Let’s help parents help themselves: A letter to the editor supporting the safety of behavioural sleep techniques

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We read with interest the recent article by Middlemiss et al. titled “Asynchrony of mother–infant hypothalamic–pituitary–adrenal axis activity following extinction of infant crying responses induced during the transition to sleep” published in Early Human Development, Volume 88, Issue 4, April 2012 [1]. Whether behavioural sleep techniques cause infants undue stress and potential long-term emotional harm is a highly contentious issue in Australia and internationally [2–4]. While we understand that the aim of Middlemiss’ paper was not to comment on the safety of behavioural sleep techniques, a conclusion of the article has been used by social media outlets in Australia and overseas to warn against their use [5]. As sleep researchers and clinicians, our goal is to help parents improve their children’s sleep and, subsequently, their own mental health [6]. We are concerned about the potential harm that Middlemiss’ conclusion may have by discouraging health professionals and families from using effective [7–9] and safe [10] behavioural sleep techniques.

There are two issues arising from the article that we would like to highlight. First, the authors’ conclusion that infants’ physiological distress levels (measured via cortisol) “remained high” during the three-day programme, despite a reduction in behavioural distress (i.e. crying), is misleading. No normative data exist that describe infant cortisol levels over the course of a typical day. Consequently, it is not possible to conclude that the levels reported by Middlemiss et al., are higher or lower than infants’ normal cortisol levels at bedtime. Furthermore, by analysing the change in cortisol levels before and after the sleep programme, the article reads as though the first collection for each day represents a starting point where the infant and mother are not stressed. There was no statistical evidence for changes in infant cortisol levels across the four collections and the absolute changes were clinically negligible. For example, the mean difference from the first to second collections on Day 1 was —0.127 μg/dl, and on Day 2 was 0.100 μg/dl, which translates to very small effect sizes (difference in standard deviations) of 0.15 and 0.13, respectively [11]. Despite this, in the abstract, the authors report that the levels on the third day were elevated.

Our second concern relates to the type of sleep programme offered in the study. In our research and clinical practice, we do not recommend that parents use the unmodified extinction methods (also known as ‘crying-it-out’) used in the Middlemiss et al. study, because of the distress they cause parents. Instead, we recommend modified versions like graduated extinction (‘controlled comforting’) and adult fading (‘camping out’). These behavioural techniques have been shown to be highly effective, cost-effective and safe to use in the long-term [7–10]. Unfortunately, these modified versions are frequently confused with traditional, unmodified extinction, and consequently are subject to a great deal of unfounded criticism by health professionals [2] and the social media [12]. Also, in contrast with the Middlemiss study, we only recommend behavioural sleep techniques for children aged 6 months and older (some children in the study were as young as 4 months). Six months is thought to be the age at which children develop the capacity for ‘object permanence’, i.e. understanding that a person or thing exists when it moves out of sight [13]. Once this milestone is achieved, an infant understands that his/her parent continues to exist and will return after the brief separations involved in the behavioural sleep techniques.

Neurobiology research tells us that stress is good for us and necessary to develop, but that too much stress over a long period of time (i.e. years) resets our regulatory processes to maladaptive states [14,15]. However, it is unknown how much stress (severity and length) in infants is too much. We agree with Middlemiss et al., that it is vital to understand how children’s neurobiology develops. For this, we need longitudinal studies that collect true baseline measurements of cortisol in the child’s normal environment (e.g. at home rather than in a parenting centre), in response to both acute and chronic stressors, over several months and years. In the meantime, parents and health professionals who are seeking ways to manage infant sleep problems can be reassured that behavioural sleep techniques like controlled comforting and camping out (a) benefit the majority of families seeking help to reduce infant sleep problems and improve parent mental health, and (b) are safe to use, i.e. they have no long-lasting effects on child mental health, stress regulation, or the child–parent relationship [7,8,10]. For parents and health professionals interested in evidence-based sleep advice, we recommend visiting the Australian government-funded, not-for-profit, www.raisingchildren.net.au for an excellent summary of infant and child sleep and development.

Ethical statement

Ethics approval was not sought because no new data were collected for this letter to the editor.

Conflict of interest statement

The authors have no conflicts of interest to declare.

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