Letter to Editor

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Expressing degrees of uncertainty in medical discourse: Hedging revisited

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Dear Editor

While the primary preference of peer reviewers for accepting publishable manuscripts is their scientific message to inspire the scholarly audience and the novelty of research findings the authors are trying to promote, the quality of writing for publication is also among the prominent criteria peer reviewers are concerned with. Generally, the contribution of outstanding articles to the expanding body of knowledge is framed into sophisticated modes of communication, where authors are recommended to use formal, accurate, and intellectual language for expressing the scientific message (1). Among certain linguistic devices, boosters (used for expressing definite facts) and hedges (used for showing degrees of uncertainty) bear advantageous metadiscoursal functions for scientific writing. Both boosters and hedges are strategies by which authors can adjust the degrees of certainty expressed and avoid absolutism wherever required in a particular context. These can help authors effectively convey their interpretations of research findings (2).

Undoubtedly, already-established scientific facts are accentuated using boosters within scientific discourse. Comparably, hedging reflects the expression of tentative findings. Boosters help scientific writers/editors make smart use of indicators of certainty, while hedges reflect a lack of such conviction. In so doing, authors of manuscripts can resort to boosters as rhetorical devices, such as "*evidently, certainly, surely, definitely, absolutely, we believe that*, etc." Authors stress their awareness of the current field knowledge and confidently interact with scholarly readers about precisely acknowledged and robust portions of science (3). However, boosters may deny the readers the opportunity for personalized argumentation; they are used to keep readers engaged and in line with authorial intention, enrich textual coherence, and build interpersonal interaction (2).

Another rhetorical device used for interpersonal engagement is 'hedging' (4), which is the focus of this short communication. Hedging is applied when authors would like to discuss their research findings as tentative results and to reflect a lack of absolute certainty on the understanding that human knowledge is subject to change (5). In particular, experimental research is associated with inevitable degrees of error (6). Hedging devices include some verbs (e.g. seem, tend, appear to be, think, believe, doubt, suggest, assume, …), some modal verbs (e.g. will, must, would, may, might, could), some adverbs of frequency (e.g. often, sometimes, usually, …), some adverbs (e.g. probably, relatively, possibly, perhaps, conceivably, potentially, …), some

adjectives (e.g. probable, possible, etc.), some nouns (e.g. assumption, possibility, probability), and that-clauses (e.g. it might be suggested that) (7). For voicing their personal opinions, experienced authors of manuscripts aptly use hedging wherever appropriate because they tend to admit the nature of human research findings. The pitfall, however, becomes more prominent when novice writers are either unfamiliar with the device or unaware of the variability of human findings under the influence of errors intrinsic to research processes (8); they may tend to use absolute terms where hedges are preferred and end up with valuable immediate rejection of their valuable manuscripts merely because of poor drafting and language errors.

However, contradictory results are reported regarding the use of these two linguistic tools, which may be subject to variations across different disciplines as well (9). For instance, the frequency of using hedges was recently compared across medical and ELT articles, and authors of these two disciplines were observed to show different preferences toward the use of hedges; significant differences were observed in the published articles of the two fields. ELT professionals used hedges as a means of expressing tentativeness more frequently than authors of medical research articles (10). However, Csongor and Rébék-Nagy examined five medical articles about prenatal vitamins and their online popularizations using a text analyzing software; it was found that there was frequent use of hedging in the articles, shown as verbs and adverbs, indicating tentativeness, possibility, and even politeness (11).

To conclude, scientific journals emphasize the proper drafting of manuscripts at both discoursal and metadiscoursal levels, which require following certain standards and rules. What we stressed in this brief discussion is a metadiscoursal issue in reassuring the readers that reflect authors' awareness of the variable nature of human science because research findings may alter over time; in addition, medical findings are conducted with a certain confidence interval which is itself a function of statistics and probability. The half-life of human knowledge is shortening day by day, and scientific claims and output are subject to change and that's why authors need to express their argumentations in a way that this variability be expressed at least implicitly. Differentiating and maintaining a good balance between boosters and hedges can duly help authors cater for this rhetorical requirement in drafting manuscripts. Being unfamiliar with publication ethics and linguistic devices may lead to rejection in most cases (1, 12). Also, collaboration with language editors can highly impact the quality of written manuscripts (13) and help alleviate some errors like hedging and boosters. Covering these areas in workshops for early-career researchers and its inclusion in academic course syllabi are exceedingly demanded.

Authors' Contribution

All authors contributed to the discussion, read and approved the manuscript and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated resolved.

Conflict of Interest

Nasrin Shokrpour, as the English Editor, was not involved in the peer-review and decision making processes for this manuscript. A team of independent experts were formed by the Editorial Board to review the article without her knowledge.

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