A Contrastive Study of Hedging in Medical Articles Written by Iranians and Non-Iranians

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Abstract
Hedging enables writers to show a perspective on their statements, to present unproven claims with prudence and to enter into a dialogue with their audiences.
Medical articles show interesting examples of the use of hedging in scientific discourse, because they relate to important issues of our life.
This study investigates the use of lexical hedging devices in discussion section of medical articles. Based on a corpus of 60 discussions collected from reputable medical journals, this study examines if frequency of hedging differs between Iranian and non-Iranian authors. The total numbers of words in discussion sections in non-Iranian and Iranian medical articles were 12,570 and 19,828 respectively.
Analyses indicated that discussions written by non-Iranian authors had more hedging devices than the ones written by Iranians. The findings of this study showed that medical articles written by non-Iranian authors are 0.45 more hedged than the ones written by Iranian writers.
Keywords: Academic Writing, Corpus Analysis, Medical Articles, Hedges Devices, Hedging

Introduction

Medical articles show interesting examples of the use of hedging in scientific discourse, because they relate to important issues of our life. Hedges have shown to play a major role in medical discourse by Salager, Meyer(1999),Skeleton(1997).

This study examines the frequency of hedges in medical articles. The notion of hedging was first used by Lakoff(1972) to 'describe words whose job is to make things more or less fuzzy and has subsequently been applied to caveats' such as "I think", "perhaps", "might", "maybe" which we use to qualify categorical assertions. Essentially, it represents an absence of certainty and is used to describe 'any linguistic item or strategy employed to indicate either a lack of commitment to the truth value of an accompanying proposition or a desire not to express that Commitment categorically' (Hyland, 1998).

Hedges are the important rhetorical device in academic writing as they show the writers anticipation of opposition to claim. Hedging can distance a person from a statement(Prince,1982;Rounds,1982;Skeleton,1988).

Zuck (1986) refers to hedging as the process whereby the author reduces the strength of a statement, while for Markkanen and Schroder (1989) it is any manipulative, non-direct sentence strategy of saying less than one means. Hyland's term is closer to the first of these definitions as it includes statements that show exactly what the author means, of saying no more than is warranted by the available evidence; in science Hedges are therefore the means by which a writer can present a proposition as an opinion rather than a fact. According to Swales (1990) hedges are rhetorical devices used for "projecting honesty, modesty and proper caution in self-reports and for creating gap in areas heavily populated by other researchers."

In medical writing, hedges play a critical role in gaining endorsement for claims for a powerful peer group by allowing writers to present statements with appropriate accuracy caution, and humility, expressing possibility rather than certainty and prudence rather than overconfidence, so expressions such as "may", "might", "could", "possible", and "likely" can contribute to gaining the acceptance of research claims.

Salagar-Meyer (1994) specified the main purpose for using hedge words as follows: it is to make the issue fuzzy. She proposed that explicit expression of a claim makes it easy for others to criticize the author's claim and reflects his lack of humility, and his ignorance of the others in that research area. Hedging can reflect the state of knowledge under discussion too.

There are other researchers who considered this latter role for hedging (Round, 1981; Tarontino, 1991; Skelton, 1988; Gilbert & Mulkay, 1984). Crompton (1997) provided a definition for hedge words in which the main function is to "explicitly qualify author's lack of knowledge to the truth of the proposition he utters" (p. 273).

We suppose that Iranian writers use fewer hedging devices in their articles and especially in medical ones, so the research questions are as the following:

1) What is the frequency of hedge words used in discussion section of medical articles?

2) Is there a significant difference between medical articles written by Iranian and non-Iranian authors considering the frequency of hedge words used in their discussion section?

Tables and figures

Results

Number of articles	Total words of discussion section	Number of hedging devices	Percentage of hedging devices
1	1131	21	1.85%
2	1047	13	1.24%
3	619	14	2.26%
4	990	19	1.91%
5	604	7	1.15%
6	550	4	.72%
7	1854	31	1.67%
8	527	2	.37%
9	820	4	.48%
10	606	7	1.15%
11	103	1	.97%
12	753	7	.92%
13	673	16	2.37%
14	407	4	.98%
15	992	23	2.31%
16	804	19	2.36%
17	717	6	.83%
18	1868	8	.42%
19	1153	6	.52%
20	289	6	2.07%
21	1031	11	1.06%
22	658	18	2.73%
23	541	7	1.29%
24	560	5	.89%
25	748	9	1.20%
26	441	2	.45%
27	1567	20	1.27%
28	485	5	1.03%
29	1080	16	1.48%
30	932	24	2.57%
Average of Hedging devices: 1.35			

Table1: Number of total words and hedging devices in each discussion section of non-Iranian articles

Number of articles	total words of discussion section	Number of hedging devices	Percentage of hedging devices
1	544	3	0.55%
2	401	8	2%
3	586	12	2.04%
4	625	2	0.32
5	712	6	0.84
6	597	3	0.50%
7	554	1	0.18%
8	821	9	1.096%
9	289	1	0.34%
10	413	4	0.96%
11	1138	6	0.52%
12	582	2	0.34%
13	625	3	0.48%
14	530	7	1.32%
15	441	1	0.22%
16	484	13	0.68%
17	633	2	0.30%
18	386	3	0.77%
19	477	3	0.62%
20	1080	16	1.48%
21	431	1	0.69%
22	900	7	0.70%
23	420	7	1.64%
24	1019	5	0.58%
25	417	7	1.67%
26	461	6	1.30%
27	535	2	0.37%
28	1409	2	0.10%
29	453	9	1.98%
30	1365	7	0.51%
Average of hedging devices: .90%			

Table2: Number of total words and hedging devices in each discussion section of Iranian articles

Articles by Iranian writers	2.68%	2.04%	1.67%
Articles by non-Iranian writers	2.73%	2.57%	2.37%

Table3:Highest percentages of hedges devices in discussion parts of Iranian and non-Iranian articles

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