



Conclusion Sections in Scientific Research Reports (IMRaD)

IMRaD refers to reports with the structure Introduction-Method-Results-Discussion used in empirical research in natural and social sciences. Please refer to the Writing Center quick guide “Writing an IMRaD Report” for more explanations.

In IMRaD* reports, conclusions often fall under the discussion section. In some disciplines and journals, however, conclusions are separated from discussions. If this is the case for the paper you are working on, you may find the following description of common conclusion moves and sample language useful.

Move	Sample Language
Restating the aims of the study	The aim of the present research was to examine ... The purpose of the current study was to determine ... The main goal of the current study was to determine ...
Summarizing main research findings	These experiments confirmed that... X made no significant difference to... This study has shown that...
Suggesting implications for the field of knowledge	The results of this study indicate that ... These findings suggest that in general ... The findings of this study suggest that ...
Explaining significance or contribution of the study	The study contributes to our understanding of ... These results add to the rapidly expanding field of ... The contribution of this study has been to confirm ...

Acknowledging limitations	A major limitation of this study is... Being limited to X, this study lacks ... The small sample size did not allow ...
Providing recommendations for future research	More research using controlled trials is needed to ... A further study could assess the long-term effects of ... Considerably more work will need to be done to determine ...
Offering recommendations for practice or policy	Greater efforts are needed to ensure ... These findings suggest several courses of action for ... Continued efforts are needed to make X more accessible to ...

This table is based on the information from University of Manchester's Academic Phrasebank <http://www.phrasebank.manchester.ac.uk/writing-conclusions/>

As always, it is important to remember that depending on the discipline, journal, or purpose of the paper, certain moves may or may not be present.

Sample conclusion

Below is an example of a conclusion from a published research article. Notice how the moves are utilized in it.

- *Italics* = Restating the aim of the study
- Underlined = Summarizing main findings
- ***Italics/Bold*** = Suggesting implications for the field of knowledge
- **Bold** = Explaining significance or contribution of the study
- **Underlined/Bold** = Acknowledging Limitations
- *Italics/Underlined* = Offering recommendations for practice or policy

This is one of the first studies to more comprehensively examine adolescents' knowledge of and attitudes towards e-cigarette ingredients, addictive properties, safety, perceived prevalence, acceptability, and regulation... In our study of 9th and 12th graders, participants had more favorable attitudes towards and perceived less risk from e-cigarettes than cigarettes, and they expressed less support for policies that applied to e-cigarette than cigarette regulation. Participants believed that about 30% of their closest friends used e-cigarettes, which is approximately 10% higher than the self-reported rates in the sample... As we hypothesized,*

adolescents who have ever used tobacco perceive greater prevalence of e-cigarette use among their parents, siblings, and peers... *These findings demonstrate the importance of developing educational and health messages that correct misperceptions about use rates of e-cigarettes, since it is plausible that beliefs about how many peers use e-cigarettes can translate into increased adolescent e-cigarette use.* Our findings are particularly concerning considering that positive perceptions of e-cigarettes may be increasingly common among teens... **This study was limited to a school-based convenience sample recruited from California schools, and given the relatively low response rate, as is true with other convenience samples, it is unclear how representativeness and generalizable the sample is compared to California adolescents.**

... *health care providers need to understand basic facts concerning e-cigarettes as well as adolescents' attitudes towards these products since e-cigarettes are becoming a more predominant tobacco product among adolescents.* (adapted from <https://www.sciencedirect.com/science/article/pii/S0091743516303413>)

*this sentence also shows significance or contribution of the study

Activity to help you prepare for writing IMRAD conclusions

Choose three different papers in your discipline and look through their conclusions. What moves do you see? What language clues helped you identify these moves? Are there any moves missing in a way that impacts the interpretation of the conclusion? Consider doing this activity and discussing your findings with others.