CHILD AND ADOLESCENT HEALTH

Nurses’ management of adolescent sleep disturbance: a qualitative study

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Aims and objectives. To evaluate nurses’ knowledge of adolescent sleep and sleep disturbance and the strategies they employ to facilitate sleep in adolescent patients.

Background. Sleep disturbance in adolescents is common and associated with potentially devastating outcomes and co-morbidities. Despite this, little literature exists that reports nursing interventions related to facilitating sleep, and no literature could be located that explored what Australian nurses know about adolescent sleep and sleep disturbance.

Design. Qualitative.

Method. Eight nurses routinely involved in the care of adolescent patients were interviewed via email and instant messaging over a five month period. Explored was the formation and extent of knowledge held by these nurses about adolescent sleep and sleep disturbance and the strategies they used to facilitate sleep in adolescent patients. Data were analysed thematically.

Results. Three main themes were identified: ‘A patchwork of experiences’, ‘Traditional remedies, personal beliefs and commonsense’ and ‘Drugs, doctors and disempowerment’.

Conclusions. Despite a lack of formal education about adolescent sleep and sleep disturbance, through life and professional experience the nurses in this study had formulated effective strategies to assist the sleep of adolescent patients.

Relevance to clinical practice. There is a need for nursing education regarding adolescent sleep issues. Providing rationales for nursing strategies would afford nurses greater confidence to strongly advocate for a more non-pharmacological approach to managing certain types of sleep disturbance. Initiating routine assessment of adolescent sleep in both hospital and community settings could be beneficial to detecting a range of difficulties adolescent patients may be experiencing.

Key words: adolescent health, Australia, nurses, nursing, qualitative research, sleep

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Introduction

Sleep disturbance in adolescence is associated with potentially devastating outcomes and co-morbidities. It is estimated that up to 25% of adolescents have difficulty falling asleep, and 4% will experience some form of diagnosable sleep disorder (Ohayon et al. 2000). Despite the prevalence of adolescent sleep problems, no literature could be located...
that explored what Australian nurses know about adolescent sleep and the strategies they employ to facilitate sleep in the adolescents they nurse.

This paper reports on a study aimed to develop insight into Australian nurses’ existing knowledge of adolescent sleep and sleep disturbance and explore the strategies Australian nurses use to facilitate sleep in adolescent patients. The specific objectives of this study included exploring nurses’ experiences of caring for adolescents with sleep disturbance to determine current level of knowledge, strategies employed, gaps in nursing knowledge and to generate relevant findings that could help inform nursing practice and identify opportunities for further research.

Background

Morgan and Closs (1999) identified several reasons why nurses need knowledge of sleep and sleep disorders. Nurses are often the first health care professionals to witness sleep disturbance or the consequences of poor sleep in a patient. Quality and length of sleep can be sensitive indicators of physical and mental health and well-being. Nurses can influence and manipulate the sleeping environment to facilitate restful sleep. Also, many strategies to assist sleep complement existing nursing skills and responsibilities. Despite this, education of nurses has historically neglected sleep and sleep disturbance (Cohen et al. 1992, Stores 2001, Lee et al. 2004, Pelayo et al. 2004). The familiarity of sleep has caused it to be discounted and casually approached by health professionals, with symptom control the main treatment rather than investigation of underlying issues (Stores 2001).

Adolescents are especially vulnerable to disturbed sleep because of a range of rapid changes they experience. Changes to the timing of dim light melatonin secretion in adolescence cause a biological shift in the circadian rhythm, causing adolescents to remain wakeful much later in the evening (Taylor et al. 2005). This circadian change combined with a relaxation of parental rules regarding bedtimes (that commonly occurs as children age), results in many adolescents going to bed later at night. However, they still have to rise in time for school. This results in shorter hours of sleep midweek, with adolescents sleeping in on weekends to compensate. The shift from weekday to weekend sleep schedules leaves many adolescents in a perpetually jetlagged state (Dahl & Lewin 2002). Also having an impact on total sleep time is the increasing academic demands of higher school education, part-time jobs, sporting commitments and blossoming social lives. Many adolescents also spend considerable amounts of time corresponding by SMS and on internet chat/networking sites (Moore & Meltzer 2008).

An extensive literature review revealed that sleep disturbance in adolescents was associated with potentially devastating consequences. Sleep disturbance was found to exist as a co-morbid or contributing factor in mental illness, substance abuse, daytime fatigue, motor vehicle accidents and poor academic performance (Vallido et al. 2009). Sleep disturbance in adolescence can also be indicative of current or past abuse and contribute to adolescent/family tension (Vallido et al. 2009). Despite some interest by nurse researchers into the subject of adolescent sleep (for examples see: Yarcheski & Mahon 1994, Mahon 1995, Kelman 1999, Baumann 2003, Carno et al. 2003), no published literature was located that evaluated nurses’ current levels of knowledge regarding adolescent sleep and the strategies used by nurses to facilitate sleep.

Method

Given the dearth of information regarding nurses’ knowledge of and strategies for managing adolescent sleep disturbance, a qualitative framework was selected to guide the enquiry. Qualitative research is concerned with producing an in-depth holistic view of a phenomenon, by focusing on the human experience (Jackson et al. 2005, Creswell 2007), and is appropriate when seeking to develop deep understandings, or when a phenomenon is poorly understood (Creswell 2007).

Ethical approval and sampling

Before recruitment began, permission was sought and granted by the relevant institutional ethics panel. All of the participants were provided with an information sheet that described the study’s purpose. As outlined in the information sheet, informed consent was implied by their continued participation. Participants were free to withdraw from the study at any time, and pseudonyms to protect their identities have been used.

Sampling was purposive using convenience and snowball methods. The inclusion criteria for this study were that the potential participant be willing to participate and be a registered nurse in Australia, involved in the clinical care of adolescent patients. Potential participants were recruited via an email sent out to members of the Australian College of Mental Health Nurses and through an advertising editorial in the Adolescent Network pages of the Royal College of Nursing Australia’s Connection magazine and website. Respondents were then encouraged to pass on details of the study to colleagues who fitted the inclusion criteria allowing snowball sampling to occur. Eight nurses participated in this study, seven women and one man. All of the participants
were very experienced clinicians, five of whom worked in adolescent mental health and three of whom were based on hospital adolescent wards. Half of the respondents had postgraduate degrees in their area of specialty, ranging from graduate certificates to one nurse-practitioner. Six of the participants had teenage or grown children.

Data collection

This study used the internet to conduct semi-structured in-depth interviews. Participants had the choice of either an ongoing email exchange, or a one-off in-depth instant message conversation, with seven of the eight nurses choosing the email option. The email exchanges on average spanned a period of five months, ranging from three–six months with emails being exchanged once or twice a week. The one instant message conversation took two hours.

Data analysis

The data were analysed thematically, with analysis occurring simultaneously with data collection. During reading, initial codes and memos were ascribed to paragraphs or sentences to allow constant comparison and evaluation. While reading and coding, data were extracted that it was felt captured the participants meaning or experience. Coded data were then correlated and combined, progressing from the individual experience to the more universal, creating themes.

Findings

Analysis of the data yielded three themes: ‘A patchwork of experiences’ that encompassed the formation and extent of nurses’ knowledge about adolescent sleep and sleep disturbance, ‘Traditional remedies, personal beliefs and common-sense’, that detailed nurses’ strategies to facilitate sleep in adolescent patients, assessment and confidence and ‘Drugs, doctors and disempowerment’ that explored the issues surrounding sleep, nurse/doctor collaboration and medication to facilitate sleep. These three themes will now be discussed in more detail.

A patchwork of experiences

Findings revealed that participants’ knowledge of adolescent sleep and sleep disturbance did not come from formal education, but rather had been accumulated through life and professional experience. None of the participants recalled being taught about sleep or sleep disturbance during their pre-registration education. Participants disclosed that even in postgraduate courses specific to adolescent health, content about adolescent sleep and sleep disturbance was not included. Knowledge had, instead, been accumulated during the course of participants’ personal and professional lives. Several participants referred to learning on the job. Other sources of knowledge included parenting and being parented, television programmes, listening to patients’ accounts of sleep disturbance and reading parenting books:

I have spent quite a while thinking about how mental health nurses acquire their practice skills (most of which are considered unteachable) and have concluded that it is primarily through professional socialisation and experiential learning. As I can never recall receiving any direct training on managing sleep disturbance I would have to say that this is how I acquired this knowledge. It is more or less common knowledge (or ‘folklore’) within mental health nursing. (Daniel)

Participants’ knowledge of adolescent sleep was often based on their experiences as parents. Several participants also referred to their own mothers’ practices regarding sleep. It became apparent during the interviews, that how sleep was facilitated during their own childhood and adolescence often impacted on participants’ beliefs and strategies, when facilitating sleeping patterns for their own children and adolescent patients:

I know from my own kids, if they have been up late too much, or their routine is all out of wack, then they’re going to be cranky … with my Mum, we had to be in bed at the same time every night whether it was a Saturday or holidays or whatever. I’m not so mean about bedtime with my own kids, but I understand from her that routine is a good thing. The same with the hospital kids … those that are there longer, need us to create some structure and routine. (Hailey)

Sleep was seen as vital to an adolescent’s ability to negotiate the rapid changes they were undergoing and to heal. All of the participants were in agreement that restorative sleep was important for an adolescent’s physical, mental and social well-being. This extended to well adolescents, as well as those admitted to health facilities for physical or mental illness:

Adolescence is a time of significant change – physical, neuro-developmental, social, sense of self, the move to independence and all that that implies… All this requires energy and good energy levels rely on good quality sleep … If adolescents don’t get adequate, good quality sleep it makes it more difficult for them to manage all these change issues. (Daniel)

All of the participants had some understanding that adolescent sleep was altered compared to children or adults. Participants consistently recognised the development of circadian rhythm changes. For example, Belinda identified...
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the changes to adolescent sleeping patterns as ‘… staying up later and sleeping in later’. Likewise Daniel, Faith and Hailey could identify the changes but not the cause, Faith wrote: ‘Adolescents sleep better in the morning which is why they want to start going to bed later, I don’t know why this is so’. Only one participant was aware of the changes to dim light melatonin secretion:

… the hormone that induces sleep in humans is released later in the evening … adolescents are more wakeful much later in the evening than pre-adolescent children or adults… This is why adolescents often struggle to get out of bed early in the morning … and if given the chance will sleep away most of the morning. (Anthea)

When discussing what might disturb adolescent sleep, the responses varied depending on the environment where the participant nursed. Mental health nurses were more likely to discuss mental illness and associated problems as a source of sleep disturbance:

Certainly for our teenagers, who suffer anxiety, depression and psychotic symptoms … at night it is all quiet and the thoughts and voices are back and go round and round in their heads … those with generalised anxiety disorder, what they watch on TV can cause a very sleepless night not just the scary stories but ones they can relate to like abuse, kidnapping by a parent … Kids who have been sexually abused will often fight going to bed because of the association to past experiences. (Faith)

The nurses who worked in medical and surgical settings identified that adolescent sleep in the hospital setting was disturbed by worry about procedures or death and environmental issues, such as isolation from home and parents, trying to sleep in a strange place and ward noise:

Sleep disturbance in adolescents in hospital is caused by many things including nursing interventions … medical interventions … pain, other staff members such as cleaners and kitchen staff … making lots of noise up the ward corridor, other patients who may be sick and needing more nursing care in the same room, patients’ parents, mobile phones, snoring etc… Also … we come on shift at 0700 and start medication round etc at 0730 waking them all up and then breakfast comes and we expect them to be awake! (Grace)

Traditional remedies, personal beliefs and commonsense

The majority of the nurses in this study were confident in their own abilities to manage adolescent sleep disturbance: ‘As a nurse I feel confident in managing sleep issues, especially having worked nights for many years’ (Belinda). However the efficacy of the strategies was questioned with some of the nurses not sure if it was their interventions or the biological urge to sleep responsible for an adolescent succumbing to slumber: ‘You do what you can, but I don’t know how much of a difference we make… Sometimes I think it is just exhaustion that gets them in the end. Everybody sleeps eventually’ (Hailey).

The strategies used by nurses to facilitate sleep in their adolescent patients had evolved from personal beliefs and practices and traditional remedies, rather than evidence-based interventions. To help ascertain common practice, participants were also asked if they conducted a sleep assessment on admission. Nursing assessment of adolescent sleep was a routine event for the mental health nurses in this study. Anthea wrote: ‘Our initial assessment for patients coming into the inpatient unit does explore sleep patterns and sleep is monitored closely for the duration of their stay …’ In the general hospital setting, study participants reported that a sleep history was not collected on admission by nursing or medical staff. Both Cathy and Hailey correlated lack of assessment with patient age… As Cathy observed: ‘… it is a worry that we don’t even look at it … we don’t get good histories about sleep … it is overlooked … Once kids get to a certain age we stop asking’.

When faced with an adolescent sleep disturbance, the first line of action for all of the nurses in this study was to facilitate sleep using non-pharmacological comfort measures:

Warm milk is an old remedy, but it does sometimes work with the kids. It’s comforting and something in milk is a natural soporific. I always drink warm milk and honey before I go to bed after night shift. (Hailey)

The promotion of comfort was advocated by the medical/surgical nurses who spoke of facilitating sleep by giving analgesia to reduce pain, or emotional support: ‘If it is in fear they need reassurance, if it’s pain you can give analgesia’ (Hailey): ‘… working night duty you do often come up with kids who are not sleeping and you have to try your best to settle them. If something is bothering them I normally sit with them for a bit and just chat quietly’ (Cathy).

Nurses also spoke of prebed routines and rituals, such as a wind down period that included activities like warm showers, reading, listening to soft music, or relaxation tapes and CDs as well as avoiding stimulating substances like caffeine and nicotine:

I usually work on educating people … and use interventions like relaxation training and sleep hygiene. That is, no caffeine drinks 6 hours before bed, no cigarettes 2 hours before bed, no strenuous activity, a warm bath or shower, use of lavender oil, no lying in bed if you can’t sleep etc. (Daniel)

Nearly all of the nurses discussed promoting routine bed and rise times and discouraging daytime sleep. The time
adolescents were sent to bed and woken up were nearly identical across the hospital and mental health settings. None of the nurses knew how the bed and rise times had been decided:

I have asked people who have been here longer than my 10 or so years and nobody knows why a bedtime of ten thirty was chosen. This is the same for the 12 year old and the 17 year olds. They are woken around 8 am. (Faith)

The mental health nurses in this study used similar non-pharmacological comfort measures used by the medical and surgical nurses in this study. However, the nature of the mental health issues experienced by adolescents had an impact on sleep in such a way that further interventions were sometimes necessary. Strategies were designed to help the adolescent overcome the source of their inability to sleep, for example, music to help drown out auditory hallucinations, rather than just for relaxation. For some adolescents, general mental health techniques such as visualisation and cognitive behavioural therapy (CBT) were also used to promote sleep:

For the adolescents with mental illness drowning out the thoughts and voices can help. We would try music (not hard rock) with earphones ... It’s changeable with anxious clients. Sometimes it’s good to let them vent their feelings. Other times this will escalate the anxiety... Setting up a routine helps and this may include shower, milk and then perhaps phoning mum ... we can use visualisation but anxious kids seem to find it harder. We also use their CBT ... Sexually abused kids need a lot of safety reassurance. We have a policy of no touching of each other. We stress how different things are here ... Encourage them during the day to make it a pleasant happy place. (Faith)

**Drugs, doctors and disempowerment**

However, sometimes traditional remedies and strategies were ineffective to assist adolescents overcome a sleep disturbance, and sedative or antipsychotic medication was required. This was especially pertinent in the mental health setting. Discussion of the use of medications revealed issues with the prescription and administration of sedation and nurse and doctor relationships.

Sedation was invariably described by the participants as a measure of last resort. While all of the participants agreed that sometimes sedation was necessary, there was a common reluctance to administer it to adolescents. This reluctance was related to the efficacy of drugs in promoting restful sleep, possible side effects and the potential to create either a physical addiction or emotional dependence. Resorting to sedation was also seen as medicalising the problem which was counterproductive to the adolescent developing their own strategies to combat sleep disturbance:

One of the interesting paradoxes of providing treatment is that if you medicalise a problem it relieves people of responsibility for developing their own solutions and sleep disturbance is one of those areas where people can develop effective strategies... (Anthea)

Several narratives referred to the prescription of sedation as being a doctor’s first line of treatment, a quick option and potentially disempowering for the nurse:

It’s really hard, because Drs don’t give nurses recognition for what they can bring to a child’s care ... alternative treatments are not necessarily seen as the simplest thing to help improve sleep, they tend to like the quick fix, that being SEDATE, SEDATE, SEDATE! ... we document what we do, but feel we are not necessarily taken seriously... It just seems Drs tend to feel that sleep issues are probably the least of the child’s problems and they are not in hospital for sleep issue treatment. (Emma)

In the mental health setting, some adolescent patients were perceived to manipulate nurses into administering sedation. Nurses sometimes found it difficult to explore non-pharmacological options to promote sleep if sedatives were prescribed:

The patients we have on the adolescent unit are very well informed regarding what medication is prescribed for them and when alternative strategies are suggested will often respond with comments like ‘my psychiatrist told me to ask for the medication when I need it’... Patients often view medication as a solution to a problem rather than a treatment to be used as an adjunct to other therapies. Doctors indirectly reinforce this belief by prescribing sedation as a way of managing dysregulated sleep. (Anthea)

Sometimes, sleep disturbance in adolescent patients was a manifestation of acute mental illness and intractable to more common strategies to promote sleep. Several of the mental health nurses agreed that sometimes their only option was to administer antipsychotic medication and wait for it to take effect, with the sleep disturbance resolving as the symptoms of mental illness declined:

She [adolescent patient] was about 16 and was very disturbed and could not sleep at all. Even with a lot of medication on board she was almost impossible to settle. She would walk around barely able to stand but still stagger around the ward. She was very troubled with hallucinations and it was as if she was too frightened to lie down and sleep. When she was very bad there was nothing we could do except try to reassure her and stay close to her but it was difficult, because the whole time you would talk to her, she would be also talking, muttering and interacting with her voices. We treated her psychosis with medication and after a few weeks she slowly improved but she was very unwell. (Faith)
Discussion

It became evident very early in the data collection process that nursing education curricula, both pre and postgraduate, failed to educate participant nurses on the physiology of sleep generally and gave them no information about adolescent sleep and sleep disturbance. Nurses in this study, while recognising that adolescent sleep was altered compared with younger children, generally possessed only vague ideas about the mechanism of change. The knowledge that they did possess was based on hand-me-down knowledge from their own mothers; conclusions they had drawn from observing their own children, and adolescent patients sleep, information from reading and television and beliefs and practices they learnt ‘on the job’.

That nursing skills are often acquired ‘on the job’ rather than in university is evident in other nursing literature. Rungapadiachy et al. (2006) in a follow-up study of 11 mental health nursing students compared their pre-registration and postregistration perception of what it meant to be a mental health nurse. The researchers found that, after registration, the majority of the nurses felt that the bulk of their skills were workplace acquired.

The lack of formal education has possibly blinkered nurses to the types of sleep disturbance that exist and hampered their identification of diagnosable sleep disorders and other problems in practice. While papers discussing such conditions as sleepwalking, night terrors (Laberge et al. 2000), sleep apnoea, restless leg syndrome, periodic limb movement disorder, sleep phase delay, narcolepsy and Klein-Levin syndrome (Capp et al. 2005) proliferate, the nurses in this current study really only addressed insomnia or broken sleep. This is especially pertinent in the mental health arena. McEnany, a leader in nursing research on sleep, in an interview with Palmer (2007), noted that the symptoms of some sleep disorders are easily mistaken for the symptoms of mental illness and that most clinicians are poorly equipped to distinguish between them.

Despite the opportunity a hospital admission affords, the medical/surgical nurses in this study did not routinely collect a sleep history. The decline in nursing assessment that occurs with the increase in the child’s age noted by the nurses in this study is supported by Mindell and Owens (2003) who surveyed 317 paediatric nurses to ascertain their practices in relation to screening for sleep in their patients. Nurses surveyed cited time constraints and competing priorities as the reason sleep disturbance were under diagnosed. Screening for sleep disturbance declined in line with the child’s age with just 35.3% of the sample responding that they were ‘very likely to screen’ patients over the age of 13 (Mindell & Owens 2003 p. 327). Other results of this survey indicated that the majority of respondents had received no formal training in dealing with paediatric sleep disorders and were not confident to manage many types of sleep disorders.

Capp et al. (2005 p. 557) have noted that ‘less sleep in adolescence has been correlated with poor grades in school and higher mortality in motor vehicle accidents, catapulting this issue from purely medical interest to great public health concern’. As sleep disturbance in adolescence is associated with diagnosable sleep disorders, psychiatric disorders, sexual abuse and physical problems that interfere with sleep, routine assessment of adolescent sleep would allow nurses to detect a range of difficulties (Kotagal & Pianosi 2006). Routinely assessing adolescent sleep could also open the way for conversations to be initiated about substance abuse which is strongly associated with disturbed sleep, mental illness and sexual abuse, as adolescents have a tendency to self-medicate with both legal and illicit substances (Australian Institute of Health and Wellness 2007). Identification of such problems creates possibilities for nurses to initiate appropriate interventions, counselling or referral (Agar & Read 2002) and possibly reduce the likelihood of some of the deleterious health, social and educational outcomes that can arise from adolescents self-medicating with illicit substances.

Despite the lack of formal knowledge the participant nurses had about adolescent sleep, there was an empirical base behind nearly every strategy they used to improve sleep. For example, seven out of eight participants referred to giving warm milk at bedtime. Milk contains tryptophan, an essential amino acid that is a precursor of serotonin in the brain (Markus et al. 2005). Serotonin converts to melatonin which induces sleep (Halson 2008). Markus et al. (2005) conducted a double-blind, placebo-controlled study on Dutch university students (n = 28), some of whom had mild sleep complaints. Results from this study suggest that raised plasma levels of tryptophan contribute to improved sleep which in turn leads to enhanced early morning alertness.

Several participants spoke of a warm bath or shower before bed. There is growing evidence that warming the skin acts as an input signal to sleep-regulating areas of the brain (Raymann et al. 2005). This is because of core body temperature lowering as blood is redirected to skin blood flow (Raymann et al. 2005). Increasing skin temperature and inversely declining body core temperature is associated with sleep onset in both human and rodents (Raymann et al. 2005).

All of the nurses who participated in this study were confident in their ability to manage adolescent sleep disturbance with their current strategies (except one who was constrained by the physical layout of her facility and
ideological differences with her colleagues). Despite this confidence, their strategies remain untaught beyond their own facility and therefore difficult for other practitioners to access. As Benner (2001 p. 37) observed, ‘as long as the practices of the experts in the field go unnoticed and undocumented, ... an essential link in theory development in nursing will be missing’.

All of the participants discussed using sedation to facilitate adolescent sleep as a last resort. Administering sedation was seen by the nurses in this study as medicalising the problem and counter-productive to the adolescents developing strategies themselves. Complicating this issue was an apparent lack of interest in adolescent sleep issues in hospital medical staff and the routine prescription of sedatives in mental health units.

Some of the sedatives mentioned by participants were the benzodiazepines, temazepam and lorazepam. Neither of these drugs is recommended for use in patients under the age of 16, as studies have not yet been conducted that establish their safety and efficacy in this age group (MIMS Online 1995, 2007). Side effects of benzodiazepines include dependence, residual daytime sedation, rebound insomnia, dizziness, headache and vertigo (Glaze 2004, MIMS Online 2007). Benzodiazepines also affect sleep architecture, decreasing the duration of slow wave sleep which is thought to be the cause of residual daytime sedation (Reed & Findling 2002, Glaze 2004). Despite the problematic nature of prescribing benzodiazepines for adolescents, some of the nurses in this study indicated it is a common practice.

Conclusion
Sleep disturbance in adolescents is a common phenomenon that has potentially devastating effects. Therefore, it is essential that nursing develop effective strategies to first detect, then manage or refer adolescents for further treatment. This study highlights that despite being deprived of formal knowledge about adolescent sleep, the nurses in this study have formulated effective strategies to facilitate sleep in the adolescents they nurse. While the life experience and clinical knowledge of these nurses was extensive, it cannot be assumed that all nurses would have this same level of knowledge. Concern must therefore be voiced for the adolescents who find themselves cared for by less experienced nurses who may lack this level of life experience and clinical knowledge. Providing formal education for all nurses about sleep and sleep disorders and education on adolescent sleep and sleep disorders for nurses undertaking postgraduate degrees in paediatric health would contribute to raising awareness of and developing skills to manage this common problem.

Strengths and limitations of the study
The findings of this study are limited by several factors. First, all of the participants in this study were very experienced clinicians. No representation can be made as to the knowledge and strategies of less experienced nurses. Second, it is the view of only eight nurses out of the thousands who nurse adolescents Australia wide. However, the small number of participants and the inductive design is also a strength of this study as it has provided a depth and richness of data that would not otherwise have been obtained.

Relevance to clinical practice
The findings of this study highlight the need for nursing education regarding the physiology of sleep, particularly in relation to adolescents and young people because of their vulnerability to negative outcomes that can arise as a result of poor sleep. Being able to provide rationales for nursing actions would afford nurses greater confidence to strongly advocate for a more non-pharmacological approach to managing certain types of sleep disturbance and push for more circumspect prescribing. Teaching nurses about sleep disorders and encouraging holistic assessment of adolescents could also contribute to the earlier identification of many disorders and other physical, emotional and psychosocial issues. Increasing nurses knowledge of adolescent sleep and sleep disturbance, could also allow nurses to educate carers of adolescents and adolescents themselves, about normal changes that occur to adolescent sleep, techniques to improve sleep and the possible implications of disturbed sleep.

Contributions
Study design: TV, DJ, LOB; data collection and analysis: TV, DJ, LOB and manuscript preparation: TV, LOB, DJ.

Conflict of interest
There are no conflicts of interest.

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Agar K & Read J (2002) What happens when people disclose sexual or physical abuse to staff at a community mental health centre? International Journal of Mental Health Nursing 11, 70–79.
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