# Critical Analysis

## Introduction

This paper aims to do critical analysis on one of existing research paper. The selected paper to perform the task of analysis is 'Application of Cervical Collars – An Analysis of Practical Skills of Professional Emergency Medical Care Providers'. This research mainly focuses on the application of cervical collar which is considered as a standard process particularly in the traumatic patients. Also, the study emphasizes on the practical skills of the professionally trained rescue workers regarding to the application of cervical collars. The paper will analyze each aspect of the chosen research work. It will be assured to acquire impartial tone and to pattern all of the observed details. In line with this, critical analysis will focus on the highlighted problems of the paper along with the relativity of findings. This report will individually focus on each section such as, title, abstract, literature review, methodology and materials, results, and discussion. The objective is to critically analyze the paper by assuring that whether the authors have justified the research or not. In other case, either authors have performed research impartially or partially.

#### Discussion

## Title & abstract

In context of medical and sciences, the study selected for the analysis is the 'Application of Cervical Collars – An Analysis of Practical Skills of Professional Emergency Medical Care Providers'. Mentioned title of study indicates a perfect relevancy of the patterned research, in selected paper. Also, the key words of the paper are perfectly representing as the key elements of the research paper. Although, the length of the title is not concise, title is written with long tail key words. On the same side, title is indeed quite long but, it is not distracting and is accurately justifying the nature of research. However, the patterned abstract of the paper is accurately summarizing the research of the paper. The subdivision of the abstract gives clearer picture to the readers, about the nature of paper along with it purpose of conducting research. Conversely, the abstract of the research also reveals that the used method of research is quantitative and the showed result of the research, particularly in the section of abstract is signifying the individually each variable

of the findings. This means that the abstract is based on the independent variables and it is written accurately in the depth.

Apparently, there are no major premises that are not mentioned in the section of abstract. Each, divided section of the abstract is written in clear tone along with the enough justification of all patterned words. All premises of the research are covered and as well as mentioned perfectly, in the abstract. On the same side, the technique of dividing each section along with intro, results, and conclusion solely gives a clear picture of whether the research article is worthy enough to read or not. The statement of abstract is enough to judge the relevancy of the paper along with its findings. This could be said that the authors of selected paper did complete justice with the section of abstract and dedicatedly served the section by assuring to match criteria and the guidelines of writing abstract. Similarly, the concluding part of the abstract simply shows the result which was found after completing the process of research.

# **Introduction & objectives**

Generally, the initiating part i.e. introduction of the research paper hooks reader from a general area of subject to the specific topic of the consideration. Also, it develops the context, significance and scope of the research that is being conducted by summarizing present time understanding and as well as the background yet supporting information of the topic, by stating the objective of the study, in the aspect of research problems through hypothesis or research questions. Also, it focuses on briefly explaining the methodology and approach in action, to examine the problem of research and to highlight the potential consequences of the study which can help in revealing or outlining the structure of the presented paper.

The introductory part of the paper gives a comprehensive detail on the identified problem, related with the cervical spine and the failed attempts of implicating its application. Also, the identified problem gives an authentic impression which defends the purpose of conducting research. This simply indicates that in the field of medical and nursing, there was a dire need of conducting detailed research on this particular issue. However, in the presented section of introduction, no exposure of any theoretical fame work has given. The initial part of the study i.e. introduction majorly emphasizes on the identifying the

problems and is more focused on the performing depth analysis of determined problem. Nevertheless, this can be said that the introductory part clearly mentions the aims and objectives of the study and the objectives of the study are written in clear tone along with the accurate sequence. For example, the last paragraph of the introduction clearly states that the objective of the study is to evaluate the practicality and the skills of the emergency cervical assistors or care providers, in terms of the application of the cervical collar within the model of standardized test (Thorsteinsdottir, et al., 2017). This indicates that the authors have developed clear understanding about their task and as well as about conducted research.

#### Literature review

One of the major missing of the selected paper is its literature review. The authors have directly jumped on the section of methods, without paying attention to the section of literature review. The conceptual framework is however missing in the selected article. The impression which the selected article gives is that the authors didn't support the idea of initiating the research on this particular research. Also, it is observed that no literature details of the identified problem have been given by the authors. Although writing a detailed literature review help in making the given statement stronger and as well as concrete. The missing literature part makes it look like the authors didn't include the opinions of other authors or in other case, didn't include the existing researches of the identified problem. This somehow, makes the choices of authors quite weak and lessens the significance of the conducted study because the authors haven't included sufficient data about the problem, relatively.

According to Hart (2018) a detailed review of literature gives an authentic impression of the authors; it proves that the authors or author have accurate knowledge regarding each aspect of the research. While performing the research, one needs to analyze the sources, examine all of the focused concepts and supposed to discuss each of it with the complete relevancy of and support. This technique of critically writing the paper and mapping each detail with the proved evidence shows that the writer vigilantly understands the patterned approach and has developed enough knowledge regarding the paper. Besides this, it also gives readers an impression that the written article is scholarly which is worth to be rely

on. Since, writing the review of literature demands a person to get into the depth of questions and concepts which the predecessors confront during the conducted argument. Also, the literature review enables an author to trail the intellectual development and as well as the major debates of the relative fields of the study. This even shows how an author has contributed in the presented paper and in what ways the authors were deviated from the research.

## **Methods and materials**

It is assumed that the section of methodology is supposed to be linked back to the review of literature and should determinately elaborate that why author is using particular methods. Also, the methodology needs to emphasize on giving a clear picture of sample size and the used method of research. However, in the selected paper the part of method is written comprehensively by the authors. In this section, authors have given detailed review of the used methods along with the materials through which the methodology of research is performed. From sample size to the procedure of collecting research, each thing is elaborated accurately. But this has been observed that the author has focused more on the section of methodology and has elaborated each thing being performed in the section of methodology, with in depth research. To support the approach, authors have even presented the practiced methods with the step by step points and have assured to meet the criteria of writing this particular method with the accuracy (Larson, et al., 2018).

The size of sample is represented in numbers and the process of research is described through the point by assuring to keep the language and as well as the terminology easy to understand. The conducted procedure is scientific and is exactly in chronological order. A complete authentic yet practical approach of methodology is used in sequence, to pattern the paper in an exact order and sequence. If said in the light of research, then this wouldn't be forged to say that the authors have completely justified with the section of methodology and have shown a complete dedication to write the paper. The provided area of methodology on the whole, gives a complete review about the details of the paper and about its conducted research as well. It clearly shows the technique of sensibility and

nativity of the authors. Though, this can be stated that the authors have kept their tone clear and concrete to write the methodology and has assured to make their audience understand about their research along with the aims and objectives of the conducted study. This makes this particular section exactly validated and sufficient enough to take idea for the research. Besides this, there are exploited pictures and are labeled and have placed in an exact sequence. Not only this, even in the described points the figures are labeled accordingly and have been discussed along with it is number of figures. Other researchers, in the similar study have used the same approach to conduct the study on this specific topic and there are several of similar techniques that have been used by the other authors, in action, to conduct the study on this topic and the area of field (Rogers, 2017). This shows that the authors have used authentic approach and have patterned the research in the exact yet appropriate manner.

#### Results

The given results of the subject are the subject shows the exact data which was found after the research. The given results decode the sample size, the number of participants and other important aspects as well. Also, the authors have used tables and charts to keep the clarity of result accurate and authentic for the audience. Written tables are labeled accordingly with their names and along with their conducted results which represents the result of each exploited figure in the paper. This shows that the authors have ensure to pattern the result of each figure solely and to give and independent idea for each of it. On the other side, the evaluation of the founded results also indicates that the there is a salient connectivity in between the results and as well as on the aims and objectives of the study. The depth analysis of the result section also shows that the results are in collaboration of the identified problem and the findings are in exact pace to assure that the identified problem is being solved. This slightly give an impression that the authors have achieved success in the mission to acquire their objectives and as well as goals. Similarly, the other relative studies have also shown the quite similar results for the particular study this clearly evidenced the findings of the authors and shows that the used approach was the accurate technique and also shows that the authors have performed the methodology or its framework is being implied exactly.

#### **Discussion**

In the discussion, the authors have acquired a comprehensive tone and have written the discussion in exact tone. Each aspect of the research along with the aims and objectives of the study have been discussed in detail. The findings have been written in the comprehensive details and all elements of the research have come into the light of research and it has been assured to pen each significant detail of the paper. All of the objectives with the relativity of the findings have been defined perfectly and it has been assured to keep the tone impartial. Besides this, Different sources have been used in the section of discussion which makes the debate more strong and signifies that the authors have conducted exact yet detailed research on this particular section. There are no limitations of the discussed patterns have been implied by the authors. It has been ensured to keep the research approach. In line with this, the authors haven't used the section of conclusion solely to give a more crystal-clear image of the findings. The part of conclusion has been merged with the section of discussion and in the last paragraph, the authors have complied the concluding tone. Although, this has been assured to hook audience and for this, the authors have even written in the engaging tone and have given the exact impression of the conclusion (Satyarthee, et al., 2018).

Besides this, each finding is discussed in the pattern and has been assured to keep the rhythm of organization in sequence. To make the discussion more authentic, the writers have used several of sources and even exploited the technique of citation. However, the findings and result also shows that the authors have successfully achieved their objective and has gained their purpose of research accordingly. In the end of the discussion, there are some suggestions have also given by the authors which shows that the authors have developed perfect understanding on each finding. Comparatively, this could be compared with other research paper where authors must share the suggestions with the audience in action, to make them understand about the value of each performed task and also to help them in acknowledging the hurdles which could be occur during the performance of such specific frameworks or research.

#### **Author's contribution**

In the last, there is a small section is also provided which shows the contribution of authors. This pattern the name of each author which shows that the professional attitude of the authors and gives the impression that each author has treated equally and have given the equal importance. The act of giving credits to the author shows that the authors have well-developed sense of respecting and valuing the contribution of each person.

#### References

All references have been written in the well-structured pattern. From page number to the name of journals, each thing is written right according to the technique and guideline of the used style. A certain line of spacing is used for the section of reference and it has been assured to sort each reference right according to the alphabetical manner. Besides this, the used sources are taken from different several years and the authors of used completely authentic yet validate sources, to action, to support their voice. The total number of used sources is seventeen, however, each reference is used right according in the context of medical and nursing and this has been ensured to use each source with the exact tone of concrete. A separately attached list of reference, in the end of the paper justifies that the authors have not used the biased tone while patterning the paper and have supported their idea and the achievement of objectives through different sources.

# Conclusion

Conclusively, this can be stated that the selected research paper is written very well. The authors have shown the complete dedication and as well as the sense of the responsibility, as by contributing in the field of medical and nursing. However, the absence of literature review somehow weakens the paper and gives a slight negative impression of the paper. But, apart from the literature of review, each section of the paper is patterned accurately and the writers have assured to give hundred percent dedication in the each, in sequence to achieve the objectives of the stud. Also, the show results indicate that the authors haves successfully achieved their objective of the research along with solving the problem. This makes it concrete that the acquired tone of the research paper is not biased and the hypothesis including with the parameter of research and methodology is patterned wisely.

# **References**

Brown, S., Sarahlyn Knechel, B.S.N., Erin Lynch, B.S.N., Nikki Mendez, B.S.N. and Andrew Sheppard, B.S.N., 2016. Improving Cervical Collar Application in the Emergency Department.

Buckland, A.J., Bressan, S., Jowett, H., Johnson, M.B. and Teague, W.J., 2016. Heterogeneity in cervical spine assessment in paediatric trauma: A survey of physicians' knowledge and application at a paediatric major trauma centre. *Emergency Medicine Australasia*, 28(5), pp.569-574.

Hart, C., 2018. Doing a literature review: Releasing the research imagination. Sage.

Johnson, M.B. and McLachlan, L., 2018. External Immobilization of the Child's Cervical Spine. In *The Management of Disorders of the Child's Cervical Spine* (pp. 245-259). Springer, Boston, MA.

Klein, Y., Arieli, I., Sagiv, S., Peleg, K. and Ben-Galim, P., 2016. Cervical spine injuries in civilian victims of explosions: Should cervical collars be used?. *Journal of trauma and acute care surgery*, 80(6), pp.985-988.

Kreinest, M., Goller, S., Rauch, G., Frank, C., Gliwitzky, B., Wölfl, C.G., Matschke, S. and Münzberg, M., 2015. Application of cervical collars—an analysis of practical skills of professional emergency medical care providers. *PloS one*, *10*(11), p.e0143409.

Kreinest, M., Goller, S., Rauch, G., Gliwitzky, B., Frank, C., Matschke, S., Wölfl, C.G. and Münzberg, M., 2017. Parameters influencing the preclinical application of cervical collars. *Der Unfallchirurg*, *120*(8), pp.675-682.

Kroeker, J., Keith, J., Carruthers, H., Hanna, C., Qureshi, N., Calic, M., Kaye, M., Solow, M., Coey, J. and Sulaiman, S., 2019. Investigating the time-lapsed effects of rigid cervical collars on the dimensions of the internal jugular vein. *Clinical Anatomy*, *32*(2), pp.196-200.

Ladny, M., Smereka, J., Szarpak, L. and Ladny, J.R., 2018. Assessment of the cervical collar application impact on the conditions of intubation and the feelings of patients—pilot study. *Disaster and Emergency Medicine Journal*, *3*(1), pp.1-4.

Larson, S., Delnat, A.U. and Moore, J., 2018. The Use of Clinical Cervical Spine Clearance in Trauma Patients: A Literature Review. *Journal of Emergency Nursing*, *44*(4), pp.368-374.

Liao, S., Schneider, N.R., Hüttlin, P., Grützner, P.A., Weilbacher, F., Matschke, S., Popp, E. and Kreinest, M., 2018. Motion and dural sac compression in the upper cervical spine during the application of a cervical collar in case of unstable craniocervical junction—A study in two new cadaveric trauma models. *PloS one*, *13*(4), p.e0195215.

Maissan, I.M., Ketelaars, R., Vlottes, B., Hoeks, S.E., den Hartog, D. and Stolker, R.J., 2018. Increase in intracranial pressure by application of a rigid cervical collar: a pilot study in healthy volunteers. *European Journal of Emergency Medicine*, *25*(6), pp.e24-e28.

Moscote-Salazar, L.R., Godoy, D.A., Agrawal, A. and Rubiano, A.M., 2018. Effect of cervical collars on intracranial pressure in patients with head neurotrauma. *Journal of Emergency Practice and Trauma*, *4*(1), pp.1-2.

Rogers, L., 2017. No place for the rigid cervical collar in pre-hospital care. *International Paramedic Practice*, 7(1), pp.12-15.

Satyarthee, G.D., Moscote-Salazar, L.R. and Agrawal, A., 2018. Magnitude of intracranial pressure changes following rigid external cervical collar immobilization in cases sustaining Traumatic Brain Injury: Impact analysis current status. *Romanian Neurosurgery*, *32*(3), pp.483-486.

Stanton, D., Hardcastle, T., Muhlbauer, D. and Van Zyl, D., 2017. Cervical collars and immobilisation: A South African best practice recommendation. *African Journal of Emergency Medicine*, 7(1), pp.4-8.

Tescher, A.N., Rindflesch, A.B., Youdas, J.W., Terman, R.W., Jacobson, T.M., Douglas, L.L., Miers, A.G., Austin, C.M., Delgado, A.M., Zins, S.M. and Lahr, B.D., 2016.

Comparison of cervical range-of-motion restriction and craniofacial tissue-interface pressure with 2 adjustable and 2 standard cervical collars. *Spine*, *41*(6), pp.E304-E312.

Thorgilsdottir, T. and Ingimundarson, A.T., Ossur hf, 2019. *Cervical collar having height and circumferential adjustment*. U.S. Patent Application 16/400,449.

Thorsteinsdottir, H.I. and Ingimundarson, A.T., Ossur hf, 2017. *Cervical collar.* U.S. Patent Application 15/598,524.

Worsley, P.R., Stanger, N.D., Horrell, A.K. and Bader, D.L., 2018. Investigating the effects of cervical collar design and fit on the biomechanical and biomarker reaction at the skin. *Medical Devices (Auckland, NZ)*, *11*, p.87.

Yakubtsevich, R., Dunder, D., Kranc, K., Pruc, M., Pastucha, A. and Koldyj, A., 2018. Place of cervical collar in emergency medicine. *Disaster and Emergency Medicine Journal*, *3*(3), pp.108-109.

Yuk, M., Yeo, W., Lee, K., Ko, J. and Park, T., 2018. Cervical collar makes difficult airway: a simulation study using the LEMON criteria. *Clinical and experimental emergency medicine*, *5*(1), p.22.