

## 4.2 Tools for cohesion: Answer key

The highlighted words and phrases represent the cohesive elements in this discussion part.

1 Our analysis of scientific abstracts demonstrates that positive and—to a lesser extent—negative words are  
2 increasingly used over the past four decades. **By contrast, this increase** was absent for neutral and random  
3 words. **The increase in positive words** could not be attributed to general language tendencies as represented  
4 by the millions of printed books searched through in this study. **Neither is the increase** driven by one or two  
5 words, **because** all words showed increased frequency patterns. **Even though the upward trend in positive**  
6 **word use** was conserved in high impact journals, **this trend** was significantly less pronounced (fig 1 ↓). **This**  
7 **difference** could be the result of a more thorough and critical editorial and peer review process in high impact  
8 journals.

### 10 *Implications of findings*

11 **Although** it is possible that researchers have adopted an increasingly optimistic writing approach and are ever  
12 more enthusiastic about their results, **another explanation** is more likely: scientists may assume that results  
13 and their implications have to be exaggerated and overstated in order to get published. **Our finding that**  
14 **scientific abstracts use more overt positive language** is **also** probably related to the emergence of a positive  
15 outcome bias that currently dominates scientific literature. There is much pressure on scientists in academia to  
16 publish as many papers as possible to further their careers. **As a result**, we may be afraid to break the bad news  
17 that many studies do not result in statistically significant or clinically meaningful effects.

18  
19 Currently, most research findings could be false or **exaggerated**, and research resources are often wasted.  
20 **Overestimation** of research findings directly impairs the ability of science to find true effects and leads to an  
21 unnecessary focus on research marketability. **This** is supported by a recent finding that **superlatives** are  
22 commonly used in news coverage of both approved and non-approved cancer drugs. **The consequences of this**  
23 **exaggeration** are worrisome since **it** makes research a survival of the fittest: the person who is best able to sell  
24 their results might be the most successful. It is time for a new academic culture that rewards quality over  
25 quantity and stimulates researchers to revere nuance and objectivity. **Despite the steady increase of**  
26 **superlatives in science, this finding** should not detract us from the fact we need bright, unique, innovative,  
27 creative, and excellent scientists.