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Authors' reply: Jongbloet provides an alternative explanation of our findings about the effect of month of birth on suicide that is based on the oocyte origins hypothesis as opposed to the maternal–foetal origin hypothesis. The oocyte hypothesis (also referred to in literature as 'conception hypothesis') may have significant implications in psychiatry. The intricate interplay between non-optimal oocyte maturation and genes results in a complex pathogenesis of the resultant foetuses or individuals. This occurs in well-timed menstrual cycles, but more so in instances of distorted hormonal tuning, not only in deprived socio-economic conditions but also at the extremes of maternal reproductive life, among endocrinologically unbalanced mothers, after very short pregnancy intervals during the seasonal transitions of the 'ovulatory' seasons, etc.[1] A similar broad spectrum of male-biased developmental anomalies – low birth weight and length, small stature at school age or adulthood, morbidity, and mortality – is present in all these circumstances.[2]

To illustrate the oocyte or conception hypothesis in practical terms: mothers with low socio-economic status are known to suffer from more menstrual disorders,[3] low standards of nutrition and abnormal body mass index. They also are more likely to be smokers or to misuse drugs[4] and to employ less safe methods of contraception resulting in unplanned and unwanted pregnancies, particularly at the extremes of maternal reproductive age and during the postpartum restoration of the ovulatory pattern (i.e. after very short inter-pregnancy intervals). They are likely to have non-optimal oocyte maturation, thus rendering the offspring vulnerable to low birth weight and certain psychiatric disorders. However, we are not clear as to how this hypothesis actually differs from the maternal–foetal origin hypothesis used to explain our findings.[5]

The geographical latitude effect in incidence rates of suicide in England, Wales and elsewhere is assumed by Jongbloet to be a consequence of the stronger seasonal ovulatory pattern the further away from the equator, just as in animals, and, in turn, stronger transitional stages between the ovulatory seasons and, thus, more poor-quality oocytes. However, the only way to accept or reject this concept is by demonstrating the same increase of suicide incidence rate – and of other disease entities or behaviour of complex origin.

We are also grateful to Chotai for his comments. Although we did not look at hanging in relation to month of birth in our study, we did in fact examine the relationship between month of birth and violent suicide (including hanging) as opposed no non-violent suicide, but found no significant association. However, a previous study,[6] in an attempt to replicate the findings of Chotai *et al*,[7] showed that those born during the season January–April were more likely to prefer hanging than poisoning: data from North Cheshire (n=502) appeared to suggest that suicide by hanging was significantly more frequent in those born in the summer months compared with those who used other methods such as poisoning by solids or gases. The findings were not in keeping with reports by Chotai *et al*. However, methodological limitations of the North Cheshire study, including a relatively small sample size, have significantly limited its inferential value. Studies with sufficient power to detect the association between month of birth and risk of hanging are required to show whether one truly exists. Seasonality of birth studies in relation to suicide may enhance our understanding of some biological aspects in the aetiology of suicide such as the oocyte origins hypothesis proposed by Jongbloet.

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Reattribution for medically unexplained symptoms

Morriss *et al*[1] performed a high-quality cluster randomised controlled trial in which reattribution for medically unexplained symptoms was taught to general practitioners (GPs). We compliment the authors on this trial. Strong points of their trial are the avoidance of selection bias by using an independent GP for inclusion, and the inclusion of patients for whom unexplained symptoms of sufficient duration were the reason for the encounter. However, we have some critical comments as well.

First, the training of GPs took only 6 hours and was performed by non-expert trainers. Reattribution is not an easy technique to learn. Other researchers have used training programmes of at least 20 hours.[2,3] The trainers in this study were three nurses and a psychologist. Although they were prepared intensively, they might not have been familiar enough with GP consultations. Consequently, we have doubts about the thoroughness and effectiveness of the training for GPs.

Second, the effect of reattribution training on doctor–patient communication has been evaluated in only one consultation. Reattribution usually takes more than one consultation.[4] Making an inventory of the problems and broadening the agenda can lead to quite a disturbance of the normal flow of the consultation. Patients often need more time to make a link between their psychosocial and physical problems. In the article it seems like it was mostly the doctor who made the link. This does not fit into the original reattribution model. A negotiating style is needed in order to let the patient raise the possibility of a link him- or herself.[4] For the purpose of effective reattribution, the patient has to come up with the link and not the doctor.[2,3]

Third, we know that the effectiveness of psychological treatments consists of specific and non-specific effects. Non-specific effects are effects caused by mutual trust, empathy and shared understanding.[5] The training in reattribution and applying it might have influenced the physicians' relation with the patient negatively because of the physicians being absorbed by the application of the new intervention. Less attention for empathy and other non-specific effects might have been an additional cause for the absence of treatment effects.

Finally, it is a pity that the authors did not differentiate the outcome effects for subgroups. Patients with medically unexplained symptoms form a heterogeneous group. 'Treatment effects

are always moderate' due to the differences in levels of emotional and physical stress.[6] The subgroup of patients with low emotional stress before treatment might have experienced deterioration in outcome measures after reattribution because of the consequent opening up and admittance of their problems. Although this is a clinically valuable change process, by reporting the overall treatment effects, this profit might be concealed.

In short, we think that some of the questions surrounding the treatment of patients with medically unexplained symptoms has been clarified by this high-quality trial, but there remain many others.

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Authors' reply: Thank you for the interest in our paper; we would like to clarify some points.

First, we conducted a 6-hour training intervention in reattribution because, on the basis of a series of studies of training in primary care, this is the length of training that most general practitioners (GPs) are prepared to attend in the UK and also in many other healthcare systems in the world. The 6-hour training produced the changes in communication that have been reported with 20-hour training in reattribution.[1] Moreover, more extensive training in reattribution for more than 20 hours by GPs does not necessarily improve patient outcome.[2] We used nurses and a psychologist because in practice these trainers would carry out this training in the work place if the intervention was ever implemented in routine practice in the UK. We received systematic feedback from the GPs about training via feedback forms at the time of training, a survey carried out later, and via in-depth qualitative interviews carried out in a sample of the GPs. The issue that the trainers might not understand the consultation was not raised as a concern by the GPs in the study.

Second, the paper describing the reattribution model,[3] which was written by one of our team (L.G.) and subsequent descriptions of reattribution written by members of our team, have always promoted a model in which doctors provide the 'making the link' explanation although they should do this through negotiation with the patient. In our trial, the intervention group of GPs gave the 'making the link' explanation in a negotiatory manner much more frequently than the treatment as usual group. We agree that reattribution may be more effective on patient outcome if patients made the link themselves between their physical symptoms and a psychosocial cause. However, GPs may need to spend much longer with patients to achieve this.

Third, we agree that an instrumental task-oriented consultation such as reattribution might be perceived as less empathic by patients with medically unexplained symptoms than treatment as usual. However, in our trial the data from the patient satisfaction questionnaire suggests that compared with treatment as usual, after reattribution training twice as many patients were very satisfied with how well the GP understood the nature of their problems and their worries (reattribution training (n=57) *v.* treatment as usual (n=68): nature of the problem 34 (60%) *v.* 23 (34%); worry 34 (60%) *v.* 20 (29%); $P<0.10$ for both items, intention-to-treat analysis allowing for missing data, clustering at practice and GP level, age and gender of patient using generalised linear latent and mixed models). The data suggest that patients perceived GPs trained in reattribution to be no less empathic than GPs delivering treatment as usual. Therefore, there may be other features of the reattribution intervention delivered by GPs in this way that may explain its lack of effectiveness. We have explored this in a qualitative interview study with patients in the trial that will be submitted for publication.

Finally, we agree that certain subgroups of patients with medically unexplained symptoms may benefit from reattribution. However, our trial was not powered to examine this issue.

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