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". 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.

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
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.²

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**
