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Journal Name:	**European Journal of Nutrition & Food Safety**
Manuscript Number:	**Ms_EJNFS_35745**
Title of the Manuscript:	**IEC (Information Education Communication) module as an effective tool for mitigation of iron deficiency anaemia among rural adolescent girls of Uttarakhand, India**
Type of the Article	**Original Research Article**

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This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty'**, provided the manuscript is scientifically robust and technically sound.
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PART 1: Review Comments

	Reviewer's comment	**Author's comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
Compulsory REVISION comments	**Authors attempted to show that three month efforts consisting of "Information, Education, and Communication" regarding anaemia improves adolescent girls' knowledge, attitude, and practice" in life style and choice of foods, and in turn reduces risk of anaemia. This paper describes the authors' laudable study. However, there is a number of problems I found in this study. I will list and explain in order they appeared in the text.** **Abstract** **IEC needs to be spelled out even though it appears in the title** **Exactly what is the curriculum of IEC?** **Subjects; Why just girls? Exclusion and inclusion criteria? How many girls with the chosen ages are eligible for this study?** **What is the definition of "rural"?** **Why 288 subjects were selected? Is this a number that needed to show a difference in the outcome? (which outcome, haemoglobin level? Survey scores?)** **What type of information was collected in "KAP"? Is this a previously validated tool?** **Introduction,** **Line 44 and 45, describe examples of "lasting impact of anaemia" cite some references.** **Line 53, this statement may apply to women with severe anaemia, cite some references** **Materials and Methods,** **Locale. Why the experimental group subjects and control group subjects are selected from different schools? Are they equivalent in SE status of the family, culture, education of parents and siblings, health status, medications they are taking such as iron, vitamins, etc.?** **Sample characteristics, needs references for the proportion of anaemia girls quoted here.** **2.3.1 Screening subjects. Authors set an inclusion criteria for age between 13 and 16 with haemoglobin equal to or below 11.9 g/dL. Thus the following sentence does not make any sense; Non anaemic subjects in**	

	the age group below 13 and above 16 years were excluded from the study. **How did the authors arrive at the number of 400 girls to be screened? How were they selected? How the authors arrive at the number 200 to be included in the study? At what level of power were they looking for and at what level of confidence? These will determine the number of subjects needed.** **Why the 12 girls were dropped out? Were there any special characteristics in these drop outs?** **2.4 Research Design** **How the KAP scores were obtained? How each component of KAP (knowledge, attitude, and practice) was assessed? Was each component equally weighted? Was the KAP score validated? Please cite a reference or two regarding KAP score.** **Were the KAP scorers blinded as to which group the subjects belonged to?** **Subjects were not randomized into experimental or control group, and there is no assurance by the authors that they were similar or equivalent.** **2.6 IEC interventions. Though each session's titles were listed, there are no details regarding which media (e.g. pamphlet, book, slide shows, demonstrations etc.) was used for which topic, and time spent for each topic. Furthermore there is no accounting as to whether all subjects in experimental group spent equal amount of time for each subject. It is also unknown whether control subjects had occasions to discuss about this program with experimental group subjects (cross pollination). Without these details, readers will not able to duplicate the results. Also authors fail to state if any subjects were allowed to take any iron medications. This is critical.** **Table 3** **The number of control subjects in pre-IEC adds to 143, and one is missing.** **Results** **The KAP scores, for what they are worth, showed small differences between the experimental and control groups on each of 3 categories (KAP), but these differences were not statistically significant by t-test. There are no confidence intervals described in the table. It is not at all certain if these differences are clinically significant.**	

	However, there was a significant difference in the haemoglobin levels between the experimental and control group at the end of IEC sessions. With little differences in KAP, it may indicate that the experimental group subjects may have taken iron supplements on their own. Since evidently the study did not prohibit subjects to take iron supplements on their own, this is very possible. **In summary, this study is poorly designed, and many details of the subjects' characteristics, methods of selecting subjects, and the reason for selecting 300 subjects, intervention methodology, and how data analyses were performed are missing. Therefore the results are impossible to interpret. Without these details, readers would find impossible to duplicate this study. It may be that education regarding importance of iron to adolescent girls motivated them to start taking supplemental iron and therefore this may be the reason for the improved haemoglobin, not IEC.**	
Minor REVISION comments	There are many grammatical errors, and some misspelling.	
Optional/General comments		

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