

# A Response to “Effect of Integrated Pictorial Handbook Education and Counseling on Improving Anemia Status, Knowledge, Food Intake, and Iron Tablet Compliance Among Anemic Pregnant Women in Indonesia: A Quasi-Experimental Study” [Letter]

This article was published in the following Dove Press journal:  
*Journal of Multidisciplinary Healthcare*

Heru Santoso Wahito Nugroho<sup>1</sup>  
Suparji Suparji<sup>1</sup>  
Wiwin Martiningsih<sup>2</sup>  
I Putu Suraoka<sup>3</sup>  
Joel Rey Ugsang Acob<sup>4</sup>  
Sahrir Sillehu<sup>5</sup>

<sup>1</sup>Midwifery Department, Poltekkes Kemenkes Surabaya, Surabaya, Jawa Timur, Indonesia; <sup>2</sup>Nursing Department, Poltekkes Kemenkes Malang, Malang, Jawa Timur, Indonesia; <sup>3</sup>Nutrition Department, Poltekkes Kemenkes Denpasar, Denpasar, Bali, Indonesia; <sup>4</sup>Nursing Department, Visayas State University, Baybay City, Leyte, Philippines; <sup>5</sup>Public Health Department, STIKes Maluku Husada, Kairatu, Maluku, Indonesia

## Dear editor

We have carefully studied the article published under the title "Effect of Integrated Pictorial Handbook Education and Counseling on Improving Anemia Status, Knowledge, Food Intake, and Iron Tablet Compliance Among Anemic Pregnant Women in Indonesia: A Quasi-Experimental Study".<sup>1</sup>

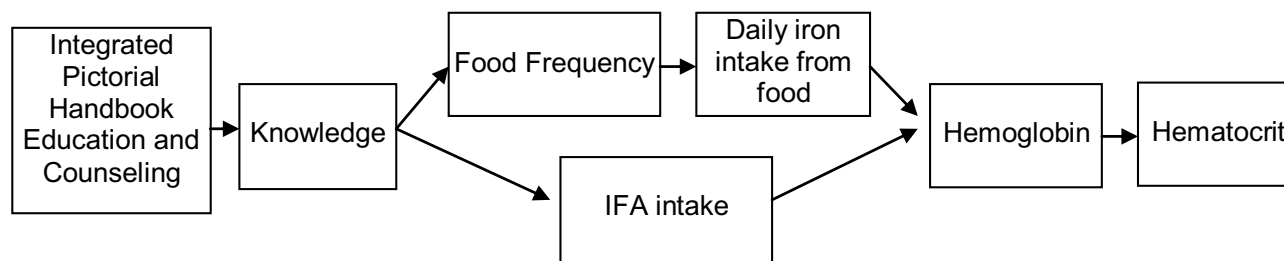
The results of this study had proven that counseling using a handbook that had been prepared by the researchers was really useful to increase knowledge, maintain adequate nutrition and prevent anemia in pregnant women, which was characterized by increased levels of hemoglobin and hematocrit.<sup>1</sup>

This finding is very valuable information in the effort to prevent anemia in pregnancy. Thus, the Integrated Pictorial Handbook Education and Counseling can be recommended as a superior health education media in order to improve the health of pregnant women in various regions.

On this occasion, we would like to submit a response to the article, as well as providing input so that further analysis can be carried out, so that more in-depth new information can be produced, particularly with regard to detailed explanations of how the stages of the process of increasing hemoglobin levels and hematocrit as a result of education and counseling.

In the process of data analysis, the researchers chose the ANCOVA in order to prove the effectiveness of counseling using the Integrated Pictorial Handbook Education and Counseling to increase hemoglobin levels, hematocrit levels, birth weight, knowledge, daily iron intake from food, FFQ scores and IFA intake. In principle, ANCOVA does not consider any direct or indirect influence. In other words, using the ANCOVA, it is assumed that the use of the handbook has a direct impact on the seven dependent variables. Whereas, logically and referring to references about physio-pathological processes, there are certainly lines of influence indirectly involving one independent variable and the seven dependent variables. For clarity, we propose the following alternative schemes on the

Correspondence: Heru Santoso Wahito Nugroho  
Midwifery Department, Poltekkes Kemenkes Surabaya, Pucang Jajar Tengah 56, Surabaya, Jawa Timur 60282, Indonesia  
Tel +62 82142259360  
Fax +62 315028141  
Email heruswn@poltekkesdepkes-sby.ac.id



**Figure 1** Pathways to influence integrated pictorial handbook education and counseling on anemia status in pregnant women.

intended pathways of influence (Figure 1). This scheme can be refined further, by referring to relevant references.

By considering the pathways of influence as shown in Figure 1, the use of ANCOVA is not enough, in other words, further statistical analysis is still needed to be able to explain each of these pathways, both directly and indirectly. In this case, the statistical analysis that can be used to explain this set of processes is path analysis. At present, there are many statistical programs that can be used as tools to easily analyze pathways, including IBM SPSS AMOS.<sup>2</sup>

We hope that the authors will carry out further analyzes using path analysis, and further findings will be published in this journal. It is hoped that with the results of the follow-up analysis, it can be understood in greater depth on how step by step Integrated Pictorial Handbook

Education and Counseling can increase hemoglobin and hematocrit levels.

## Disclosure

The authors report no conflicts of interest in this communication.

## References

1. Nahrisah P, Somrongthong R, Viriyautsahakul N, et al. Effect of integrated pictorial handbook education and counseling on improving anemia status, knowledge, food intake, and iron tablet compliance among anemic pregnant women in Indonesia: a quasi-experimental study. *J Multidiscip Healthc.* 2020;13:43–52. doi:10.2147/JMDH.S213550
2. Arbuckle JL. *IBM SPSS Amos 22 User's Guide*. 1st ed. Crawfordville, FL: Amos Development Corporation; 2013.

Dove Medical Press encourages responsible, free and frank academic debate. The content of the Journal of Multidisciplinary Healthcare 'letters to the editor' section does not necessarily represent the views of Dove Medical Press, its officers, agents, employees, related entities or the Journal of Multidisciplinary Healthcare editors. While all reasonable steps have been taken to confirm the content of each letter, Dove Medical Press accepts no liability in respect of the content of any letter, nor is it responsible for the content and accuracy of any letter to the editor.

Journal of Multidisciplinary Healthcare

Dovepress

Publish your work in this journal

The Journal of Multidisciplinary Healthcare is an international, peer-reviewed open-access journal that aims to represent and publish research in healthcare areas delivered by practitioners of different disciplines. This includes studies and reviews conducted by multidisciplinary teams as well as research which evaluates the results or conduct of such teams or healthcare processes in general. The journal

covers a very wide range of areas and welcomes submissions from practitioners at all levels, from all over the world. The manuscript management system is completely online and includes a very quick and fair peer-review system. Visit <http://www.dovepress.com/testimonials.php> to read real quotes from published authors.

Submit your manuscript here: <https://www.dovepress.com/journal-of-inflammation-research-journal>