Good intentions and received wisdom are not enough

There is a common view among social and public health scientists that there is an evidence-based medicine (EBM) juggernaut, a powerful, naïve, and overweening attempt to impose an inappropriately narrow and medical model of experimentation onto a complex social world. We have both frequently come across hostility among social scientists, and public health or health promotion practitioners or theorists, to attempts to apply EBM principles (for example, systematic reviews or experimental designs) in social or public health settings (for example, sex education in schools, health promotion campaigns, or community development). We believe such hostility to be particularly harmful in younger children, children from families with lower parental education levels, and children lacking other family members who bicycle. Although “Sesame Street” benefited all children, the gap between fast and slow learners actually increased.

The fifth misconception is that plausibility is a sufficient basis for policy making. It may seem obvious that lying infants to sleep in the prone position is a good idea because this position mimics the recovery position and should reduce the likelihood of choking or inhaling vomit, but studies from a number of countries now suggest that advice to do this in fact placed babies at greater risk of sudden infant death syndrome (SIDS). Even when a range of laboratory, epidemiological and other data point to the likely benefits of an intervention, for example, of dietary supplementation with vitamin A, controlled intervention studies can demonstrate unanticipated adverse results.

The sixth misconception is that experimental methods may underestimate the benefits of interventions because they define their outcomes too narrowly or take too short-term a time frame. This may relate to Oakley’s observation that one reason for the decline in the use of randomised experiments in the United States might have been that they tended to show the interventions to be relatively ineffective (or to do harm). Certainly experimental and observational estimates of the effects of social interventions can differ markedly (for example, observational studies of adolescent pregnancy prevention interventions result in more optimistic estimates of effectiveness compared with RCTs). However, one important reason for systematically evaluating interventions is that the wider beneficial effects of some interventions are not always obvious, either because they often remain unmeasured, or are overlooked. In other cases, benefits may be overlooked until enough rigorous evaluations are available to demonstrate these impacts. In the United States in the 1980s there was uncertainty among politicians about the effectiveness of a supplemental food programme for women and children. However, a synthesis of good quality evaluations showed that it had modest positive effects on birth weights. Other, and sometimes unintended, positive effects may only be convincingly demonstrated in large, prospective, well controlled intervention studies.

We suggest that the antipathy towards evidence-based principles in social science and public health is often based on misunderstandings about the principles of evidence-based policy; reluctance to accept that well intentioned interventions may do more harm than good, or be ineffective and thereby a waste of public money and time; and
unjustified defeatism in the face of apparent operational or ethical problems. Rather than thinking of EBM as a biomedical orthodoxy whose applications to social policy, education, the criminal justice system, etc, should be resisted, we believe that the thoughtful extension of evidence-based principles to all these realms of public policy is important for all those who wish to improve human well being.

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