LETTERS

GRADE for the advancement of public health

The recent debate in this journal about the applicability of the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach to public health interventions is both important and timely.[1] [2] To say it upfront, we are enthusiastic about the transparent, systematic, comprehensive and nevertheless straightforward way in which GRADE guides its users in judging the quality of evidence and in classifying the strength of a recommendation. We do, however, continue to struggle to apply GRADE to a range of public health questions.

Sir Austin Bradford Hill[3] has been called on by those proposing a GRADE-plus framework[2] and by advocates of the status quo.[1] We believe that assessing GRADE's compatibility with Hill's viewpoints is less about ticking the box—the presence or absence of a viewpoint—but rather about how individual viewpoints are considered in upgrading or downgrading. These more subtle reflections will make a critical difference when we take stock of and assess our confidence in the full spectrum of public health evidence, which more often than not is derived from non-randomised studies. Let us illustrate our point in relation to consistency.

Hill placed 'a great deal of weight upon similar results reached in quite different ways',[3] an issue pertinent to complex interventions that are highly dependent on context.[4] In GRADE, an important inconsistency in the size of an effect results in downgrading the level of evidence by 1. Yet wouldn't Hill's original thinking suggest that if a public health intervention delivers similar impacts in different settings and countries, under different circumstances and at different times, and as measured by different researchers using a variety of study designs, the level of evidence should be upgraded? Wouldn't this imply the need for a criterion that examines such *consistency between populations and settings* explicitly?

Currently, GRADE is not being widely implemented in systematic reviews of complex interventions; indeed we were unable to locate any published examples. Is it that the public health community is resistant to change and unwilling to reap the benefits of GRADE? Or are there indeed substantial problems in the applicability of the framework to questions outside clinical practice, turning GRADE into a straight-jacket? There is a simple way to find out and to proceed in an evidence-based way: testing GRADE across a range of public health interventions should inform whether the approach works in its current form or whether modifications are justified.

Eva A Rehfuess,[1] Nigel Bruce,[2,3] Annette Prüss-Üstün[2]

[1]Institute for Medical Informatics, Biometry and Epidemiology and Munich Centre of Health Sciences, University of Munich, Germany; [2]Department for Public Health and Environment, World Health Organization, Geneva, Switzerland; [3]Division of Public Health, University of Liverpool, Liverpool, UK

Correspondence to Dr Eva A Rehfuess, Institute for Medical Informatics, Biometry and Epidemiology and Munich Centre of Health Sciences, University of Munich, Marchioninistrasse 15, 81377 Munich, Germany; rehfuess@ibe.med.uni-muenchen.de

Competing interests None.

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Association between child malnutrition and maternal common mental disorders: the potential role of disability

In 1996 one of the authors (CTM) was the leading author of a clinically based case—control study conducted in Brazil, which investigated the association between child stunting and maternal common mental disorders (MCMD).[1] A positive association (OR 2.8; 95% CI 1.2 to 6.9) was found in that case. Similar methods and results have been reported in another study conducted in Pakistan (OR 3.9; 95% CI 1.95 to7.86).[2]

Harpham et al[3] were the first to test this association through population surveys in a multicentre study. They found significant positive associations between child stunting and MCMD in two out of four countries, namely India (OR 1.4; 95% CI 1.2 to 1.6) and Vietnam (OR 1.4; 95% CI 1.1 to 1.8). In Peru and Ethiopia, there was no significant association. There was congruence in the results of clinical and population-based studies.

We conducted a population survey with the same objective in Brazil. From a low income region of 884 668 inhabitants, a probabilistic sample of 944 mothers of children aged 0—60 months was selected for investigation of the prevalence of child stunting. A multistage sampling design was adopted, and it consisted of three steps: municipalities were randomly selected; sectors within each municipality were established; one household was defined within each sector from which consecutive households where children aged 0—5 years resided were selected. Child stunting, an indicator of chronic protein energy malnutrition, was defined by a cutoff of 2 Z-scores of height for age. A subsample of all the mothers of children aged 6—24 months was utilised for our study. As in the study of Harpham et al,[3] for an evaluation of the prevalence of MCMD our sample was assessed by the SRQ-20 (cutoff of 7/8), which was interviewer administered along with a questionnaire that included the collection of data on mother/child health, socioeconomic and demographic conditions. The project was approved by the ethics committee of the Federal University of Alagoas, process no 000465/2007—96.

The proportion of MCMD was 44.3%. There was no statistical association between child stunting and MCMD (OR 0.9; 95% CI 0.42 to 1.9). The number of subjects presenting with child stunting among those with and without MCMD was 13 (10.5%) and 18 (11.5%), respectively. In the logistic regression analysis, in which the independent variables (MCMD, age and education of the mother, number of children, employment status, social class, breastfeeding and birth weight) were included in accordance with the dependent variable stunting, the significant variables in the final model remained the same as those detected in the univariate analysis: low birth weight (OR 3.6; 95% CI 1.08 to 12.4) and breastfeeding (OR 6.7; 95% CI 1.76 to 25.5). There was no statistical association between child stunting and MCMD (OR 0.9; 95% CI 0.42 to 1.9). In the logistic regression, the variables associated with child stunting were low birth weight (OR 3.6; 95% CI 1.08 to 12.4) and no breastfeeding (OR 6.7; 95% CI 1.76 to 25.5).

When the studies with clinical samples[1] [2] used to evaluate the association between child stunting and MCMD are compared with studies using population samples for the same purpose[3] (and the current study), the former present a stronger association (OR of approximately 3), whereas in the latter the highest significant OR is 1.4. One hypothesis to explain this difference is that in clinical samples, MCMD cases present more disabilities than those from the community. These disabilities would impair mothers in their role as caretakers. Therefore, the association would not be between child stunting and MCMD, but between child stunting and disability linked to MCMD.

For future studies, the administration of an instrument such as the Sheehan disability scale[4] for evaluation of the level of impairment in the SRQ-positive cases is suggested. If our hypothesis is correct, the association with child stunting would be stronger in SRQ-positive mothers with higher scores on the Sheehan disability scale. The implications