



Research Article

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Treatment of Behavioural Sleep Problems: Asking the Parents

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Abstract

Background: Behavioural sleep interventions, which can have significant mental health benefits for parents, are commonly and successfully utilised to teach children to self soothe at night. In most methods offered in South Australia, these often require parent(s) to ignore their child's cries for extended periods, a technique parents may find difficult. It is important to understand why parents find this difficult as this impact on intervention compliance. This paper presents pilot data from two studies to address these issues.

Methods: Study 1: As part of a larger clinical trial, 73 families of sleep disturbed (aged 8-51 months) children who had previously attempted ignoring their child's cries, anonymously and voluntarily commented on their experiences and success of a technique that did not ignore their child's cries (3-4 week previously published behavioural based sleep intervention). Study 2: Those comments were used to conduct and further explore in an online anonymous survey, parental opinions of sleep intervention techniques and sleep disturbance. Parents ($n=104$) were asked if and why they would or had used techniques that included ignoring their baby's cries, specifically "controlled crying".

Results: All parents in Study 1 reported significantly reduced sleep disturbance ($p<0.001$) and high satisfaction (Mean (SD) score of 4.3, range 2-5). Thematic analyses suggested parents found this method was successful and achievable and respectful of both children's emotions and parental choices because they did not need to ignore their baby's cries. In Study 2, 72% of parents would not use or continue to use controlled crying methods. Those parents who used controlled crying were more likely to be outcomes focussed whereas those who did not were likely to be emotionally focussed.

Conclusions: This study gives valuable information about parental opinion of common behavioural sleep interventions. Although small and selective samples, it is the first time parental opinion has been explored and is therefore an important addition to the field. If larger more rigid studies confirm these findings, this will inform how best to optimise the delivery of and compliance with sleep interventions.

Keywords

Behavioural sleep treatment; Infants; Controlled crying; Extinction; Self soothe

Introduction

Sleep problems, from either reduced sleep quantity or quality in young children, can be both significant and extensive [1-3] and are not restricted to age, socioeconomic demographic or country [4]. Whilst most children will experience some degree of transitory and developmentally normal sleep problem [5], some families with more persistent sleep problems will seek professional assistance, particularly when they persist after 6 months of age. Not only do sleep difficulties in children lead to significant attentional and memory problems, decreased school performance, problematic behaviour, mood disturbance, increased risk of obesity and poorer health in general [6] but when left untreated, sleep problems developing during the primary school years can become a persistent problem and equate to health difficulties as adults [7,8]. In fact, sleep problems in children, particularly infants and pre-schoolers, can have a significant and detrimental effect on family function and parental mental health [9]. Even in the absence of no family or prior history of depression, a relationship between depression and sleep loss during early parenthood has been reported [10], with these sleep problems clearly putting parents at risk [2].

The large majority of these sleep problems in young children do not have a physiological aetiology but are behaviourally based [11,12]. In fact, up to 40% of young children have been reported to have these sleep problems [13]. These behaviourally based sleep problems have been classified by the International Classification of Sleep Disorders as Behavioural Insomnia of Childhood [14] and include sleep problems such as difficulty initiating and maintaining sleep and frequent night wakings. Specifically, difficulties initiating sleep may be due to (1) the inability of the child to initiate sleep alone (or reinitiate sleep after a night waking) without the assistance of another individual or object (Sleep Onset Association Disorder Type) or (2) bedtime reluctance where the child is unwilling to go to bed and parents have difficulty in setting and implementing healthy and adequate sleep guidelines (Limit Setting Disorder Type) [14]. It should be noted that that defining a sleep disorder in children, compared to adults, is more complex and that these sleep disorders are often overlapping. In Australia, as in many western cultures, where young babies and children sleep either in their own bed or in a separate room, behavioural sleep problems and night waking accompanied by nocturnal crying are common [15]. That is, for those children who have difficulty settling without assistance, when they wake in the night, they will signal to their parent or caregiver for attention and assistance. This nocturnal crying and protesting from the child can develop into extended night wakings not only for the child but also for the parent who is trying to soothe them or trying to encourage them to sleep alone [16]. Often parents will co-sleep with their child as a solution to the night wakings rather than as a choice. Up to 40% of families in Australia have reported sleep problems that fit the above description [9,17] and cultures around the world have reported similar statistics [18].

As these sleep problems are considered behavioural, the interventions utilised are also behavioural [19,20]. Common sleep training methods for parents can be considered to lie on a spectrum

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ranging from completely ignoring a child's night time protests or cries (an extinction method often called the "cry-it-out-method"), to staying with the child until they fall asleep or co-sleeping. Between these two extreme methods lie other options, such as the camping out method and the graduated extinction method [4]. The camping out method has been described as parents sitting with their infant/child until they fall asleep then gradually removing their presence from the room over a period of a few weeks [21]. The graduated extinction method often refers to a variety of techniques (sometimes called controlled crying or controlled comforting) but in all versions of this technique, parents are instructed to ignore bedtime crying and tantrums for specified periods whether on a fixed schedule (e.g. every few minutes) or progressively longer periods (e.g. 2,5,7,10 minutes) [4].

All of these treatments have been shown to achieve their aims of reducing night time crying and parental interaction by teaching parents to set limits on how much they will attend to their child and what they will do when they do [4,22]. In Australia however, particularly within the jurisdiction of the first author, most health professionals delivering sleep treatments promote standard extinction or graduated extinction. These two treatments are often tolerated with difficulty by parents as the significant amount of crying (as the child communicates their desire for parental attention), can be difficult for a parent to withstand [4,21,23-25]. Even in more gentle methods such as 'camping out', some centres in Australia expect parents to ignore their child's crying and must not comfort their child if distressed (CCCM 2006). It would appear then that in a large majority of cases, if behavioural sleep interventions are to be successful, parents need to ignore their child's crying and this may not be tolerable for some parents. Whilst it has been reported that parents find compliance with extinction techniques difficult [4], exactly how many parents, and the reasons for their non compliance has not, to our knowledge, been evaluated. It is important to better understand this non compliance with sleep interventions so as to maximise treatment outcomes. This information will allow a more comprehensive and perhaps targeted delivery of sleep interventions to all parents.

This paper reports data from two pilot studies. The first presents previously unreported parental opinion of and comment on a sleep intervention that did not include ignoring a child's cries, yet achieved successful sleep outcomes [16]. The second used those comments to explore in a pilot study, reasons why parents did (or did not) prefer this method to those that necessitated ignoring a child's cries and further to estimate the number of parents who preferred extinction based methods to non-extinction based methods. For the purposes of this paper, non-extinction based methods are defined as those that do not necessitate ignoring a child's cries (such as parental presence). The principal aim of this paper is to understand parental opinions about sleep interventions in the hope that findings will result in better understanding of parental needs in relation to sleep interventions in infants and young children.

Study 1

Materials and method

Participants: Between January 2009 – April 2011, on average 15 new families per month attended a private paediatric sleep psychology clinic in Adelaide, South Australia, for assistance with the sleep of their pre-school child (approximately 390 families over two years). Because this is a psychology practice specialising in behavioural

sleep medicine, this clinic offers a larger range of sleep interventions from extinction to camping out compared to medically based clinics within the same jurisdiction. All families who attend the clinic and who complete the entire 5 week sleep treatment program (completion rate of approximately 75%, n=292 families) are sent an evaluation and post intervention sleep diary one month after completion of the 5 week program. Evaluations were returned by reply paid post and are anonymous in order to minimise social desirability bias. All families who did not return the initial evaluation were contacted again by post to request that they return their evaluations, however essentially return of the evaluations was voluntary. Data from 73 of those families who returned their evaluations is included in this study. Given the anonymity, identifying details of each family are not available, but a sub sample of the 73 families (n=33) have been identified in a previous publication [16]. In that group, the target children were 47% female, with mean maternal age of 32.9 years and a mean maternal education of 14.7 years. What is known of the current sample group is that all children were between the ages of 8 months and 51 months (largely a pre-school demographic) and contained both public and private patients indicating a range of socio-economic families. Clients were referred from primary health care practitioners, Child and Youth Health organisations, hospitals, and peer referral. During initial interviews, all families in this sample reported attempting some version of sleep intervention based on extinction methods where they were instructed by a health professional to ignore their child's cries either completely (standard extinction) or periodically (graduated extinction), and being uncomfortable with the method, abandoned it. Permission was gained from all parents, to utilise their data in an anonymous fashion for this paper.

Materials: The Clinic Evaluation Questionnaire (CEQ) has been developed by the clinic. The CEQ asks parents to score on a Likert scale of 1-5, (1=the lowest score and 5=the highest score) how they rated the service, the psychologist's approach, the success of the program (i.e. whether the sleep disturbance had been alleviated, as measured by a pre and post sleep diary) [16] and their overall satisfaction. Two open ended comment boxes invited parents to offer other comments on the treatment program.

Intervention: The treatment program is described elsewhere in detail [16] but briefly contains 3 sessions, one follow up after 2 weeks and an evaluation sent out 4 weeks after the last sessions. The focus of the program is to change sleep behaviour, by applying the principles of behaviour and learning theory and delivering parental psycho-education of how this applies to the sleep environment. This is coupled with learning alternative behavioural strategies that reduce parental interaction at settling time, while assisting parents with limit setting rather than focusing on reducing inappropriate behaviours, as is done with the previously described extinction strategies. The main difference between this method and extinction techniques is that parents are not expected to ignore their child's cries. They will respond to the cries (they call back to the child when the child calls or cries, telling them to wait, they will be there soon), and then they can go to the child if they choose. When they go, they gradually reduce interaction by substituting forms of comfort that are reassuring to the child yet are more sustainable because they will create less dependence, until the child and parent are confident enough with little or no interaction. Parents are not instructed to ignore their child's cries (as in extinction methods) and they can always (at least) call back to the child. Different reduced interactions are explored and

practiced and take into account parenting styles (e.g. authoritarian vs. permissive) and the infant’s reactions. Psycho-education about routine, misconceptions about crying, parental exhaustion and ability to complete the program were discussed. The sleep interventions are implemented over three sessions. The first session is dedicated to history taking and discussing behavioural interactions between parent (s) and child that may be creating dependency in the child. Session 2 is dedicated to exploring and choosing alternative methods of settling the child. Session 3 is implementing the precisely planned behaviour change(s) with an individually written programme based on choices made by the family in week two [16].

Results of study 1

All measures of sleep including total night time sleep; time taken until SOL (sleep onset latency) and WASO (wake after sleep onset), assessed in the subset of this sample significantly improved (all $p < 0.002$) with large treatment effects sizes ($d = 0.94 - 1.85$), as noted in the original publication [16]. All parents who returned their evaluations ($n = 73$) reported that sleep patterns, previously reported to be a “great deal of a problem” on the Likert Scale (1=the lowest score and 5=the highest score) were reduced from 5 to either 1 or 2. There were no differences in outcomes for age or gender.

Answers to the questions (1), “Please indicate on the line below how successful the assistance you received from the Clinic was in dealing with your sleep problem” and (2) “Please indicate on the line below your overall satisfaction with the Clinic” had a mean (SD) score of 4.3 (0.8) and 4.7 (0.7) (range 2-5) respectively, confirming a high success and satisfaction rate. Responses to the questions: “Did the sleep treatment improve anything else in the family home”? 2. “Do you have any other comments about the Clinic”? were thematically analysed.

No comments were reported in 32% (24/73) for the first optional open ended question, and 52% (38/73) for the second. For those that did respond, several themes emerged which are thematically grouped and presented in Table 1. For the purposes of this paper the answers are restricted to those of parental outcomes only (that is, improvements to children’s behaviour for example, are not reported). Responses suggested that improvements in sleep and settling problems showed secondary gains in parental mental and physical health, reduced stress levels and improved energy levels in 43% (32/73) families, followed by increased knowledge of child development and behaviour for 21% (16/73).

In terms of the comments about the program itself, four main thematic areas emerged and these began to address parental opinion of the method itself. Although three parents reported that it was difficult and time consuming, most comments were about the inclusiveness of the method (24%-18/74), satisfaction that it was child and family friendly and the absence of extinction techniques (15%-11/74). This was supported by comments such as: (1) “[The program was] Very supportive, good explanations and examples enabled me to focus on small steps to achieve overall goals” (2) “[I] like the approach of developing accommodating realistic programs that is inclusive of parents views, ie: being able to go to your child” (3) “Very understanding, didn’t make us feel like we were wrong – many other professionals have been quite judgemental” (Parents own words, with permission).

Table 1: Controlled crying rationale questionnaire.

Parents Age:
Parents Gender: Male/Female
Age of Infant or Toddler:
Ethnic Origin please circle:
Aboriginal or Torres Strait Islander
Anglo Saxon
Asian
Other (please describe).....
The Controlled crying method is a sleep treatment that instructs parents to put their child to bed awake, leaving them alone(crying if necessary), for increasingly longer periods, but checking them briefly at increasing intervals (for example, 2 minutes, 5 minutes, 10 minutes, 20 minutes etc), until they fall asleep alone without a parent in the room.
We are interested in your thoughts and feelings about this method.
Have you used the controlled crying method as described above?(Please tick)
Yes and it was good <input type="checkbox"/> Yes started to use it but stopped <input type="checkbox"/> No <input type="checkbox"/>
If you answered ‘Yes and it was good’, why did you use it? Please tick any box that applies to you
It works <input type="checkbox"/>
Clinic nurse’s suggestion <input type="checkbox"/>
Child settles <input type="checkbox"/>
Provides routine <input type="checkbox"/>
Friends say it works <input type="checkbox"/>
It creates boundaries <input type="checkbox"/>
It gives me space away from my child <input type="checkbox"/>
The baby sleeps longer <input type="checkbox"/>
Are there other reasons? Please describe below
.....
If you have NOT used this method or have used it and stopped, why did you not use it or stop using it?
Too stressful for parent <input type="checkbox"/>
I dislike the concept <input type="checkbox"/>
It creates separation anxiety <input type="checkbox"/>
I prefer comforting my child <input type="checkbox"/>
Too stressful for the child <input type="checkbox"/>
The child will cry too much <input type="checkbox"/>
An anxious baby will stay upset <input type="checkbox"/>
Can’t bear to hear my child cry alone <input type="checkbox"/>
Are there other reasons? Please describe below
.....
.....
.....

Study 2

In Study 1, data obtained was from a selective sample (all had reported utilising and abandoning extinction techniques that necessitated ignoring their child’s cry). Therefore responses were likely to be biased. Their comments were nonetheless important as they raised the question of whether other parents shared similar opinions of extinction based methods. So it was deemed important to further explore parental opinion about sleep intervention methods in a second anonymous and non-clinic based sample who had not necessarily refused extinction methods.

Participants

Any parents of an infant or toddler up to 36 months of age at the time of completing the questionnaire were invited to participate in an online survey accessed through the Survey Monkey site. This study was advertised on sleep websites (e.g. www.sleepeducation.net.au; www.sleepstore.com) and in health clinics and daycare centres where the researchers have ongoing contact in Warwick, Toowoomba and Adelaide, South Australia.

A total of 109 were recruited over a two month period - five participants' data were incomplete and so were excluded from the study making a final sample size of 104 (females=101, 98%). Parental ages ranged from 21-44 with the mean age (SD) for males 34.67 (5.69) and females 32.15 (5.14). Given the pilot nature of this study and as there is no published evidence to suggest gender differences in perceptions regarding sleep treatments, the three males were included in the sample.

Materials

Based on questions debated in the literature surrounding extinction methods (i.e excessive crying, difficulty complying with graduated extinction) and comments from respondents in Study 1, the authors developed the Controlled Crying Rationale (CCR) questionnaire specifically for this project (Table 2). Development began by piloting the CCR. In the pilot study, 25 consenting parents of young children from two urban community child care centres in Queensland, Australia, were asked at random by the researcher (AB) to participate in an interview before or after they collected their child from the child care centre. A description of controlled crying was given (see appendix) and then parents were asked their thoughts and feelings specifically about that method with two questions: (1) Have you used the controlled crying method? (2) If YES, why did you use it? If NO, why did you not use it? Interviews were continued until responses were saturated and no new information was forthcoming. Reasons given by respondents for and against controlled crying were then used to form a list of eight potential responses each for and against the use of controlled crying, presented in a checkbox format for the final questionnaire. Parents were asked to record their age, gender and their child's age. All surveys were anonymous with online surveys uploaded automatically while pen and paper surveys were returned to the researcher in reply paid envelopes. Full ethical clearance was given and consent procedures were approved for all sections of the study.

Results

The percentage of parents reporting use of the controlled crying method was summed. Parent responses indicated that 25% utilize controlled crying, 22.1% utilize it but stopped and 52.9% did not utilize controlled crying. In total, over 70% of parents either did not use controlled crying or started it and stopped.

Reasons for use of controlled crying were explored. These are presented in Table 3.

From the summary data, it appears that parents did not utilise the controlled crying method or started and stopped mainly because of concerns that it had an emotionally detrimental effect on the parent and/or the child (Table 3). By contrast, those who chose to utilise the controlled crying method did so because of a behavioural outcome that they deemed favourable (i.e "it works"; "the baby sleeps longer").

Table 2: Parental responses to closed and open ended questions from evaluations.

Other improvements	% (n)*
Improved parental mental and physical health	43% (32)
Increased knowledge of child development and an easy to understand method of behaviour management	21% (16)
Improved relationship between parents	17% (13)
Increased confidence in parenting and ability to change things	9% (7)
Improved relationship with child	8% (6)
Other comments	% (n)
Inclusive of parents views	24% (18)
Child friendly with no excessive crying	15% (11)
Difficult because takes time but worth it	2% (2)
Worked initially – couldn't sustain it	1% (1)

*Total sample size = 73

Table 3: Parent report (n=104) of positives and negatives of utilising the graduated extinction method called controlled crying.

Usage if Controlled Crying		Non usage or non compliance with controlled crying	
Reason	% (n)*	Reason	% (n)
It works	20.2% (21)	Too stressful for parent	47.1% (49)
Provides routine	16.3% (17)	I dislike the concept	44.2% (46)
Friends says it works	13.5% (14)	Too stressful for the child	44.2% (46)
The baby sleeps longer	11.5% (12)	I can't bear to hear my child cry alone	41.3% (43)
It creates boundaries	10.6% (11)	An anxious baby will stay upset	24% (25)
Child settles	10.6% (11)	The child will cry to much	24% (25)
Mother/friends suggestion	6.7% (7)		
It gives me space from my child	4.8% (5)		
Clinic nurse's suggestion	2% (2)		

*Total n for this sample =104

Discussion

As noted above, several authors [4,21,23-25], have reported that parents find extinction techniques difficult but exactly why this is has not been the subject of investigation to date. This paper investigates this and reports, for the first time, parental opinion about sleep interventions which require parents to ignore their child's crying. The first study, in a selective clinical sample who had tried and abandoned extinction techniques, reported satisfaction with a method that did not ignore crying yet was still successful in ameliorating sleep and settling problems in their child. The second study further explored in a larger random sample, how many parents had tried and abandoned a form of graduated extinction (controlled crying) and why. Findings from Study 2 suggested that approximately 30% of parents choose to utilise controlled crying and suggested use was based on perceived behavioural outcomes whereas the majority of respondents chose not to utilise controlled crying due to perceived emotional outcomes. Whilst these data are limited by small sample sizes and some response bias, we believe that this is the first attempt to directly seek

out parental opinion and attitudes to sleep interventions. It is hoped that these results will lead to larger empirical studies that will further clarify how to tailor BSI for parents so that compliance is maximised and sleep disturbance minimised.

When considering the findings of both studies together, two main themes emerged. The first theme of interest in both studies is that the comments put forward by parents tended to be thematically divided into either emotional/psychological or behavioural. For example, in Study 1, behavioural outcomes included improved confidence/knowledge/relationships and emotional/psychological themes included being inclusive of parental views /no excessive crying. Similarly in Study 2, all responses were either behavioural or emotional/psychological. More precisely, in Study 2, it emerged that comments in support of extinction were largely behavioural (“it works”, “child sleeps longer”), whereas those not in favour of extinction were more emotional/psychological based (“too stressful for parents”, “the child will be too upset”). Whilst these differences may be reflective of the type of questions asked, or parental perceptions, it may also reflect basic differences in approach, perhaps reflecting the type of parent that prefers to use some form of extinction technique or of a particular parenting style. Parents, who are experiencing unsettled infant behaviours, for example, all require support in order to avert problems in the development of parental confidence, maternal mood problems and a satisfying parent/infant relationship [26,27]. If possible, this needs to be congruent with parenting choices and styles and so understanding parental choices and styles is important for compliance. Evidence is clear that parent/child interactions are diverse and complex [28] and theoretical perspectives must take into account individual differences and be adapted to avoid a “one-size-fits-all” approach. For example, several parents (24%) in Study 1 noted their preference for a technique that was inclusive of parents’ desires to comfort their child, a view confirmed in Study 2, where 44% of parents reported preferring to comfort their child. If parents’ views and preferences and parenting styles are taken into account, would this increase compliance? Our findings suggest that this may be the case. Our studies were not aimed at clarifying specific parental factors that contribute to non-compliance of extinction interventions, yet they were a first attempt at trying to understand any parental opinions and factors that may impact on non-compliance. The need for systematic, larger studies in this area taking into account parental factors and parenting styles is clear.

The second most common theme involved excessive crying. In Study 1, reduced crying was noted as an advantage of the intervention and in Study 2, excessive crying was given as a reason for low uptake/compliance with controlled crying methods. Previous authors have noted that the main barrier for compliance to extinction techniques was excessive crying and the difficulty parents had with ignoring this. Specifically, Cook et al. [24] suggest that “Despite the effectiveness..... some parents find techniques involving extinction unacceptable, as they dislike leaving their infant to cry. Given that these parents may not follow through with strategies, it may instead be preferable to aim to prevent sleep problems “(P3). Furthermore, Hiscock and Wake write that concerns about extinctions techniques...” have led to community reluctance to manage infant sleep”, Finally Meltzer [23] wrote, “Although effective, extinction is not well tolerated by most families, resulting in poor adherence to treatment recommendations. Most parents who seek assistance for sleep problems cannot tolerate prolonged crying in their children”. Our data confirm these viewpoints

and point to strong reasons for non-compliance to extinction programs which necessitate ignoring a child’s cries. Whilst it is clear that there exist non-extinction sleep interventions such as parental-presence based techniques [30], it may be that the parents in these studies were not offered these possibilities. This seems to be the case in South Australia where the majority of parents seek assistance for sleep disturbance with medical practitioners who commonly advocate extinction methods but alternative methods that do not ignore crying are rarely offered. Previous data have shown that sleep problems and interventions receive little attention in medical studies [29,30] and so reliance on published data would be the main source of information for medical primary health care practitioners. Indeed, based on Mindell and Owens [30] comprehensive review of behavioural sleep interventions in children, the vast majority of published work in this area reports extinction techniques, with 40/57 studies of behavioural sleep interventions including some form of extinction [4]. In Study 1, it was noted that parents valued the choice they were offered by the behavioural sleep psychologist to avoid extinction during the intervention program. Some parents reported that when approaching other medical health professionals, their choices and preferences had been at the least undervalued and at worst judged as ‘wrong’. Indeed, two parents, respectively, reported that this method was “inclusive of parents views and limitations” and “didn’t make us do what we were not comfortable with” (Parents own words, with permission). In Study 2, 23% (n=23) parents also reported that they had utilised extinction techniques under direction from their health professional although it was not specified if these were medical or allied health.

Clearly, when parents are in need of assistance, their primary health care professional is the first point of call. What appears clear from these data is that, whilst extinction is clearly efficacious in achieving a reduction in night time crying and therefore parental sleep disruption [4,21,23,31,32] for those parents who find this difficult, alternative choices and support should be considered as part of professional service delivery. It is not always the case that parents are offered alternatives to standard extinction techniques [23,33], or are offered sufficient emotional support during extinction methods, which may be particularly helpful in maintaining compliance [34]. Given that behavioural sleep problems are very common in young children [4,9,22,35]; our studies give important information about the need for ensuring the availability of tailored BSI for parents through their health delivery networks. Health professionals are in the prime position to be able to offer a range of sleep treatments to parents in need and should therefore be versed in all available options which sometimes is not the case [34].

Findings of these studies need to be considered in light of several limitations. Methodological limitations include, particularly in Study 1, the self-selective nature of the sample resulting in a potential subjective reporting bias. Parents in Study 1, had clearly rejected extinction techniques and there is likely a high motivation to prefer a more gentle approach to sleep training and this may have contributed to the positive feedback and a social desirability bias in reporting. However, similar responses were recorded in the second study where an attempt was made to improve this by targeting a less selective sample with no predisposition to response bias. It should be noted that in Study 2, although in theory a random sample, it may have inadvertently gathered a sample of parents with varying degrees of favorability for the use of extinction or may have favoured parents who had access to the online survey. In addition, whilst in

Study 1 some of the demographic information was available for a sub group, there was essentially no identifying information for any of the participants, and so it was difficult to extrapolate any demographic information that may assist in understanding what, if any, social or psychosocial factors are embedded in these parental observations. However, collecting demographic and personal information is often not congruent with surveying a random anonymous sample and whilst anonymous samples make generalisability impossible, it also excludes the potential for response bias. It is also noteworthy that these two studies utilise different methodologies, and no control groups for the intervention study.

Despite these significant limitations, these cross sectional survey data point readers to the potential benefits of treatment matching, and begin to suggest mismatching as a reason for non compliance. This explicit novel contribution to behavioural sleep medicine will assist our field in how best to tailor and increase compliance in the 40% of new parents who seek assistance. It is, to the best of our knowledge, the first attempt to understand parental opinion around the most commonly prescribed sleep intervention currently available yet often not complied with and provides important qualitative feedback from parents. More importantly, These studies have the potential to elucidate critical barriers to parents engaging in behavioral treatments for their children and prompt the need for further investigation in larger, more rigid studies. If parents do not comply with current and common BSI treatments, what do they do? Are they left untreated as suggested by Hiscock and Wake [27]? Do they undertake unsafe sleeping practices in order to get some sleep (i.e. co-sleeping in young babies)? How can we improve access for parents to other available sleep interventions? Is this a question of training availability for health professionals or desirability?

The answer to these questions depends on further study. It is clear that sleep disturbance can be extremely debilitating with significant sequelae for parents and child, so finding the best formula for the best compliance and treatment should be high on the priority of early childhood health care professionals. These data begin that journey.

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