Bullying in the workplace is something detestable, unacceptable in itself.
But is there a causal relationship between bullying and mental health problems?

Does bullying lead to health problems?

In Norway we have a long tradition of prioritising safe working environments – going to work should not make people ill. This also has a legal dimension, in that the provisions of the Working Environment Act place a significant responsibility on the employer to ensure that employees are afforded «full safety from harmful physical and mental influences» (1).

Common sense tells us that bullying is mentally stressful, and it seems plausible that being bullied can thereby trigger depressive reactions and other mental health problems. Moreover a number of studies have demonstrated a clear association between bullying and mental health problems. Those who respond «yes» to the question of whether they are exposed to bullying at work often report that they have mental health problems (2).

However, this can be called into question. Firstly, it may well be that the causal relationship is the other way around – that persons with mental health problems are more exposed to bullying than others. Studies in which people are asked on a single occasion about both bullying and mental health problems – cross-sectional studies – do not provide an answer as to whether the bullying or the health problems came first.

By following the same people over time, it is possible to ascertain whether the bullying occurred before or after they became ill. These longitudinal studies are the classic method of searching for causal relationships when controlled experiments cannot be conducted. For example, most of our assumed knowledge about the health effects of various types of food is based on studies in which a cohort of people have been followed up over time, and their eating habits and health recorded at two or more points in time. The optimal approach would be to conduct randomised experiments, as we do with drugs. However, exposing people to bullying is, of course, ethically indefensible and getting trial subjects to adhere to a particular diet is difficult, especially over time.

In this issue of the Journal, Nielsen at al. present an updated, systematic review addressing this question: What do we know from research about the causal relationship between bullying in the workplace and health problems (3)? They conducted a thorough and systematic search for longitudinal studies in which the prevalence of bullying and health problems was measured at different points in time. Furthermore, they have combined the results from the individual studies into one quantitative pooled analysis – a meta-analysis.

This method has two particular advantages (4). Firstly, the statistical «power» is greater than in a single study, because the sample size is increased. Associations can thereby become apparent that would not otherwise be observable. One of the best known examples of this concerned the use of corticosteroids in women at risk of preterm delivery. It was only after the results from the existing studies were combined in a meta-analysis that it became clear to everyone that the treatment increased infant survival rates (5). A graphic presentation of this meta-analysis is featured on the logo of the Cochrane Collaboration.

The second advantage of meta-analyses is that the various studies included generally encompass different populations. The results may therefore have greater generalisability than the results from a single study; and if the results differ (heterogeneity), this in itself is an important observation that requires an explanation. Why was A so clearly associated with B in some studies, but not in others? The degree of correlation between bullying and subsequent health problems varied substantially across the studies included in the meta-analysis by Nielsen et al. One possible explanation is that the definition of «bullying» and «mental health problem» varied. The meaning of the term «bullying» is essential for the interpretation of these types of studies.

Figures can be misleading, and this applies to meta-analyses in particular. It is always worth remembering that results from such analyses are no better than the studies upon which they are based. Although Nielsen et al. found a statistically convincing correlation between bullying and subsequent mental health problems in their meta-analysis, they are cautious in drawing conclusions. This is primarily because the studies included in their meta-analysis are observational – not experimental. Therefore there will always be uncertainty as to whether the observations are in fact causal relationships or whether there are other factors (third variables) that cause some people to be more exposed to both bullying and subsequent mental health problems. This issue is well known in nutritional research. Is it the vegetables that keep people healthy, or are we deceived into believing this, because vegetable-lovers smoke much less than other people?

One way to attempt to smoke out a possible causal relationship is to ascertain whether a dose-response relationship exists. Does health improve uniformly the more vegetables people eat? If the risk of health problems is found to be higher for those who have been exposed to severe forms of bullying, the evidence in favour of a causal relationship would be strengthened (6). Alternatively, a causal relationship might be considered so plausible in this case that there is no need for further evidence.

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