Effectively Drafting the '*Discussion Section*' of Research Articles in Health and Medical Sciences: Reminding the Authors of a Missing Move

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Dear Editor

Research papers in healthcare and medical sciences are normally framed into an IMRAD structure for their uniformity and readability. Each section serves a certain function, and the '*discussion'* is where authors summarize key findings, and vividly make interpretations of their own findings in relation with earlier studies, together with implications and limitations based on the evidence obtained. It is the final stage of a research report, where authors explore and interpret the results by comparing them with the current literature. Authors often highlight their unique findings and contrast them with published papers reporting both different and similar findings. Peer reviewers are also sensitive to the integrity of this section of the manuscript.[1, 2] However, in so doing, less experienced authors tend to discuss congruent studies and avoid discussion of incongruent results in detail. A preliminary search to verify this tendency prompted us to send the present letter, and we observed that the assumption may come true if empirical evidence is collected.

Generally, a well-structured discussion section is expected to have an introductory paragraph, some paragraphs in between, and a concluding paragraph. Journals often tolerate discussions of up to 1500 words. Longer discussions deny readers the opportunity to catch the message of the study. Although conducting a study with significant ethical principles now shapes the cornerstone of research,[3] presenting a convincing argument tactfully and keeping the discussion section effectively concise and evidence-based certainly require the application of linguistic devices to keep the reader engaged. Earlier studies also emphasize seeking the assistance of professional language experts.[4, 5]

As to development of a convincing and evidence-based discussion of the results, Swales (1990) suggests eight '*moves*' to convey a clear scientific message.[6] Swales further delineates the following notes for each move with tolerable variations from case to case. Move 1 (background information) describes the theoretical and technical information as already addressed earlier in the same manuscript. Move 2 (statement of results) introduces the claim made by the writer as the direct answer to the research question. Move 3 ((un)expected outcomes) stresses a new finding. In Move 4 (reference to previous research), authors attempt to connect their present findings to current and relevant literature for comparing or contrasting them with either congruent or incongruent studies. Move 5 (explanation) is taken to logically convince readers about the apparently odd findings of the present study. Move 6 (exemplification) may be taken to show an illustration or examples to strengthen or support the explanation. Move 7 (deduction and hypothesis) tries to relate the interpretation of the findings to the whole body of knowledge in that area. Finally, Move 8 (recommendation) makes some practical suggestions on the application or implementation of the findings or suggests further studies on similar topics.[6]

Based on the obtained evidence, most published articles in health and medical sciences earnestly follow journals' methodological styles

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to achieve publication; these attempts mostly imitate the formatting and details of the methods section, presentation of results, tables, and figures. Most of them even follow the norms of good paragraph development and follow the rhetorical style of writing a good discussion. However, a missing link in some published pieces is Move 4 (i.e. reference to previous research), pointing out both similar and dissimilar studies in the past to be included and deliberately discussed to enrich the manuscript within the context of the existing literature. Aiming for rapid promotion, however, most novice writers start to develop a propensity to dwell on studies with similar findings as proof of scientific support of their findings. However, they often forget to deal with incompatible findings in detail. Here, the application of Swales' Move 4 finds salience in shaping the global body of knowledge – a far more prominent concern in accurate knowledge production. As such, we suggest further training of less experienced researchers not because of superficial issues of the structure of the discussion section, but rather because of the more prominent concern in enriching human knowledge.

To sum up, this letter is brought to public attention to raise the need to include 'structural move analysis' as a new dimension in academic and scientific writing workshops.[6] In other words, understanding these moves (especially Move 4) in writing up the discussion section of a scholarly manuscript by health and medical researchers can help upgrade the likelihood of extending the edges of human science.[7] Therefore, to achieve this goal, we recommend that the authors focus on the communicative aspects of written manuscripts so that medical and healthcare authors gain awareness of rhetorical moves for embracing congruent and incongruent evidence from existing literature.

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