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The Management of Chronic Insomnia in Young Children: A Survey of UK General Practice

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ABSTRACT

Objectives: Chronic insomnia (CI), the most common sleep disorder in young children, is associated with negative outcomes for the child and family. This study explores the beliefs, current practice, and understanding of UK primary health care professionals (PCPs) regarding CI in children under 5 years.

Method: An online survey of UK PCPs (e.g. general practitioners (GPs), practice nurses) recruited through Clinical Research Networks. The survey consisted of Likert-style and closed- questions regarding beliefs, current practice, and training/knowledge. Data were analyzed descriptively.



Results: Two hundred and ninety-five PCPs took part (mostly GPs, $n = 244$). Respondents believe that CI has a large impact on children and family. 80% agreed that CI should be managed in health care and 66.3% in primary care. However, consultations with families regarding CI were reported as infrequent. 91.6% agreed that CI should be managed with behavioral approaches, and more than 85% of respondents recommend positive bedtime routines. Respondents had varied confidence and knowledge about management. They had received little to no professional education about CI.


Conclusions: PCPs recognize the importance of CI and understand some principles of management, though they lack training and confidence. Improved training and awareness of evidence-based resources for support would improve management in primary care.

Introduction

Up to 30% of parents report that their children experience sleep problems. Chronic insomnia (CI), specifically behavioral insomnia, is the most common sleep problem in children (Hill & Everitt, 2018). Short sleep/poor quality sleep in children is associated with negative physiological, psychological, and functional outcomes for the child (Matricciani et al., 2019) and family (Coles et al., 2022; Mindell et al., 2009, 2015).

Systematic reviews and meta-analyses have evidenced a variety of behavioral treatments as effective for young children (Meltzer & Mindell, 2014; Meltzer et al., 2021; Mindell et al., 2006; Reuter et al., 2020). These include, but are not limited to, improved sleep hygiene (otherwise known as positive sleep habits), extinction-based techniques such as graduated extinction (controlled comforting) and extinction with parental presence (camping out), delayed or faded bedtime, scheduled awakenings, positive reinforcement, and parental education.

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Primary health care may be an optimal setting to prevent or address behavioral sleep problems early. A narrative literature review of pediatric sleep problems in primary care (Honaker & Meltzer, 2016) suggested suboptimal management in these settings. In studies including insomnia, for example, primary care providers (PCPs) recognized sleep problems including insomnia symptoms in young children (Bruni et al., 2004; Mindell & Owens, 2003; Mindell et al., 1994; Owens, 2001; Owens et al., 2003), although documentation of sleep disorders, including insomnia, in health-care records was limited (Meltzer et al., 2010). PCPs endorsed evidence-based behavioral sleep strategies (Bruni et al., 2004; Mindell et al., 1994; Owens, 2001); however, documentation of recommendations in clinical records was low (Meltzer Lisa et al., 2014) and only two studies explored efficacy of interventions in primary care (Adachi et al., 2009; Adair et al., 1992). Barriers to management included limited professional teaching (Faruqui et al., 2011; Mindell & Owens, 2003; Mindell et al., 1994, 2011; Rosen et al., 1993) and limited knowledge and/or confidence in managing insomnia, albeit this was still higher than for other types of sleep disorders (Bruni et al., 2004; Davis et al., 2012; Faruqui et al., 2011; Mindell & Owens, 2003; Mindell et al., 1994; Owens, 2001).

Studies in Honaker and Meltzer's review were mostly based in the United States or Italy. More recently, however, similar surveys of health professionals were conducted in Turkey (primary care pediatricians (Ersu et al., 2017)), Australia (health professionals, which included "medical practitioners," many of whom were likely working in primary care (Richardson et al., 2021)) and Canada (health professionals of which participants' specialties were 36.1% family medicine and 9.3% general practice (Gruber et al., 2017), with general practice a primary care term now less often used (Rosser, 2006)). These studies similarly highlighted limited training, knowledge, and confidence regarding the management of insomnia. Other primary care intervention studies have also recently been published with positive findings (Williamson et al., 2020), and primary care screening tools have been developed (Honaker & Saunders, 2018).

To date, there have been limited studies conducted in UK primary care settings, with most published studies conducted in other countries with different primary care systems. For example, the United States has primary care pediatricians as the first point of contact for families; therefore, it is expected that they may have more knowledge and practice regarding managing children's sleep than within a generalist primary care setting such as in the UK. Some outdated studies have focused on UK health visitor participant populations (community child nurses who are the primary universal contact for families with children under 5 years old in the UK). None have included other UK primary care clinician populations (i.e., general practitioners who are general family doctors working in general primary care practice in the UK). Recent studies (Cook et al., 2020, 2022; Hatton & Gardani, 2018) of parental views of help-seeking for sleep problems in children discuss negative views of health professional support, but include minimal information regarding general practitioners (GPs).

It is therefore of merit to address this knowledge gap and explore the management of pediatric sleep problems within a UK national health service primary care setting (general practice) and compare to similar studies in high-income countries with differing health systems (e.g., pediatricians) to explore whether knowledge, practice, and beliefs differ. This study broadly explored UK general practice PCPs' views, knowledge, professional training, current practice, and unmet needs regarding the management of chronic insomnia in pre-school children younger than 5 years old. No specific hypotheses were tested due to the exploratory nature of this study.

Materials and methods

Reported using the Consensus-Based Checklist for Reporting of Survey Studies (Sharma et al., 2021).

Design

A cross-sectional online survey.

Setting

UK National Institute for Health and Care Research (NIHR) Clinical Research Networks (who facilitate research delivery and participation in health and care organizations in England) distributed an online survey link, which respondents completed at a place and time suitable to them.

Participants and recruitment

Eligibility criteria

UK practicing general practice-based PCP (GP or nurse working in general practice).

Sample size

This exploratory survey targeted a sample size of 100–300 to capture a range of views.

Sampling and recruitment

Recruitment took place September 2020 to February 2021.

Initially (September 2020) the survey link and researcher contact details were distributed via e-mail from one local clinical research network (LCRN) to potentially eligible staff in research active GP practices within their region, encouraging distribution to other potentially eligible staff in their practices. Potential participants receiving the link could then decide whether to take part. Due to COVID-19 recruitment challenges, another nine LCRNs participated from November 2020 to February 2021 by circulating to potentially eligible staff within their region, and community recruitment (e.g., social media advertising), and snowball sampling was used. The 10 LCRNs advertising the survey included the North, East, South, West, Midlands, and London regions of England.

The survey link included the participant information sheet and research team contact details for any questions. Researchers were unaware of who was invited; thus, it was not possible to record the number of, or reasons for, nonparticipation. Surveys were submitted directly to the research team.

Respondents who did not provide information regarding their professional group, e.g., “general practitioner” and/or that they were a GP or nurse based in “general practice,” were excluded from data analysis.

Survey design and data collection

The survey mostly used or adapted questions from published literature (Bruni et al., 2004; Ersu et al., 2017; Faruqui et al., 2011; Mindell & Owens, 2003; Mindell et al., 1994; Owens, 2001). It was further refined following input from a public contributor who had personal experience with children’s sleep problems, and the research team (a PhD student, a paediatric somnologist, an academic GP, a health psychologist, and a medical statistician). The survey was pilot tested with two GPs, which informed the development of the final version (see supplementary information 1).

An introductory explanation clarified the survey’s focus on the management of chronic insomnia (behavioral type) in typically developing children up to 5 years old. It had three sections: 1) beliefs, 2) current practice, and 3) professional training and understanding.

For “beliefs,” participants rated the impact of chronic insomnia on different domains using Likert scales, as similarly done in other surveys. These were adapted from (Faruqui et al., 2011; Gruber et al., 2017; Mindell & Owens, 2003; Mindell et al., 1994; Owens, 2001). Specifically, the domains/response options were those used by Faruqui et al., (2011) with small changes to wording resulting from pilot testing and the addition of “parental stress” due to the response options about the impact on families given in the other surveys. Participants also rated their agreement on statements about the impact and management of chronic insomnia in children, and they ranked who is important for the management of chronic insomnia.

For “current practice,” participants were asked about frequency of consultations about chronic insomnia with parents, decision aids they use for management, and their awareness of sleep resources for families. Completing questions adapted/based from similar research asking about individual treatment practice (Mindell et al., 1994; Owens, 2001), participants also rated their likely frequency of recommending a list of individual treatment recommendations. Similar to Owens (2001), the questions used a Likert scale of frequency. Scale points were 1 (“never”) to 5 (“every time”). The list of individual recommendations were informed by those in both Owens (2001) and Mindell et al. (1994) and further developed by experts within our research team. Further, Mindell et al. (1994) asked these questions generally, and Owens (2001) in response to specific scenarios. In the current study, a rating was given in response to each of three age ranges: up to 6 months, 6 months to 12 months, and 1 to 5 years. Completing Likert questions from Faruqui et al. (2011) adapted to be specific to chronic insomnia (by swapping the term “sleep problems” with “chronic insomnia” in two statements), respondents rated their confidence in aspects of management from 1 (“not confident”) to 5 (“very confident”).

For “professional training,” participants were asked about any formal teaching specific to chronic insomnia in children during their training; opportunities to receive teaching since; attendance at further teaching; perceived need for any (or more) sleep teaching specific to chronic insomnia during their training, and whether they would like to access sleep teaching if they were given the chance now.

For “knowledge,” participants were asked to select “True,” “False,” or “Don’t know” in response to 10 statements about sleep in children; five sleep hygiene statements were from Mindell’s (Mindell et al., 1994) sleep survey, here reported as knowledge questions 1 to 5. The wording of one of these statements was slightly changed based on our development/pilot testing. The other five were from Owens’ (Owens, 2001) pediatric sleep survey, here reported as knowledge questions 6 to 10.

The survey was designed to take approximately 15 minutes to reduce risk of non-response. Questions were primarily closed or Likert-scale questions. There were some additional free text boxes (see supplementary material 1) where participants could add comments, either at the end of each main section (beliefs, current practice, and professional training) or by expanding on some specific answers or selecting an “other” response. A final page asked about demographic details such as health professional type, time in practice, time in primary care, region of practice, age, gender, and ethnic background.

At the end of the survey, participants were offered the chance to enter a drawing to win a £100 gift voucher.

Analysis

The survey was open to general practice staff, and health visitors/community nurses. This article includes GPs and general practice nurses, as too few health visitors/community nurses (less than 10) participated to be representative. Data were manually checked for repeated participation. One duplicate participant was removed. Data were analyzed using descriptive statistics with number and frequency reported for binary/categorical variables and mean or median as appropriate for continuous variables in SPSS. Percentage of respondents is reported based on valid responses received. Likert-scale data were analyzed by calculating the number and percentage of respondents for each scale point and comparing response options at higher and lower ends of the scale, thus enabling comparison with previous research.

The number of participants who gave extra detail by responding to the free text questions varied widely (ranging from 9–133 participants). There is not capacity to include an analysis of free text comments within this article; however, it is planned to include this in a future publication.

Ethical considerations

The University of Southampton Research Governance Office (RGO 53955) and UK Health Research Authority (IRAS 277619) approved the study. After reading the participant information sheet, participants provided informed consent before completing the survey. Survey responses were submitted directly to the research team, and contacts/organizations who distributed the survey link were not informed of

participation. Participation was anonymous unless respondents left their contact details for the voucher draw. All data were kept confidential, and contact details were stored separately from survey responses.

Patient and public involvement

A public contributor who had personal experience with sleep problems in their children was involved in the design of this study. This person confirmed the relevance of the topic and of the study population, and also informed the development of some of the survey questions.

Results

Sample characteristics

There were 295 general practice PCPs who responded.

Most were GPs ($n = 244$, 82.7%) or practice nurses ($n = 31$, 10.5%, a registered nurse working within a GP surgery) and nurse practitioners (nurses with advanced training, working in GP surgery) (See Table 1). Ages ranged from 26–75 years ($M = 46.72$, $SD = 9.5$), and 60.3% were female. Respondents had practiced in primary care from 1 to 41 years ($M = 14.6$, $SD = 9.2$), 66.1% were white British, and 84.7% had personal experience caring for children up to 5 years old.

Table 1. Participant characteristics.

CHARACTERISTIC	N (%) OR Mean (SD)	Median (range)
Years since qualified ($N = 292$)	20.69 (10.3)	20 (1–50)
Years in primary care/community ($N = 281$)	14.6 (9.2)	14 (1–41)
PCP type		
GP	244 (82.7)	
Advanced nurse practitioner	17 (5.8)	
Practice nurse	31 (10.5)	
Health visitor (general practice-based)	1 (0.3)	
GP trainee (reported by free text in “other”)	2 (0.6)	
Age ($N = 288$)	46.72 (9.5)	46 (26–75)
Gender		
Male	106 (35.9)	
Female	178 (60.3)	
Missing	11 (3.7)	
Ethnicity		
Black or Black British	African	2 (0.7)
White	British	195 (66.1)
	Irish	1 (0.3)
	Other	14 (4.7)
Asian or Asian British	Indian	47 (15.9)
	Pakistani	4 (1.4)
	Bangladeshi	1 (0.3)
	Other	3 (1.0)
Mixed	White and Asian	4 (1.4)
	White and Hispanic	1 (0.3)
	Other	4 (1.4)
Other ethnic groups	Chinese	3 (1.0)
	Other	5 (1.7)
Do not state/missing		11 (3.7)
Personal experience of caring for children aged 5 or under		
Yes (or mention of having children/grandchildren or caring for family members)	250 (84.7)	
No	31 (10.5)	
Other response/response not clear	3 (1)	
Missing	11 (3.7)	

Age, ethnicity, and gender characteristics are similar to published data for GP practice staff working in the National Health Service in March 2021 (Digital, 2021).

Unfortunately, it was not possible to categorize many free text responses on regional location of practice. However, prior to excluding the small number of participants who were not based in general practice ($n = 8$) or who were not a nurse or GP in general practice ($n = 13$; for example, non-clinical or a role not expected to be consulted about sleep), the approximate percentage of complete responders (proportion of participants from each CRN region where the study was advertised) were: East of England (41.2%); North-West London (16.2%); North West Coast (14.4%); Wessex (11.3%); Kent, Surrey, and Sussex (6.7%); East Midlands (3.2%); North Thames (2.1%); Thames Valley and South Midlands (1.8%); South London (1.4%); and West Midlands (1.4%).

Beliefs

Impact of chronic insomnia

Participants rated their beliefs regarding the impact of chronic insomnia in children on a 1 (“no impact”) to 5 (“major impact”) scale. Generally, respondents perceived an impact on all domains: “mood and behavior,” “learning ability,” “general physical health,” “social health (peer and family relations),” “weight gain,” “accidental injury,” and “parental stress.” Average ratings were 3.39 to 4.74, with “no impact” reported by 3.1% or less. Ratings of the impact of sleep on psychosocial domains were slightly higher than for physical domains, with parental stress most often rated the highest impact. See Figure 1 for the percentage of respondents reporting the top two ratings (4 or 5, high or “major” impact) or the bottom two ratings. Supplementary Table S1 reports the number and percentage of respondents for each rating.

Participants rated statements about the impact of chronic insomnia from 1 (“strongly disagree”) to 5 (“strongly agree”); 86% and 97.5% agreed/strongly agreed that it affects the child and family, respectively (see Figure 2).

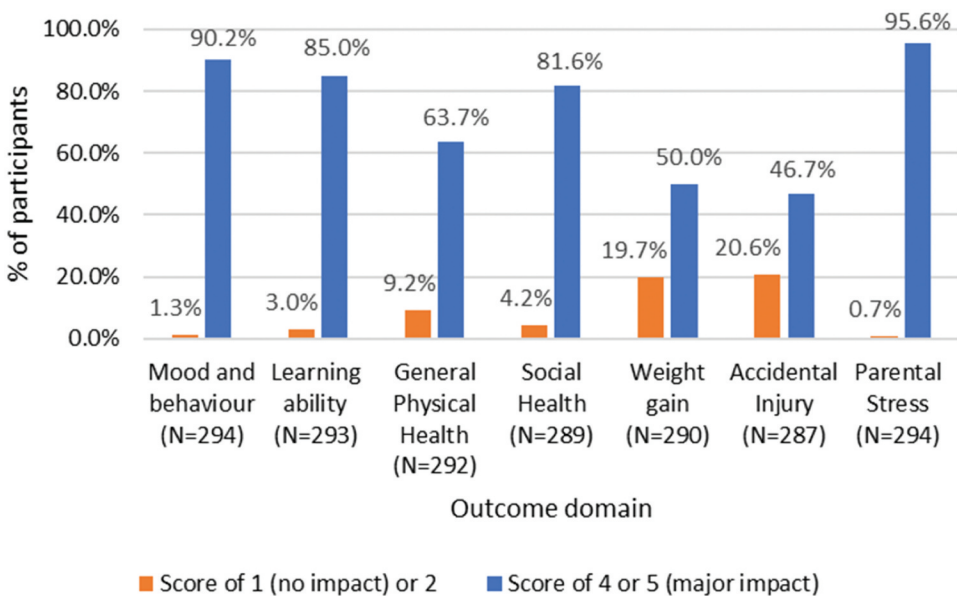


Figure 1. Percentage of respondents scoring at each end of the rating scale for their perceived impact of chronic insomnia on each outcome.

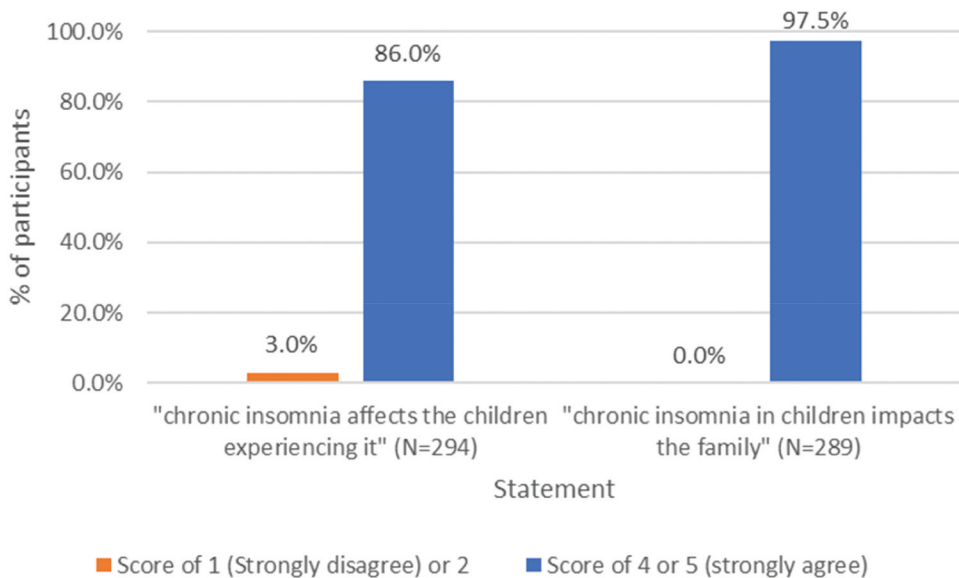


Figure 2. Participant agreement ratings about the impact of chronic insomnia in children.

Beliefs about the management of chronic insomnia

Participants rated statements about management from 1 (“strongly disagree”) to 5 (“strongly agree”); see supplementary Table 2. Eighty percent (of $N = 295$) agreed/strongly agreed health services should advise about or manage insomnia, 66.3% (of $N = 294$) agreed/strongly agreed primary care should manage insomnia, and 58.8% (of $N = 291$) agreed/strongly agreed it should be managed in their practice; 91.6% (of $N = 287$) agreed/strongly agreed it should be managed using behavioral intervention, as opposed to 17.8% who agreed/strongly agreed it should be managed with pharmacological approaches.

Participants ranked people from 1 to 6 in order of importance for management, with 1 being “least important” and 6 being “most important.” Ranking varied, but most often chosen as most important were parents. For health professionals, the most common (modal) ranks were: health visitors (5), GPs (4), nursery nurses (3), GP practice nurses (2), and other (1). See supplementary Table 3.

Management

Consultations

Two hundred ninety-one respondents reported how often they discuss chronic insomnia with parents in consultations: “sometimes” (44%), “rarely” (43%), “frequently” (6.5%), “never” (5.8%), and “very frequently” (0.7%).

Regarding who initiates the discussion about insomnia, across all age ranges “the family” were most often identified (see Figure 3).

Respondents selected which decision aid(s) they use when managing children’s chronic insomnia. The most common was “general discussion about the child’s sleep history” ($n = 236$, 80%), then “personal experience” ($N = 162$, 54.9%), followed by “sleep diary,” “existing literature,” “I do not use anything specific,” and “other” (see Figure 4).

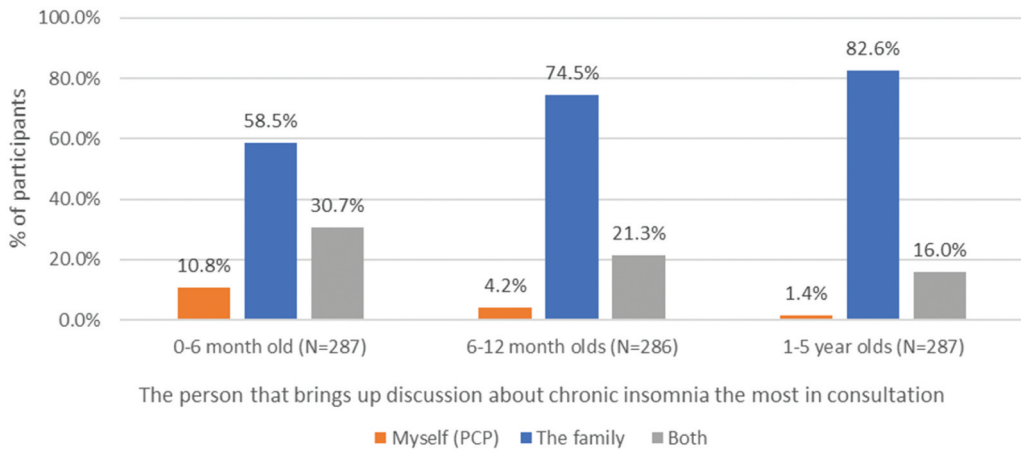


Figure 3. Participant reporting of who most often initiates discussion about insomnia in children for three different age groups.

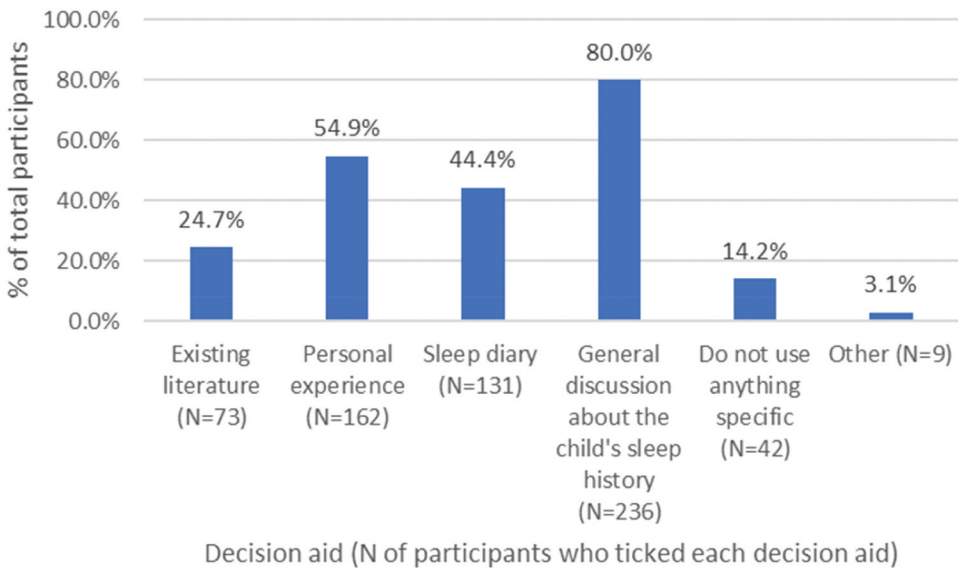


Figure 4. The number and percentage of total participants who reported that they use individual decision aids when managing chronic insomnia in children.

Likelihood of different treatment recommendations

See Figure 5 for the percentage of respondents rating each recommendation as likely to be used most of the time/”every” time, for each age range. See supplementary Tables 4–6 for number and percentage of respondents selecting each response.

In all age ranges, positive bedtime routines was the most likely recommendation with fewer than 85% making the recommendation most of the time/”every” time. Fewer than 50% rated other recommendations most of the time/”every” time.

Also, 46.8%, 37.6%, and 26.7% (for ages up to 6 months, 6 to12 months, and 12 months to 5 years respectively) of respondents reported they would advise the sleep problem would resolve over time most of the time/”every” time. This decreased as age range increased. Conversely, the percentage who

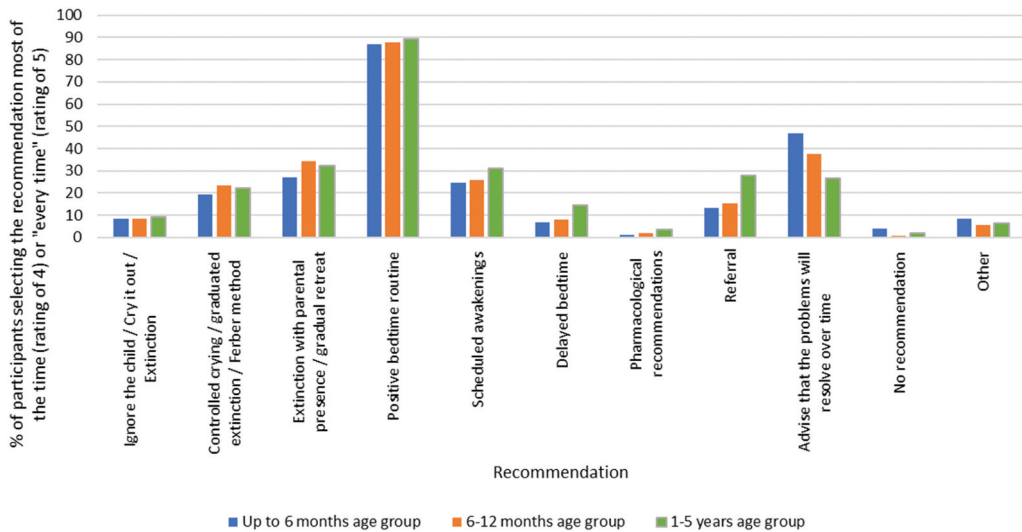


Figure 5. Percentage of respondents who reported that for children's chronic insomnia in each age range, they would likely make each recommendation most of the time (rating of 4) or every time (rating of 5).

would make a referral most of the time/"every" time increased with the child's age (13.1%, 15.4%, and 27.9%, respectively).

For extinction-based techniques, a higher percentage of respondents preferred modified approaches in all ages. More respondents reported they would likely recommend "gradual retreat" (camping out) most/"every" time (27.2% to 34.3%), followed by "graduated extinction" (controlled comforting; 19.5% to 23.3%), and finally "unmodified extinction" (cry it out; 8.3% to 9.1%).

For scheduled awakenings, 24.6% to 31.2% would make the recommendation most/"every" time, compared to delayed bedtime recommended most/"every" time by 6.8% to 14.5%, with the percentages increasing with age range.

In each age group, "no recommendation," pharmacological recommendations, and unmodified extinction were the least likely to be recommended; less than 10% would advise these approaches most/"every" time.

Awareness of other resources

Two hundred eighty-four participants responded about whether they were aware of any resources or sources of support or information for parents, and 70.4% selected "no," while 29.6% selected "yes." Of those reporting "yes," 83 reported on frequency of use: "most of the time" (43.4%), "in particular circumstances" (42.2%), "all of the time" (9.6%), "rarely" (3.6%), and "N/A" (1.2%).

Confidence in management

See Figure 6 for the number and percentage rating at each end of the scale and supplementary Table 7 for each response option. For all statements, the modal response was 3, indicating generally respondents were neither confident nor unconfident (see Figure 3). The mean rating was highest for the sleep hygiene statement ($M = 3.33$, $SD = 1.04$), followed by the ability to manage and refer for chronic insomnia ($M = 2.78$, $SD = 0.94$), ability to conduct follow up ($M = 2.61$, $SD = 0.97$), and ability to motivate children to change sleep behavior ($M = 2.51$, $SD = 0.98$). Just less than 50% were confident or very confident in advising about sleep hygiene (45.6%), but only 14.1% to 21.6% were confident or very confident for other aspects of management.

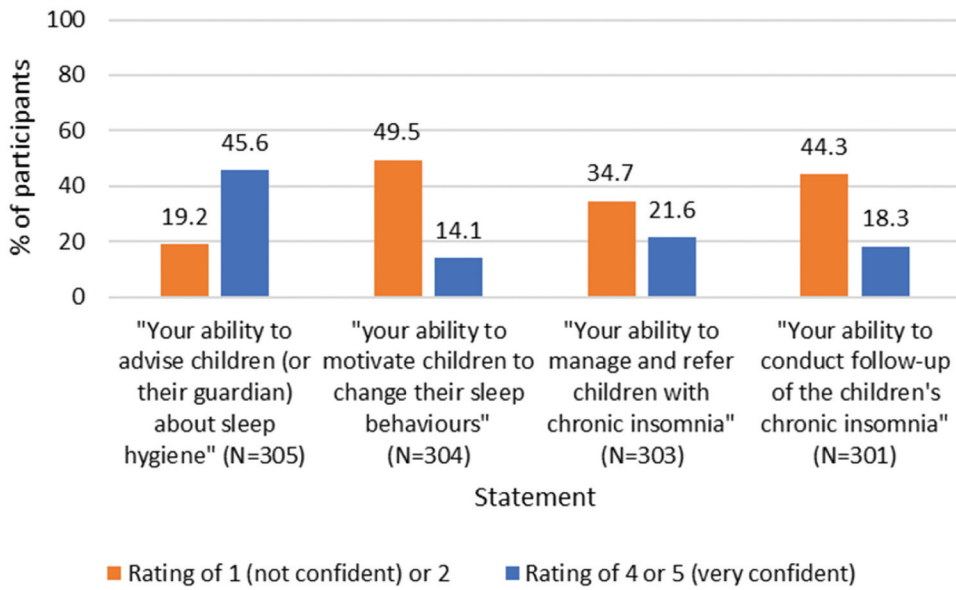


Figure 6. For different statements regarding their ability to manage children's sleep, the percentage of respondents who rated at each end of the confidence scale. Those who rated 1 ("not confident") or 2 and those who rated 4 or 5 ("very confident").

Knowledge

Professional training

Regarding formal teaching about chronic insomnia in children, 84% of respondents reported that they had not received formal teaching during training to become a health professional, and 80.3% had not had the opportunity since (see Table 2). Fifty-one percent felt they should have had more when training to become a health professional, and 80.7% reported that given the opportunity, they would like access to further teaching/training.

Table 2. Participant responses about whether they have had formal teaching/education specific to chronic insomnia in children.

Questions asking about formal teaching (for health professionals) specific to chronic insomnia in children	N	%
Whether they had teaching during medical education/training (N = 290)	Yes	17 5.8
	No	245 84.2
	Not sure	29 9.8
Whether they have had the opportunity to receive teaching since training to become a health professional (N = 290)	Yes	37 12.8
	No	233 80.3
	Not sure	20 6.9
Of those who selected "yes" to opportunities since becoming a health professional, attendance at any of the opportunities (N = 36)	Yes	13 80.3
	No	19 50.2
	Not sure	4 11.1
Feeling that they should have had any/more when training to become a health professional (N = 290)	Yes	148 51
	No	54 18.6
	Somewhat	88 30.3
Given the opportunity now, whether they would like to access further teaching/training (N = 290)	Yes	234 80.7
	No	56 19.3

Knowledge

The percentage of respondents scoring questions correctly ranged from 26.4% to 75.9% (questions 1–5) and 24.7% to 77.8% (questions 6–10), suggesting knowledge varied (see Table 3). The most incorrect/uncertain questions were about letting infants cry themselves back to sleep (73.6% incorrect/did not know), rocking an infant to sleep (60.3% incorrect/did

Table 3. Knowledge questions.

Question [correct answer: T= true, F= false]	Answered correctly N (%)	Answered incorrectly N (%)	Answered "Don't know" N (%)
<i>Questions 1–5 (Mindell et al., 1994)</i>			
Depriving a child of his/her nap is effective in helping children to sleep at night [F] N = 294	173 (58.8)	60 (20.4)	61 (20.7)
Sleep resistance and frequent night wakings in children are often highly amenable to behavioral techniques [T] N = 307	200 (68.5)	35 (12.0)	57 (19.5)
Rocking an infant to sleep before placing him/her in the crib is likely to be an effective strategy to improve sleep [F] N = 310	117 (39.7)	101 (34.2)	77 (26.1)
In general, infants should be allowed to cry themselves back to sleep [T] N = 307	77 (26.4)	140 (47.9)	75 (25.7)
A child who regularly has trouble getting to sleep at night should be allowed to sleep later in the morning [F] N = 310	224 (75.9)	16 (5.4)	55 (18.6)
<i>Questions 6–10 (Owens, 2001)</i>			
It is normal for school-aged children to take naps up to several times a week [F] N = 294	189 (64.3)	73 (24.8)	32 (10.9)
Breast-fed babies usually sleep through the night at an earlier age than bottle-fed babies [F] N = 293	191 (65.2)	34 (11.6)	68 (23.2)
Health care providers should not recommend temporary establishment of a later bedtime as an intervention for a child with difficulty falling asleep [F] N = 292	72 (24.7)	123 (42.1)	97 (33.2)
It is normal for young children to awaken briefly during the night at the end of a sleep cycle (every 60–90 minutes) [T] N = 293	228 (77.8)	22 (7.5)	43 (14.7)
"Learned hunger" resulting from frequent night feedings can lead to increased nocturnal awakenings in infants [T] N = 294	189 (64.3)	31 (10.5)	74 (25.2)

not know), and temporarily establishing a delayed bedtime for a child with sleep onset difficulties (75.3% incorrect/did not know).

Discussion

This is the first survey study to explore UK general practice PCPs' management of chronic insomnia in children. It included PCPs from diverse regions of England. PCPs were aware of the impact of chronic insomnia in young children, and while most were confident recommending positive bedtime routines, confidence about other behavioral strategies was more limited. PCPs reported they were unlikely to recommend pharmacological treatment. Participants generally agreed that chronic insomnia should be addressed in health care, though consultations with parents are infrequent. Importantly, participants reported receiving little professional teaching about chronic insomnia in childhood, there was low awareness of sleep management resources for parents, and the majority would welcome more teaching opportunities.

PCPs belief that childhood chronic insomnia has a significant impact on the child and family reflects prior U.S. findings (Faruqui et al., 2011; Owens, 2001) where pediatricians also recognized an impact of sleep disorders on all domains of function. Both studies found psychosocial domains rated as more impacted than general health domains. Other studies in U.S. and Italian pediatricians (Bruni et al., 2004; Mindell et al., 1994), and Canadian and Australian health professionals (Gruber et al., 2017; Richardson et al., 2021) have similar findings, indicating health professionals working with children are aware of the diverse impacts of sleep problems on child and family well-being.

Despite study respondents agreeing chronic insomnia should be managed in health care, infrequent consultation rates were reported for this common problem in children (Hill & Everitt, 2018). This may reflect the differences between PCP role types, as in the UK consultations are likely more frequent with health visitors (Cook et al., 2022). However, Honaker and Meltzer's review (Honaker & Meltzer, 2016) also suggested that childhood sleep is infrequently addressed in primary care. Qualitative research suggests that parents have perceived barriers to approaching health professionals such as GPs due to accessibility, fear of judgment, or concerns about the reliability of advice and training (Cook et al.,

2020, 2022; Hatton & Gardani, 2018). Encouraging GPs to inquire about children's sleep more routinely might help address this.

That most respondents felt chronic insomnia should be managed with behavioral rather than pharmacological approaches reflects international guidelines (Owens et al., 2005). However, nearly 20% believed pharmacological management to be important, despite the British National Formulary for Children (NICE & BNFC; NICE & BNFC 2025) not recommending this approach for typically developing children in primary care.

High rates of positive bedtime routine recommendations and lower levels of preference for modified extinction approaches over unmodified extinction align with prior research (Bruni et al., 2004; Mindell et al., 1994). Cultural norms are known to strongly influence responses; for example, 86% of U.S. pediatricians would likely recommend gradual retreat (camping out) (Mindell et al., 1994) compared to 35% of Italian pediatricians (Bruni et al., 2004), highlighting the importance of flexible management options for individual families within a multicultural society.

That 70.4% of respondents were unaware of any resources or sources of support for families is concerning and is an area that merits further work. Evidence-based online resources could be signposted to parents in time-limited consultations.

The reported lack of professional education about chronic insomnia in children is in line with research from other countries. 67% of U.S. pediatric nurse practitioners (Mindell & Owens, 2003) and 80–82% of Turkish pediatricians (Ersu et al., 2017) also reported no professional teaching for sleep problems/disorders. The interest in more teaching is also echoed in other research, for example, in 92% of pediatric nurse practitioners (Mindell & Owens, 2003). Similarly, varied participant knowledge of insomnia and sleep hygiene in the current study are similar to previous studies. A problematic question in both the current study and Bruni et al. (2004) was about rocking an infant to sleep. Average scores on the sleep hygiene questions were 73.5% in Mindell et al. (1994), compared to 57.89% in Bruni et al. (2004). Forty to 66% of Turkish pediatricians scored correctly in knowledge questions in Ersu et al. (2017).

Varied confidence levels also aligns with other research; for example, Faruqui (Faruqui et al., 2011), developer of these confidence scales (not specific to chronic insomnia), reported less than 15% of U.S. pediatricians were very confident on any statement, and similarly for U.S. pediatric nurse practitioners' confidence in assessing and treating insufficient sleep (Mindell & Owens, 2003), and Turkish (Ersu et al., 2017) and U.S. (Owens, 2001) pediatricians' confidence in managing children with sleep problems.

Differences in primary care between countries must be acknowledged. For example, while U.S. parents can seek help directly from primary care pediatricians, UK families consult with a general practitioner. From the current and previous research, findings regarding beliefs, current practice, and knowledge appear similar in both systems. While in other countries where previous research has been conducted parents seek help primarily from primary care pediatricians, some children will see family medicine physicians, which are similar to a generalist system. The current study therefore supports findings suggested for family medicine, for example Gruber et al. (2017), which also found limited knowledge for sleep in Canadian health care practitioners, which included family medicine.

Strengths and limitations

This was the first survey of UK GPs on this topic and included nearly 300 GPs/general practice nurses across many regions of England. Often questions were generally similar to (or adapted from) studies where validation analyses had been conducted, but were updated in this more recent survey based on development within the study team, PPI feedback, and to be more specific to chronic insomnia and different age ranges where applicable. The definition of behavioral subtype of chronic insomnia at the survey start could have influenced responses; however, this was necessary to ensure respondents

focused on the management of chronic insomnia as a primary issue in typically developing children. For brevity, the treatment recommendations question asked about positive bedtime routines (a well-evidenced part of sleep hygiene) alongside other behavioral management strategies but not other aspects of sleep hygiene.

Unfortunately, there were few responses for community PCPs such as health visitors who are another designated health provider for child health in the UK. Thus, data specific to this group could not be analyzed. Self-selection of respondents could have introduced bias. Many of the participants had personal experience caring for a child younger than 5 years old. Social desirability bias could also have an effect, where respondents may have perceived “right” or “wrong” answers and selected responses accordingly.

Finally, although the age, gender, and ethnicity characteristics of respondents were broadly similar to 2021 GP practice NHS staff data, most of the respondents were recruited from 4 of 10 CRN regions, and it is possible that participants recruited via CRN regions (therefore in research active practices) may have different views than those in the larger clinical community. Responses during a highly stressful time—the COVID-19 pandemic—and within an already resource constrained NHS may also have impacted recruitment and representativeness of findings.

Implications for research and/or practice

Future research should include community PCPs such as health visitors. Qualitative research could explore these findings in more depth, for example, whether PCP preferences are due to personally preferred approaches or their perceptions of parent preferences, and whether their confidence ratings are based on their own ability or due to other situations (e.g., time constraints).

Limited awareness of resources and varied knowledge/confidence in management indicates it would be beneficial to develop brief and appropriate training opportunities or resources for PCPs. These could include optional e-modules, which can be completed flexibly by PCPs, or a brief update of resources to signpost or evidence/guidelines. The detail given for different training opportunities (for example, awareness of resources versus detailed information about management strategies) could be tailored to different PCP types with differing roles, time, and capacity in consultation.

Conclusion

UK GPs and general practice nurses are aware of the impact of chronic insomnia in children and endorse behavioral management such as positive bedtime routines. However, they have limited training and varied knowledge/confidence to manage insomnia in children. Increased appropriate training (about resources to signpost or about management strategies) and increased confidence would improve the management within primary care.

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Data availability statement

The participants of this study did not give written consent for their data to be shared publicly, so supporting data is not available.

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