

Editorial: Media's interpretation of research results

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In the early 1990s when I was working in the Analysis Unit of the Public Health Directorate at the former Yorkshire Regional Health Authority (UK), a regular topic of conversation was discussing the media's reporting of public health issues. Amongst many items, I remember the scare over mercury dental fillings as a result of a special TV documentary. The documentary created an expectation of policy change by health service providers. However, the advice from the executive office was to carry on as normal until advised otherwise by the ministry of health. In the proceeding days and weeks, the media continued to report that there was an increased demand for alternative dental fillings and that members of the public had taken steps to replace all their amalgam with the alternative. But soon the panic faded. And as usual the report was criticised e.g. see

<http://www.quackwatch.com/01QuackeryRelatedTopics/mercury.html>.

Other items covered by the media which provided topics for conversation included wine and chocolate (e.g. see <http://www.telegraph.co.uk/food-and-drink/healthy-eating/chocolate-10-health-reasons-you-should-eat-more-of-it/>). Chocolate was promoted as being not only good for the heart but also for weight loss! Phrases frequently used by the media to report include 'experts say', or 'research show' as supporting evidence for their claim, e.g. scientist have revealed that chocolate is good for you (<http://www.dailymail.co.uk/health/article-3728/Eating-chocolate-good-you.html>)! Such a statement was later claimed to be a hoax in order to demonstrate the gullibility of the media and the public (<http://www.dietdoctor.com/i-fooled-millions-into-thinking-chocolate-helps-weight-loss> or <http://io9.gizmodo.com/i-fooled-millions-into-thinking-chocolate-helps-weight-1707251800>).

And how can we forget the publicity about drinking alcohol which was promoted as being a coronary protective agent. With headlines such as 'Cheers! Alcohol IS good for you...' media's coverage of the alcohol debate is merely supports and promotes a drinking culture (e.g. see <http://www.dailymail.co.uk/health/article-3454813/Cheers-Alcohol-good-5-drinks-week-lowers-risk-heart-failure-heart-attack.html>, or, <http://www.express.co.uk/life-style/health/483365/Red-wine-s-a-tonic-says-doctor>).

One of the feedback effects of media reporting of public health issues is that those items that are favoured by the public such as chocolate and alcohol is immediately taken up and the respective industries benefit financially.

Over recent years the rising rate of obesity has been prevalent in the media, so has the plight of dairy farmers locally and globally with the drastic fall in milk prices, e.g. see (<http://www.reuters.com/article/us-newzealand-dairy-idUSKCN0WU1UU>).

The most recent (24 May 2016) media report which attracted my attention is the revival of the 'fat' debate that fat is good for you (<http://www.stuff.co.nz/life-style/well-good/teach-me/80365213/im-living-proof-that-eating-fat-can-be-good-for-you>), or,

<http://home.bt.com/lifestyle/wellbeing/fat-can-be-good-for-you-after-all-what-you-need-to-know-about-the-full-fat-debate-11364063681910>).

Interestingly, some articles claim to discuss the full-fat debate (e.g.

<http://home.bt.com/lifestyle/wellbeing/fat-can-be-good-for-you-after-all-what-you-need-to-know-about-the-full-fat-debate-11364063681910>). The claim that our current knowledge on fat being a health risk is based on scant evidence does not constitute solid evidence that fat is good for health. On the other hand, just as in the previous examples mentioned earlier what proof is there that we are right this time to promote fat as a slimming agent? Yet, under the headlines, such as ‘eat fat to get slim’ (e.g. <http://www.besthealthmag.ca/best-eats/swap-and-drop/why-you-should-eat-fat-to-get-slim/>, <http://www.telegraph.co.uk/news/2016/05/22/eat-fat-to-get-thin-30-years-of-flawed-dietary-advice-is-disastr/>, <http://www.express.co.uk/life-style/health/438600/Eating-fat-is-good-for-you-Doctors-change-their-minds-after-40-years>), it’s mainly dairy products which are promoted.

The fat debate is not new (e.g. see <http://www.ourcivilisation.com/fat/index.htm>, <http://www.telegraph.co.uk/foodanddrink/4810354/Eat-fat-get-thin.html>, <http://www.express.co.uk/life-style/health/438600/Eating-fat-is-good-for-you-Doctors-change-their-minds-after-40-years>). Unfortunately some authors have put a new spin on it to attract the attention of the media and hence the public. I remember discussing the role of fat as a research student and subsequently with work colleagues. Decades of *uncritical* use of research by academics, politicians and decision makers coupled with the media reporting has led to much misinformation and confusion which has resulted in inappropriate guidelines being issued by various so called experts.

The foremost and important guideline for anyone, be it a member of the public or politicians or academics, is that making tentative conclusions on matters of human behaviour must be based on an appropriately designed longitudinal study using appropriate methodologies to observe, measure, and analyse. Even with such carefully designed studies one cannot include and measure all factors thus making any research conclusions more probabilistic than statements of fact.

In the recent round of the ‘fat debate’ forty years of a low fat diet is being endorsed as the cause of the current obesity epidemic. To make such a claim one has to control for human behaviour, e.g. take into account life style, food security, food production (farming, agricultural, manufacturing), demographic variables, income and educational level, dietary habits, access to appropriate and relevant information, and so many other observable and unobservable variables.

Without going into too much detail about study design and analytical methodologies, it can be argued that the fat debate cannot be a full-fat debate without reference to life during WWII. During and after the war, on average, basic but essential food items such as meat, dairy, sugar, eggs, were distributed through a rationing programme. As a proportion of the average diet, fat consumption was relatively high with bread and dripping providing regular a high energy meal. However, in this context the population’s diet was more a command choice

(restricted or forced) rather than a free choice. Therefore, the risk of excessive eating of any type of food was very low.

All social and economic norms have changed since then; the socio-economic characteristics of residential areas have changed, and food security for those in low socio-economic areas has meant the closure of fresh produce outlets and the growth of fast food takeaways (Shahtahmasebi, 2006). So is it really the lack of fat in people's diet that has led to the obesity epidemic?

It appears that the fat debate could not have come at a better time for the dairy industry with the current drive to popularise fat once more with slogans such as: "Eat fat to get slim, don't fear fat, fat is your friend. It's now truly time to bring back the fat"

(<http://www.metafilter.com/159825/Eat-fat-to-get-slim-Dont-fear-fat-Fat-is-your-friend>).

This is the message from the Public Health Collaboration (<https://phcuk.org/>), a group of medics who have issued a report saying that avoiding fat is bad for our health.

Ironically, it is the proponent of a high fat diet in the UK who have accused public health bodies of colluding with food manufacturers

(<http://www.theguardian.com/society/2016/may/22/official-advice-to-eat-low-fat-diet-is-wrong-says-health-charity>)!

Unfortunately, whilst challenging conventional wisdom often helps to raise media ratings, the ensuing counter challenge (e.g.

<http://www.theguardian.com/society/2016/may/28/national-obesity-forum-advice-fat-dangerous>) causes confusion in the public mind set. In other words, what is being observed as reported recently, e.g. by the Guardian newspaper, does not constitute a debate but a 'challenge' and is reactionary (e.g. see <http://www.sciencemediacentre.co.nz/2016/05/25/uk-diet-report-questioned-expert-reaction/>)

The interesting point is that such conflicts that have come to light due to media coverage represent only the tip of the iceberg. There are many prevention policies based on poor research not considered 'sexy' enough by the media to report such as the current suicide prevention policy in New Zealand and globally, health promotion (e.g. adolescent health related behaviour, cholesterol, diabetes), drink driving and traffic accident prevention policies, and so on. However, the perpetual debunking of research findings creates distrust in the public mindset.

Clearly, one feedback effect is that those items that are favoured by the public such as chocolate and alcohol are taken up thus increasing consumption and demand, which in turn leads to adverse morbidity outcomes.

Another potential feedback is the impact on public health outcomes due to public misinformation, and mistrust of the research community, which in turn leads to the current trend of self-health, self-diagnosis and self-medication which can lead to health complications and chronic ill-health.

It would seem that the proponents of a high fat diet are guilty of the same flaws that they accuse their opponents of. In other words, there is no evidence to support a claim that current obesity epidemic is the result of low fat consumption. However, it must be noted that previous research supporting a low fat diet promoted a balanced diet rather than cut out fat altogether.

Whilst research can inform policy development only when there is open and free debate, the main problem with the media's style of reporting is confusion, distrust, and 'unjustified' change in behaviour in the public at large, which in turn leads to the prevalence of morbidity and mortality. The problem is that, if we, as researchers are not equipped to critique our own research, how can we expect the public to critique research outcomes and policies.

REFERENCE

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