth Industrial Revolution". Retrieved 15 January 2019.)*

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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) 27 Nov 2020

Dear authors:

All of the points and cases considered by the reviewers, have been corrected.

REFEREE: EIC | **Revision** (1) 27 Nov 2020

Dear Author

Your article has been accepted for publication.

Best regards