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Faculty of Medicine and Health Sciences  
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Malaysia  
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About the Journal

The Malaysian Journal of Medicine and Health Sciences (MJMHS) is published by the Faculty of Medicine and Health Sciences, Universiti Putra Malaysia. The main aim of the MJMHS is to be a premier journal on all aspects of medicine and health sciences in Malaysia and internationally. The focus of the MJMHS will be on results of original scientific research and development, emerging issues and policy analyses pertaining to medical, biomedical and clinical sciences. The Malaysian Journal of Medicine and Health Sciences is now indexed in the following data bases: Scopus, EBSCOhost, ISC, and Rubriq.

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## AUTHOR GUIDELINES

The Malaysian Journal of Medicine and Health Sciences (MJMHS) is a peer-reviewed journal of Medicine, Clinical Research and Health Sciences. To facilitate a smooth publication process, authors who are considering submitting to MJMHS are strongly encouraged to read the following guidelines:

### SUBMISSION

To submit a manuscript, please go to <https://mc.manuscriptcentral.com/mjmhs>

If you do not have an MJMHS author account on the Editorial Manager, create an account and log in with your username and password. Before uploading your manuscript to the Editorial Manager, ensure all the documents described in the manuscript preparation section.

All submitted manuscripts undergo rigorous editorial checks before they are sent for peer review. The manuscripts are checked for plagiarism and format. Manuscripts that do not pass the initial assessments will be unsubmitted without peer review.

Download the “Conflict of Interest Form” and “Copyright Agreement Form” from the Instructions & Forms tab. Completed forms should be submitted along with manuscripts during the submission period.

The manuscript will not be accepted if it is not formatted according to the journal style and follows the authors’ instructions.

All materials submitted for publication should be submitted exclusively to the MJMHS unless stated otherwise.

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### REVIEW PROCESS

#### Peer Review

All manuscripts submitted undergo a double-blinded peer-review process and are managed online. Authors can suggest up to 3 individuals qualified in the field to review the article. However, the reviewers must not be affiliated with the same institution(s) or have any potential conflicts of interest in reviewing the manuscript. The editor’s decision to accept or reject these reviewers is final. Decisions on manuscripts are made in accordance with the ‘Uniform Requirements for Manuscripts Submitted to Biomedical Journals’ ([www.icmje.org/index.html](http://www.icmje.org/index.html)).

#### Revision

Articles sent for revision to the authors do not guarantee that the paper will be accepted. Authors are given approximately 2 weeks to return their revised manuscript. Note that if the revision is not received within 3 months, the Editorial Office will reject it.

## PUBLICATION PROCESS

The final decision to publish or not to publish the articles lies with the Editor in Chief. The editor retains the right to determine the style and, if necessary, edit and shorten any material accepted for publication.

When the galley proof is ready, the Editorial Office will send the proof to the authors to check for its completeness. Confirmation or comments from the authors must be given within 48 hours of receipt of the proof to avoid delays in the publication of the manuscript. Significant alterations to the text will not be entertained at this stage, and the authors are responsible for all statements made in their work, including changes made by the Editorial team and authorised by the corresponding author.

Manuscripts without the authors' approval of the galley proof and a completed Copyright Form will not be published. Once the author gives permission for publication, the Editorial Office will not be held responsible for any mistakes thereafter. No complimentary hard copy of the journal to authors is provided. However, the soft copy of the article can be obtained from the journal's webpage [http://www.medic.upm.edu.my/our\\_journal-3046](http://www.medic.upm.edu.my/our_journal-3046)

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## STATEMENTS, PERMISSIONS AND SIGNATURES

### Authors and contributors

Designated authors should meet all four criteria for authorship in the ICMJE Recommendations. Journal articles will not be published unless the signatures of all authors are received. The author statement form should be uploaded. Written consent of any cited individual(s) noted in acknowledgements or personal communications should be included.

### Conflict of interests

All submissions to MJMHS must include disclosure of all relationships that could be viewed as presenting a potential or actual conflict of interest. **All authors must declare their interest and complete the declaration form.** The completed declaration form should be uploaded.

Authors must state all possible conflicts of interest in the manuscript, including financial, consultant, institutional and other relationships that might lead to bias or a conflict of interest. If there is no conflict of interest, this should be explicitly stated as none declared. All sources of funding should be acknowledged in the manuscript. All relevant conflicts of interest and sources of funding should be included on the title page of the manuscript with the heading "Conflicts of Interest and Source of Funding:"

A conflict of interest exists when professional judgement concerning a primary interest (such as patients' welfare or validity of research) may be influenced by a secondary interest (financial gain). Financial relationships can also occur because of personal relationships or rivalries, academic competition, or intellectual beliefs. The editor may use such information as a basis for editorial decisions and publish such disclosures if they are believed necessary to readers in judging the manuscript.

Agreements between authors and study sponsors that interfere with authors' access to all of a study's data and interfere with their ability to analyse and interpret the data and prepare and publish manuscripts independently may represent conflicts of interest and should be avoided.

### Permissions to reproduce previously published material

Authors should include with their submission copies of written permission to reproduce material published elsewhere (such as illustrations) from the copyright holder. Authors are responsible for paying any fees to reproduce the material.

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## MANUSCRIPT PREPARATION

### Language

All articles submitted must be written in the British English language. The Editorial Office does not offer copyediting services; therefore, the author's responsibility is to ensure that the English language is thoroughly revised before submitting the work for publication. It is the responsibility of the authors to send their articles for grammar and editing services. Editorial Office reserves the right to reject a manuscript if the use of language is deemed too poor.

### Organisation

The following documents are required for each submission, in this order:

- Covering Letter
- Title Page
- Manuscript
- Tables (if any)
- Figures (or illustrations) (if any)
- Copyright Assignment Form (signed by all the authors)
- Conflict of Interest Form

### Covering Letter

The covering letter should be uploaded at the stage of the online submission process. Explain in the covering letter why your paper should be published in MJMHS

### Title Page

The title page should be **an individual document, uploaded separately**, that provides:

- Title of manuscript
- Full name of all authors; underline the family/last name, e.g. Lekhraj Rampal, Chih-Kong Tong, Fazila Hanis Hashim
- Full postal address of all authors' institutions
- Details of the corresponding author
  - Designation and name of the corresponding author
  - Contact details: email, telephone and fax number

***Please refer to the sample of 'Title Page' that could be obtained from the 'Instruction & Forms' tab***

Note: Persons designated authors should have participated sufficiently in work to justify authorship. Kindly refer to the section on authorship in the Uniform Requirements for Manuscripts Submitted to

Biomedical Journals, available at [www.icmje.org](http://www.icmje.org). The editor may require authors to justify the assignment of authorship

## Manuscript

### *Abstract*

- The abstract should be an informative synopsis/summary of your manuscript.
- All abstracts for original articles should follow the structured format, with the headings Introduction, Methods, Results and Conclusion. The word count should not exceed 250 words.
- Abstract for Case Series should follow the structured format, with Introduction, Case Series and Conclusion heading. The word count should not exceed 250 words.
- Abstract for Short Communications, Review article, Commentary and Case report should follow the unstructured format. No need to divide the abstract into different sections. The word count should not exceed 150 words.

### *Keywords*

- Below the abstract, provide 5 keywords (compulsory) that will assist in cross-indexing the article.
- Check and confirm that the keywords are the most relevant terms found in the title or the abstract and should be listed in the medical subject headings (MeSH) list of Index Medicus found in <http://www.nlm.nih.gov/mesh/meshhome.html>

### *Main Text*

- Times New Roman font, size 12 with double-line spacing. The left, right, top and bottom margins should be 2.54 cm (1 inch).
- Do not use boldface for emphasis within the text
- Numbers one to ten are written out in words unless they are used as a unit of measurement, except in figures and tables
- Use single hard-returns to separate paragraphs. Do not use tabs or indents to start a paragraph
- Do not use the automated features of your software, such as hyphenation, headers, or footers (especially for references). You can use page numbering

### *Figures*

- Abbreviate "Figure" as "Fig.", e.g. Fig. 1, Fig. 2.
- Number the figures consecutively in Arabic numerals (e.g. Fig. 1, Fig. 2) in the order of their first citation in the text.
- Images as TIFF/JPEG files should be submitted with a **minimum resolution of 300 DPI** and a minimum dimension of 1,000 x 1,000 pixels. Colour images should be submitted in CMYK format instead of RGB format.
- **The figure should cover a minimum of 85-95% of the figure's total area, and the margin area/space should not exceed more than 10%.**
- **Each figure should be submitted separately without figure legend and title.** (Authors are advised to keep backup files of all images).
- Figure legends should be provided in the main text after references.
- Line Figures – freehand and type-written lettering are not acceptable.
- Letters, numbers and symbols should be clear and even throughout and of sufficient size so that when they are reduced in size for publication, each item will still be clearly identifiable.

- If a Figure has been published, acknowledge the original source and submit written permission from the copyright holder to reproduce the material.
- Authors' names and affiliations should not appear on the images.
- All Figures/Figure-parts relating to one patient should have the same Figure number.
- Symbols, arrows or letters used in photomicrographs should contrast with the background.

*Please refer to the sample of 'Figure' that could be obtained from the 'Instruction & Forms' tab*

### ***Clinical Pictures***

- The ideal Clinical Picture provides valuable visual information to other clinicians.
- Clinical Pictures should be interesting, educational, and respectful of the patient. MJMHS is less interested in pictures that simply illustrate an extreme example of a medical condition.
- Authors must obtain signed informed consent for publication.
- Use no more than 450 words, with no references. The text should include brief patient history and must put the image in context, explaining what the image shows and why it is of interest to the general reader.

### ***Tables***

- **Submit all tables in Microsoft word format only.**
- **Each table should be submitted separately.**
- Number the tables consecutively in Roman numerals (e.g. Table I, Table II, Table III) in the order of their first citation in the text
- Provide a brief title, which should be shown at the top of each table
- The main table heading should be in 10 point Times New Roman font **BOLD**
- Legends should be in 10 points, single-spaced
- Tables should be in 8-point Times New Roman font, single-spaced
- Headings within tables should be in 8 points **BOLD**
- Place table explanations in the footnotes of the table
- Explain all non-standard abbreviations in the footnotes to the tables
- Obtain permission for publication before submission of the manuscript and acknowledge fully if data from another published source is used

### ***Abbreviations and Symbols***

- The full term for which an abbreviation or acronym stands should precede its first use unless it is a standard unit of measurement
- Symbols and abbreviations should be those used by British Chemical and Physiological Abstracts
- Weights, volumes, etc. should be denoted in metric units

### ***Data***

- An International System of Units (SI) is required
- Numbers in text and tables should always be provided if % is shown
- Means should be accompanied by Standard Deviation and Medians by Inter-Quartile Range
- Exact p values should be provided unless  $p < 0.0001$

### ***Drug names***

- Recommended international non-proprietary name (rINN) is required

## References

- Use the form of references adopted by the US National Library of Medicine and the Index Medicus. Use the style of the examples cited at the end of this section.
- **The citation and bibliographical style of all reference sources (book, chapter in a book, journal articles and internet) should adhere to the Vancouver citation style and must supplement with a digital object identifier (DOI). The reference can be cited without a DOI if it does not have a DOI.**
- If you use reference managing software such as EndNote, Mendeley or RefWorks, you may opt for the “**Springer Vancouver**” style for reference formatting.
- **References in text, table and legends should be numbered in brackets (e.g. [1], [1, 4], [1-3] and [1, 3-5]) and cited consecutively in the order of appearance in the manuscript.**
- Personal communications and unpublished observations may not be used as a reference.
- Two references are cited, separated by a comma, with space. Three or more consecutive references are given as a range with an en rule.
- References in tables, figures and panels should be in numerical order according to where the item is cited in the text
- Give any subpart to the title of the article. Journal names are abbreviated in their standard form as in Index Medicus
- If there are six authors or fewer, give all six in the form: surname space initials comma
- If there are seven or more, cite the first six names followed by et al
- For a book, give any editors and the publisher, the city of publication, and the year of publication
- For a chapter or section of a book, cite the editors, authors and title of the section, and the page numbers (<http://www.ncbi.nlm.nih.gov/books/NBK7271/#A34171>)
- For online material, please cite the URL, together with the date you accessed the website
- Do not include references in the abstract.

Examples of reference style are given below:

### Reference Citation Style for MJMHS

#### ***Standard Format for Books:***

Author Surname Initials. Title: subtitle. Edition (if not the first). Place of publication: Publisher; Year. [Include DOI if available].

#### Book with 1-6 authors/editors

Abul A, Lichtman A, Pillai S. Cellular and molecular immunology. 7th ed. Philadelphia: Elsevier Saunders; 2012.

#### More than 6 authors/editors (Book, Chapter in a book & etc.)

Fauci AS, Braunwald E, Kasper DL, Hauser SL, Longo DL, Jameson JL, et al. Harrison's Principles of Internal Medicine. 17th ed. New York: McGraw Hill; 2008.

#### Chapter in a book

Vidyadaran S, Ramasamy R, Seow HF. Stem cells and cancer stem cells: Therapeutic Applications in Disease and Injury. In: Hayat MA, editor. New York: Springer; 2012.



Corporate/Organisation as Author

Canadian Dental Hygienists Association. Dental hygiene: definition and scope. Ottawa: Canadian Dental Hygienists Association; 1995.

E-book

Frank SA. Immunology and Evolution of Infectious Disease [Internet]. Princeton: Princeton University Press; 2002 [cited 2014 December 17]. Available from:

<http://www.ncbi.nlm.nih.gov/books/NBK2394/pdf/TOC.pdf>. doi/book/10.xxxx/xxxxxxxxxx

***Standard Format for Journal Articles:***

Author Surname Initials. Title of the article. Title of the journal abbreviated. Year of Publication: Volume Number (Issue Number): Page Numbers. DOI

Journal article 1-6 authors

Dazzi F, Ramasamy R, Glennie S, Jones SP, Roberts I. The role of mesenchymal stem cells in haemopoiesis. Blood Reviews. 2006;20(3):161-71. doi: 10.1016/j.blre.2005.11.002.

Journal article with more than 6 authors

Leong YY, Ng WH, Umar Fuaad MZ, Ng CT, Ramasamy R, Lim V, et al. Mesenchymal stem cells facilitate cardiac differentiation in Sox2-expressing cardiac C-kit cells in coculture. J Cell Biochem. 2019;120(6):9104-16. doi: 10.1002/jcb.28186.

Journal article in press

Clancy JL, Patel HR, Hussein SM, Tonge PD, Cloonan N, Corso AJ, et al. Small RNA changes en route to distinct cellular states of induced pluripotency. Nature communications.2014; 5:5522.Epub 2014/12/11.

It is the authors' responsibility to check all references very carefully for accuracy and completeness. Authors should avoid using abstracts as references. "Unpublished observations" and "personal communications" may not be used as references; if cited, a letter (from the person quoted) granting permission must be submitted. Subject to editorial approval, the person quoted will be cited in parentheses in the text and not in the reference section.

***Acknowledgements***

State contributions that need to be acknowledged but do not justify authorship.

Acknowledgeable contributions include (not in exhaustive order) general support by a Department Head or Chairman, technical help, and financial and/or material support (including grants). Mention conflicts of interest, if any.

## ARTICLE CATEGORIES

The format for the text varies depending on the type of article. The list of article types and their respective formats are as follows: Original Article, Short Communication, Review Article, Case Report, Commentary and Letters to Editors.

### *Original Article*

- An original article is a report on the research objectives and analytical process, as well as a discussion of the implications of the results of a study
- The manuscript should be organised according to the following headings:
  - Title of the manuscript
  - Abstract (Structured & 250 words) and Keywords
  - Introduction
  - Materials and Methods
  - Results
  - Discussion
  - Conclusions
  - Acknowledgements
  - References
  - Figure Legends
- **The original article should not exceed 6000-word count, 4-7 figures/table and 50 references.**

### *Short Communications*

- Short Communication is a brief report that presents original and significant research data. It is not meant for publishing preliminary or incomplete results but to provide a platform for the rapid dissemination of exceptionally interesting and valuable data.
- The manuscript should be organised according to the following headings:
  - Title of the manuscript
  - Abstract (Unstructured & 150 words) and Keywords
  - Introduction
  - Materials and Methods
  - Results and Discussion (Combined)
  - Conclusions
  - Acknowledgements
  - References
  - Figure legends
- **The short communications should not exceed 3000-word count, 3-5 figures/tables and 20 references.**

### *Review Article*

- It is usually a solicited/invited article written by an expert, providing critical analysis and recent information on a given speciality.
- The manuscript file should be organised according to the following headings:
  - Title of the manuscript

- Abstract (Unstructured & 150 words) and Keywords
- Introduction
- Relevant section headings of the author's choice
- Conclusions
- References
- **The review article should not exceed 6000-word count, 0-4 figures/tables, and there should be an adequate number of references to support the review.**

### ***Case Report***

- Case reports submitted to MJMHS should contribute to medical knowledge and must have **educational value or highlight the need for a change in clinical practice or diagnostic/prognostic approaches.**
- The manuscript file should be organised according to the following headings:
  - Title of the manuscript
  - Abstract (Unstructured & 150 words) and Keywords
  - Introduction
  - Case Report
  - Discussion
  - Conclusions
  - Acknowledgements
  - References
- **The length manuscript should not exceed 1500 words, 3-4 figures/tables and 5 references.**

### ***Case series***

- The Case Series should report 3-6 similar cases that address clinical problems/challenges in diagnosis/treatment or health-related solutions (non-clinical) to provide a better or different perspective in managing these cases/issues.
- The manuscript file should be organised according to the following headings:
  - Title of the manuscript
  - Abstract (Structured & 250 words) and Keywords
  - Introduction
  - Case Series
  - Discussion
  - Conclusions
  - Acknowledgements
  - References
- The case series must be accompanied by a comprehensive review of the literature.
- The structure of the abstract should follow subheadings: Introduction, Case Series & Conclusion
- **The length manuscript should not exceed 3000 words, 3-5 figures/tables and 20 references.**

### Study protocol

- Study protocol articles will generally only be considered for proposed or ongoing trials that have not completed participant recruitment at the time of submission. Submissions should provide a detailed account of the study's hypothesis, rationale, and methodology. Randomised trial protocols should follow the SPIRIT guidelines (<https://www.spirit-statement.org>), including the SPIRIT flow diagram in the main body of the text.
- The manuscript should be organised according to the following headings:
  - Title Page
  - Abstract (Structured – Introduction, Methods, Discussion and Trial Registration; maximum 250 words) and Keywords
  - Introduction
  - Methods/Design
  - Discussion
  - Acknowledgements
  - References
  - Figure Legends
- The study protocol article should not exceed 4000-word count, 1-2 figures/table and 30 references.

### Systematic review

- Authors should report systematic reviews and meta-analyses following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) statement and guidelines or other relevant guidelines for systematic reviews. Systematic reviews or meta-analyses terms should be included in the title, abstract and/or full article. Authors may register their systematic review (e.g. in a registry such as PROSPERO) and provide the registry number in their article. Meta-analysis of observational studies requires a MOOSE checklist for meta-analysis of observational studies.
- The information below is adapted from the Journal of Advanced Nursing (JAN).
- The manuscript should be organised according to the following subsections:
  - Abstract (Structured Aims, Design, Data Sources (include search dates), Review Methods, Results, Conclusion and Impact), 250 words and keywords.
  - Introduction (Include rationale, conceptual or theoretical context, and topic's relevance.)
  - Background and Aims (Present the scientific, conceptual or theoretical framework that guided the review, identifying and providing an overview of the conceptual model and/or theory where appropriate. Identify key concepts or variables. Include research topic/objectives/questions/hypotheses).
  - Design (The review design should be the most appropriate for the review question. Identify the type of review and describe the design and methods used in detail. Report processes and steps used and any methodological adaptations/deviations (if any) with supporting rationale.) Report original methodological sources of reference for the review design and methods.
  - Search methods (Include: Development, testing and choice of search strategies (consider using a supplemental information file to report searches), inclusion/exclusion criteria, databases searched, keywords, languages, and inclusive dates of the literature searched.)

- Search outcome and audit trail (application of inclusion/exclusion criteria, retrieval and selection of references and handling. Summarise included studies (and, if appropriate, excluded studies) in separate tables).
  - Quality appraisal (Please note that for most systematic review approaches quality appraisal is mandatory and considered the primary marker of a systematic review. If the quality appraisal was not undertaken, provide a convincing and robust explanation, and in the limitations section, outline the potential impact on the credibility of the review findings.) Include a description of approaches used, outcome of appraisal process and audit of discarded studies. Make clear the criteria that were used for discarding studies.
  - Data abstraction (Describe the methods and processes).
  - Synthesis (Include a clear description of processes used).
  - Result ( Present the results of your review using appropriate subheadings outlined here and adhere to the relevant standard(s) of reporting. Include a flow diagram illustrating the flow of literature through the review. Review methods that involve multiple methodological stages/processes should report the outcome of each stage/process. If appropriate, identify each definition's conceptual or theoretical context or discussion of the concept found in the literature.)
  - Discussion (Draw out the applicability, theoretical and practical implications of the review findings. End with limitations and strength and generalisability/transferability of the evidence.)
  - Conclusion (This should not be a summary/repetition of the findings. Clarify the contribution of the review to existing knowledge, highlight gaps in knowledge and understanding, outline future research, report implications/recommendations for practice/research/education/management as appropriate, and be consistent with the limitations. If applicable, consider whether one or more theoretical frameworks could guide future research about the review topic.)
- Systematic Reviews should contain 4000 - 4500 words, a maximum number of references is 100, and a maximum number of illustrations/Tables is 10.
  - Useful resources links:
    - Moher D, Liberati J, Tetzlaff D, Altman DG, Group PR. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement (Reprinted from Annals of Internal Medicine). Phys. Ther. 2009;89:873-80.
    - Stroup DF, Berlin JA, Morton SC, Olkin I, Williamson GD, Rennie D, Moher D, Becker BJ, Sipe TA, Thacker SB. Meta-analysis of observational studies in epidemiology: a proposal for reporting. Jama. 2000 Apr 19;283(15):2008-12. (MOOSE guideline)
    - PRISMA statement guidelines and checklist (<http://www.prisma-statement.org/>)
    - Centre for Reviews and Dissemination (<https://www.york.ac.uk/crd/>)
    - Cochrane Collaboration (<https://www.cochrane.org/>)
    - The Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre) (<https://eppi.ioe.ac.uk/cms/>)
    - Joanna Briggs Institute (JBI) (<https://joannabriggs.org/>)
    - National Institute for Health and Clinical Excellence (<https://www.nice.org.uk/>)

### **Commentary**

- These are short articles describing an author's personal experience of a specific topic and should outline the various viewpoints. The editor usually invites commentaries.
- The manuscript file should be organised according to the following headings:

- Unstructured abstract (optional) and Keywords
- Introduction
- Relevant section headings of the author's choice
- References
- Length should be about 1,000-1,500 words, 2 figures/tables and references should be limited to only those that support the argument.

### ***Letter to the Editor***

- Letters to the Editor should either offer objective and constructive criticism of published articles or discuss matters of general scientific or medical interest to readers of MJMHS.
- This is also a forum for authors to publish concise articles such as reports of novel cases.
- No abstract is required. Standard formal letter format is recommended.
- Comments on MJMHS published articles/authors' reply
  - 250 words (main text only)
  - 1 small table or figure (optional)
  - Up to 5 references
- Discussion on new topics/novel cases
  - 450 words (main text only)
  - 1 small table or figure (optional)
  - Up to 5 references

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### **PLAGIARISM & SIMILARITY INDEX**

- Please be advised that all manuscripts submitted to the MJMHS will be screened for plagiarism/duplication. MJMHS adopts a zero-tolerance toward plagiarism.
- Authors are required to paraphrase all reference citations in their own words. This is to prevent any misunderstandings regarding plagiarism.
- In the case where a particular citation would lose its original meaning and essence if paraphrasing is attempted, the journal requires authors to enclose the citation in quotation marks ("") to indicate that it is a direct quote from the source. However, excessive use of such quotation marks is discouraged and should be utilised only when necessary.
- All submitted manuscripts will be screened for the similarity index with other published articles. Failure to comply with the accepted level of similarity index will result in resubmission for rectification or an outright rejection of manuscripts without peer review.

SIMILARITY INDEX	CATEGORY
< 30 %	Pass
31 – 40 %	Resubmit
> 40 %	<b>Reject</b>

- Besides, any individual resource that exceeds 2% of the similarity index will be subjected to resubmission.
- If the excerpt or sentences were taken directly from a published resource without paraphrasing, they should be written in quotation marks ("xxxxxxx xxxx xxxx") with reference.

## POLICY ON DUAL SUBMISSION

- Submissions that are identical (or substantially similar) to previously published, accepted for publication, or submitted in parallel to other conferences are NOT appropriate for submission to MJMHS and violate our dual submission policy.
- If you are in doubt (particularly in the case of material you have posted on a website), we ask you to proceed with your submission but to include a copy of the relevant previously published work or work under consideration by other journals.
- Policy on Near-Duplicate Submissions or Multiple submissions with an excessive amount of overlap in their text or technical content are NOT acceptable. The Editors reserve the right to immediately reject all submissions they deem to be excessively similar and by the same authors. Such “shotgun submissions” are unacceptable, unfair to authors who submit single original papers, and place an additional strain on the review process.

## ETHICS

### *Subject consent forms*

Subjects have a right to privacy that should not be infringed without informed consent. Identifying details (written or photographic) should be omitted if they are not essential, but subject data should never be altered or falsified to attain anonymity. Complete anonymity is difficult to achieve, and a consent form should be obtained if there is any doubt. For example, masking the eye region in photographs of subjects is inadequate protection of anonymity. When informed consent has been obtained, it should be indicated in the published article. A sample patient consent form is available here if required.

### *Ethics committee approval*

Authors must sign a declaration that the research was conducted within the guidelines below and under the terms of all relevant local legislation. Please also look at the latest version of the Declaration of Helsinki. The Editors reserve the right to judge the appropriateness of the use and treatment of humans or animals in experiments for publication in the journal.

*Human experiments:* All work must be conducted following the Declaration of Helsinki. Papers describing experimental work on human participants, which carries a risk of harm, must include (1) a statement that the experiments were conducted with the understanding and the consent of each participant and (2) a statement that the responsible, ethical committee has approved the experiments.

*Animal experiments:* In papers describing experiments on living animals, include (1) a full description of any anaesthetic and surgical procedure used and (2) evidence that all possible steps were taken to avoid animals' suffering at each stage of the experiment. Describe the precautions taken to ensure adequate anaesthesia in experiments involving muscle relaxants.

Experiments on isolated tissues: Indicate precisely how you obtained the donor tissue. The NIH guide for the care and use of laboratory animals (National Institutes of Health Publications No. 80-23, revised 1978) gives guidelines for the acquisition and care of animals.

### *Clinical trials and behavioural evaluations*

Authors reporting results of randomised controlled trials should submit a complete checklist from the CONSORT statement, see <http://www.consort-statement.org>. For behavioural and public health evaluations involving non-randomised designs, authors should include with their submission a

comprehensive checklist from the TREND statement, see Am J Public Health 2004; 94:361-366 or <http://www.cdc.gov/trendstatement/>.

**Registration of clinical trials:** Clinical trial registration in a public registry is required. Registration of a trial must be at or before the enrollment of participants. This policy, in concert with the ICMJE, applies to clinical trials starting enrollment after 1st July 2005. For trials beginning enrollment before this date, the journal will require registration by 13th September 2005. We will use the definition proposed by the ICMJE of a 'clinical trial as a research project that prospectively assigns human subjects to intervention or comparison groups to study a cause and effect relationship between a medical intervention and a health outcome' see *N Engl J Med* 2004; 364:911. Studies such as phase 1 trials will be exempt. The editors do not advocate one particular registry but require that the registry be utilised to meet the criteria set out in the statement of policy of the ICMJE. Thus, the registry must include an identifying number of the trial, a description of the intervention(s), comparison(s) investigated, hypothesis, primary and secondary outcome measures, eligibility and exclusion criteria, dates of start, anticipated follow up and closure, number of subjects, funding source, and contact information for the principal investigator.

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## CONTACT

The Editorial Office can be contacted at [mjmhs@upm.edu.my](mailto:mjmhs@upm.edu.my)



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Dr. Andri Setiya Wahyudi, Universitas Airlangga, Indonesia

Dr. Dianis Wulan Sari, Universitas Airlangga, Indonesia

Dr. Dluha Mafula, Universitas Gadjah Mada, Indonesia

Dr. Eka Misbahatut MHAS, Universitas Airlangga, Indonesia

Dr. Ferry Efendi, Universitas Airlangga, Indonesia

Dr. Hidayat Arifin, Universitas Padjadjaran, Indonesia

Dr. Ilya Krisnana, Universitas Airlangga, Indonesia

Dr. Lukman Handoyo, Sekolah Tinggi Ilmu Kesehatan Widya Dharma, Indonesia

Dr. Masunatul Ubudiyah, Universitas Muhammadiyah, Indonesia

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## ORIGINAL ARTICLE

# Nursing Assessment in Cases Due to Occupational Work in the Agricultural Area: An Analysis Factor

\*Eko Prasetya Widiyanto<sup>1</sup>, Arista Maisyaroh<sup>1</sup>, Rizeki Dwi Fibriansari<sup>1</sup> and Risna Yekti Mumpuni<sup>2</sup>

<sup>1</sup> Nursing Diploma, Nursing Faculty, University of Jember, 67316, Lumajang, East Java, Indonesia

<sup>2</sup> Emergency Nursing Department, Nursing Program, Maharani College of Health Sciences, 65144, Malang, East Java, Indonesia.

## ABSTRACT

**Introduction:** A nurse evaluation of the patient comes first in the documentation of nursing care. Depending on the patient's needs, particularly in those who have a history of working as farmers, this nursing care evaluation model may be modified. To match the nursing record, factors in nursing evaluation in situations related to agricultural employment still require a lot of investigation. Thus, the goal of this study is to examine the variables that affect nursing assessments in situations involving labor in the agricultural sector. **Methods:** This study employed a cross-sectional methodology and surveyed a sample of 40 nurses. The nurses who participated in the sampling were nurses who worked at Puskesmas and handled patient cases initially in rural regions of the Lumajang district. With the help of the statistical method instrument CFA, data were gathered and examined (confirmatory factor analysis). **Results:** There are 6 elements that have been identified as influencing nurse evaluation. Namely, demographic factors, health cultural factors, risk factors for poisoning, risk factors for contamination, risk factors for injury and risk factors for stress. In the meanwhile, 2 component factors were created based on the findings of the factor analysis, namely factors related to hazardous chemicals and variables generating trauma in nursing evaluations in agricultural regions. **Conclusion:** Nursing documentation must be developed with the work environment where the health service is located in mind. As a result, in order to provide nursing care that is focused on issues in the agricultural region, nurses who work in agricultural areas need to have understanding of nursing documentation.

**Keywords:** Agriculture; Documentation; Nursing Assessment

## Corresponding Author:

Eko Prasetya Widiyanto, S.Kep., Ners., M.Kep  
Email: ekoprastw@unej.ac.id  
Tel: +6281235682817

## INTRODUCTION

Nursing care is a nursing process in which there is an assessment, diagnosis, intervention, implementation and evaluation of nursing. Research conducted by Susanto (2010) regarding the application of nursing standards in Cilacap inpatient health centres concluded that the application of nursing care standards in this case including assessment standards, nursing diagnoses, interventions, implementation, evaluation and nursing documentation is not carried out properly this may be related to factors related to the application of nursing care standards. Achmadi (2015) states that the application of nursing care standards is still not optimal.

In the three-year "Nursing Now" (2018-2020) health implementation program, the AAOHN has also

incorporated occupational nursing. It claims that in order to ensure the quality of workers farmer' health, it is necessary to use nurses' knowledge and abilities, particularly in the decision-making process (1). Understanding the requirements of the clients, effective nursing practice, and a holistic approach with high ethical standards are the cornerstones of OHN's work. Additionally, OHNs place a priority on environmental health, sustainability, healthy communities, and the management of chronic diseases. At every step of the nursing caregiving process, new ethical problems have arisen as a result of changes in work life and health care that is the significance of the impact if this problem is not resolved (2).

Nursing care is an indicator in determining the quality of health services carried out by nurses as caregivers with the most important aspect of nursing services in the form of nursing documentation (3). If the documentation is not carried out properly, it will cause quite a big problem. Nurses in carrying out their roles, functions and responsibilities in providing nursing care, are required to always have high

expertise and knowledge. Skills and expertise in nursing are the results of knowledge and clinical experience that have been carried out with the aim of making complex decisions and interpreting clinical situations in providing professional and quality nursing care due to changes in health needs and community demands as well as government policies related to nursing and health services (4).

In practice, nurses are also responsible for providing nursing services to all levels of society, including farmers who experience illness or work accidents in the agricultural sector. Keeping workers safe is an ongoing challenge in agricultural production (5). The mean annual incidence rate (injury/100 workers) was 6.91 for all injuries and 2.40 for serious injuries (6). Some of the most common sources of injury in the agricultural sector are machinery, animals, and falls. Sources of machine-related injuries include tractors, combiners, harvesters, planters, take-off drivelines, augers, and all-terrain vehicles (7). Agricultural communities have not received sufficient information about how human-machine interactions lead to accidents, nor have they obtained enough or developed further sustainable prevention measures (Robert & Kuedler, 2015). In addition, pesticides have become an integral part of agricultural activities worldwide (8). Acute pesticide poisoning is an important public health problem (9). In this context, the use of pesticides has come to be associated with a variety of environmental and health issues. The majority of these hazardous substances used in agriculture eventually end up in the environment (soil, water, and air) and cause environmental contamination. In developing nations as opposed to industrialized nations, there are more side effects of pesticides and their residues owing to factors including inadequate understanding of the hazards of pesticides, incorrect use of pesticides, and a lack of competent oversight and control (10).

An evaluation of the patient by a nurse is the first step in recording nursing care. The patient's demands can dictate changes to this nursing care evaluation model, particularly in cases when the patient has a history of working as a farmer. A concern that has come up in nursing assessments in an agricultural region is the possibility of occupational illnesses for farmers. To match the nursing documentation, factors in nursing evaluation in situations involving labor in the agricultural sector still need to be thoroughly investigated. The purpose of this study was to examine the variables that affect nurse assessments in situations involving farmworkers.

## MATERIALS AND METHODS

This study used a cross-sectional study design. This study was conducted to analyze the factors in

nursing assessment in cases due to work in the agricultural area.

### Population, Samples and Sampling

In this study, the population was 40 nurses and the sampling criteria used are total sampling. The inclusion criteria are nurses who worked at the Puskesmas who did the initial handling of patient cases in agricultural areas in the Lumajang district.

### Procedure

The procedure for collecting research data is explained as follows. The researcher distributed an informed consent paper to nurses who are willing to be a respondent form to the nurses in the Lumajang district. There are 40 nurses who have experience in reviewing work-related cases in the agricultural area who are willing to become respondents. The researcher met with respondents to provide a case study questionnaire as a result of work in the agricultural area. In this study, the instrument used was the Agronursing Assessment instrument obtained from interviews with nurses by the Agronomers Research Group Team at the University of Jember in 2020. For the assessment of validity and reliability, SPSS version 20 has been carried out. Next, the researchers collected questionnaires and analyzed the data with the help of SPSS 20 software.

### Data Analysis

Data were collected and analyzed using Statistical Method Instrument CFA (confirmatory factor analysis). A correlation test was used in the first test to determine the connection between the variables. Testing the instrument's reliability and validity is the second goal. As part of evaluating the instrument's reliability and validity, confirmatory factor analysis is used to condense data from numerous indicators into a smaller set of factors that can explain the association between the observed indicators. Considering that a factor is a construct and that a construct only has significance if it can be interpreted, the interpretation of factor names follows next. Knowing the components of a factor might help one interpret it. Interpretation is carried with discretion.

### Ethical Clearance

This research has received ethical approval from the Health Research Ethics Commission, Faculty of Dentistry, the University of Jember with an ethical approval number No.982/UN.25.8/KEPK/DL/2020 dated August 26, 2020.

## RESULTS

Based on the research results, it can be seen that the univariate analysis describes demographics,

health culture assessment, poisoning risk assessment, contamination risk assessment, stress risk assessment, and injury risk assessment.

The output table I of KMO and Bartlett's Test is useful to determine the feasibility of a variable, and whether it can be processed further using this factor analysis technique or not. The trick is to look at the KMO MSA (Kaiser-Meyer-Olkin Measure of Sampling Adequacy) value. If the KMO MSA value is greater than 0.50 then the factor analysis technique can be continued. Based on the output above, it is known that the KMO MSA value is  $0.755 > 0.50$  and Bartlett's Test of Sphericity (Sig.) value are  $0.000 < 0.05$ , so the factor analysis in this study can be continued because it has met the first requirement.

This Communalities table I shows the value of the variables studied whether they are able to explain the factors or not. The variable is considered capable of explaining the factor if the Extraction value is greater than 0.50. Based on the output above, it is known that the Extraction value for all variables is greater than 0.50. Thus it can be

concluded that all variables can be used to explain factors.

The Total Variance Explained table II shows the value of each variable being analyzed. In this study, there are 6 variables which mean there are 6 components that are analyzed. There are two kinds of analysis to explain a variance, namely Initial Eigenvalues and Extraction Sums of Squared Loadings. In the Initial Eigenvalues variant, it shows the formed factor. If all the factors are added up, the number of variables is equal to 6 variables. While the Extraction Sums of Squared Loading section shows the number of variations or the number of factors that can be formed, in the output results above there are 2 (two) variations of factors, namely 3.563 and 1.325.

This Component Matrix shows the correlation value or the relationship between each variable and the factors that will be formed. For example: from the output above, it can be seen in the demographic variables, namely the correlation value of this variable with factor 1 is 0.608 and the correlation

### Tables of Nursing Assessment in Cases Due to Occupational Work in the Agricultural Area: An Analysis Factor

**Table I : Research Component Analysis**

Variable	Determine	KMO and Bartlett's Test
Demographic	.710	
Health cultural factors	.784	
Risk factors for poisoning	.938	KMO MSA .755
Risk factors for contamination	.944	Sig. .000
Risk factors for injury	.766	
Risk factors for stress	.745	

**Table II : Dominant Factor Correlation Value**

Variable	Component 1	Component 2
Demographic	.608	.584
Health cultural factors	.885	.028
Risk factors for poisoning	.887	-.389
Risk factors for contamination	.798	-.555
Risk factors for injury	.495	.722
Risk factors for stress	.861	.059
Extraction Sums of Squared Loadings	3.563	1.325

with factor 2 is 0.584. For other variables, the way to interpret them is the same as for demographic variables.

As a result, there are 6 factors that have been identified as factors that influence nursing assessment. Namely, demographic factors, health cultural factors, risk factors for poisoning, risk factors for contamination, risk factors for injury and risk factors for stress. Meanwhile, based on the results of factor analysis, 2 component factors were formed, namely factors due to hazardous materials and factors causing trauma in nursing assessments in agricultural areas.

Demographic variables, health culture assessment, poisoning risk assessment, contamination risk assessment and stress risk assessment have a higher correlation value in component factor 1. In the assessment variable, the risk of injury has a greater correlation value on component factor 2. By looking at the above discussion, the conclusion What we can take in this factor analysis is as follows: component 1 consists of demographic variables, health culture assessment, poisoning risk assessment, contamination risk assessment and stress risk assessment. Factor component 2 consists of assessing the risk of injury.

## DISCUSSION

The agricultural industry in Indonesia is one that presents a significant danger to employees, has harsh environmental conditions, and uses and technologies in land management that are still insufficient for the level of health and safety of farmers. Ergonomic injury is one of the health and safety issues that frequently affects employees, such as farmers (11).

Global agricultural productivity has increased as a result of pesticides. However, if not used properly, they may have negative health impacts that can even be permanent as well as environmental degradation. Organophosphate pesticide exposure can happen in a number of ways, such as through contaminated food, contaminated environments and homes, agricultural activities, and closeness to agricultural fields (12). Pesticide exposure by skin has been identified as the main route that contributes the most among workers, particularly pesticide handlers who mix, load, and/or applies pesticides (13).

Among all injuries, injuries such as skin injuries, skin friction, superficial vein injuries, injuries to the toes or fingers, and muscle tension were recorded as the severity of AIS 1, whereas injuries to limbs, deep vein injuries, permanent loss of any body part, and infection of the injured limb was considered to be between the severity of AIS 2 and AIS 3 injury (14).

Farmers' behavior in dealing with trauma caused by hazardous products may be improved through training programs, understanding of safe handling techniques and safety precautions, and education about the long-term effects of pesticide exposure to health and the environment (15). The primary goals of occupational health care are the advancement and maintenance of good health, the avoidance of disease and injury, protection from environmental and occupational dangers, and business profitability. Regardless of the workplace, nurses need to get high-quality education regarding the connection between work and health, but some schools lack this or only provide a limited amount of it. For students enrolled in the baccalaureate nursing degree, this report provides a cutting-edge occupational health nursing curriculum. This new curriculum's development and testing process, alignment with nursing skills, structure, and learning activities are all described (16).

The role of nurses is very important in providing health services for patients (17). Several studies that have been carried out explain that the professional behaviour of nurses is related to the patient's recovery rate (18). In the agricultural sphere, it is the management of care and nursing services in the agricultural sphere that focuses on individuals, families, groups and even communities that are holistic and comprehensive. Agronursing aims as a forum to meet the health needs of the community in the agricultural environment.

## CONCLUSION

In order to provide patients with health services, nurses play a crucial role. Nursing documentation must be developed with the work environment where the health service is located in mind. Regardless of the workplace context, effective nursing care depends on quality education about the connection between work and health. As a result, in order to provide nursing care that is focused on issues in the agricultural region, nurses who work in agricultural areas need to have understanding of nursing documentation.

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