



How biased is our evidence?



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Bias is all around us. From the moment we open our eyes in the morning we are surrounded by bias – our own bias and the bias that is delivered to us in all shapes and forms. Our own, internal bias is comprised of our beliefs and thoughts, and might interfere with the way we analyze information and make decisions. The external bias is the way others are trying to present information to us and make us perceive things in a certain way. It is quite acceptable, for example, that a commercial will provide biased information towards a specific product; we are prepared for this when we watch TV or listen to the radio.

When it comes to science and evidence in the literature or in conventions, we are less prepared and sometimes even assume that these are free of bias. This assumption is, unfortunately, not completely true and we should be well prepared and trained in identifying bias in our professional life as well.

During recent decades, there has been a major increase in industrial support for research, publications, and lectures. Some of this support is adequately disclosed and some is less obvious and needs to be carefully detected by the reader or listener. While reading a scientific paper we should try to assess possible bias influences, even when they are not disclosed. Sure, the editorial system is doing its best to avoid bias in publications but this is not an easy task; it is part of our duty to critically evaluate the evidence we read, and this includes the risk of bias. We have to bear in mind that the power of the industrial companies and their need to advertise and promote their products might lead sometimes to changes in the way things are presented to us, even in scientific papers. In the same manner, some negative results might not be presented for publication because of pressure from the industry.

When referring to lectures, the situation could be even worse. Here, the balancing and controlling system is less pronounced, and sometimes the lecturers or organizers depend on the financial support of the sponsoring companies, which might enhance bias in some cases. It is not uncommon these days to hear lectures, even in the most respectable conventions, that are contaminated with financial bias. It is our role as listeners to look at those lectures critically and try to figure out what options for bias are possible in each talk. We have to remember that some of those lectures might serve as commercials for the industry and it is our responsibility to judge carefully, just as we do with TV commercials or paper adverts.

Market strategies and economic forces have resulted in an ongoing commercialization of clinical practice. As part of our oath to care for our patients, we have to avoid any financial interference in planning and treating for the sake of our patients' health and well-being. Part of that is knowing how to distinguish science from advertising.

Finally, the role of universities and educational programs cannot be underestimated in this regard. Dental education should not become dominated by the industry. We, as educators, have to avoid any risk of bias in educational facilities in order to be able to serve as role models for our students and trainees. Furthermore, we have to provide our students with the appropriate tools to search and critically evaluate those issues later in their independent professional life.

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