

Editorial

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School management of students with a lack of sleep

The Schools Health Education Unit have been collecting school data since 1977. Following publication of the latest report, *Young People into 2012* (SHEU, 2012) some of the media reported that:

"Many teenagers do not believe they are getting enough sleep to remain alert at school and stay healthy, research suggests. It reveals girls are more concerned about their sleeping habits than boys, and that youngsters are more likely to say they are not getting enough as they get older. More than one in four 14 and 15-year-old girls (28%), and just over a fifth of boys of the same age (22%) do not think they sleep enough to concentrate on their studies, according to the Schools Health Education Unit. Their findings, drawn from surveys of thousands of schoolchildren aged from 10 to 15, show that fewer 12 and 13-year-olds (Year 8) are concerned about lack of sleep affecting their classwork. A fifth (20%) of Year 8 girls, and 16% of boys said that the amount of sleep they normally get is not enough for them to stay alert and concentrate on lessons. The research shows the proportions of youngsters who are concerned about the impact lack of sleep has on their health, with 17% of 12 and 13-year-old boys and the same number of girls saying they don't think get enough to stay healthy. This rose to 22% among 14 and 15-year-old boys (Year 10) and 27% of girls of the same age. Overall, 80% of Year 8 boys and 78% of Year 8 girls said that they get eight hours or more sleep a night, this fell 65% for Year 10 boys and girls." (Press Association, 2012).

Research by Warwick Medical School has found that sleep deprivation is associated with an almost a two-fold increased risk of being obese for both children and adults. The research reviewed current evidence in over 28,000 children and 15,000 adults. The research also suggests that those who sleep less have a greater increase in body mass index and waist circumference over time. These trends are detectable in adults as well as in children as young as 5 years (Warwick, 2012).

School management

How do schools manage students with a lack of sleep? In September 2007, about 300 pupils aged between 14 and 18 at Hugh Christie Technology College in Kent, started school three days a week at 11.30am and finishing at 5.30pm. The Headteacher said, "Their (the pupils') punctuality and attendance has improved, their questioning and answering is better because

they are more alert and the pace of lessons is often much quicker," (Guardian, 2009).

Monkseaton High School in North Tyneside in the UK has worked with Russell Foster, Professor of Circadian Neuroscience at Brasenose College, Oxford University, on teenagers' body-rhythms. Pupils have been given cognitive tests at different times to replicate larger-scale studies carried out in Germany, Canada and America. The study has discovered about a 10 per cent improvement in pupil performance in the afternoon compared to the morning. An 11am school start was being considered (Gems Education, 2012).

The following articles present an insight into ways of managing a universal problem.

Sleepless in America: School start times, is an overview of the history of research into adolescents' delayed sleep-wake patterns and the growing movement of later school start times.

In Australia, recent research suggests that the school classroom may be a promising arena for the dissemination of sleep interventions for adolescents.

Sleep Scotland is raising awareness in schools of the importance of sleep. In England, *The Sleep Council's* teaching resource: '*Better Brains with More Sleep*' is being used to teach pupils about the importance of a good night's sleep.

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Sleepless in America : School start times

In America, in the early 1990s, Mary Carskadon et al. (1993), showed that the circadian biology drives the delayed sleep-wake patterns of adolescents and "our current understanding of adolescent sleep patterns may need revision". Since then many American studies have examined the effects of sleep loss on young people and the effects of school start times.

Many school students in America start their lessons before 8 am. Some even begin at 7:00 am, leaving home around 6:30 am. A growing body of evidence has been used to challenge school start times suggesting that better student health, wellbeing and academic grades could be achieved with later start times.

In 2012, many campaigners continue to use the emerging research studies to support efforts to influence their local school boards and change the start of the school day.

For example, research compiled by Stacy Simera, (2011), is used to advocate for start times after 8:30 am for 6th through 12th grades students in Ohio.

Dennis Nolan's website (2012), contains an exhaustive compilation of research that is updated and used to influence later school start times in California as well as providing support for campaigners in other states.

Figures from the National Sleep Federation (2012), suggest that, "...individual schools or districts in 19 states have pushed back their start times, and more than 100 school districts in an additional 17 states are considering delaying their start times".

Adolescents' sleep

Carskadon et al., (1980) showed that adolescents require at least as much sleep as they did as children, generally 8.5 to 9.25 hours each night. Research also showed that many adolescents undergo a sleep phase delay that results in them both falling asleep and waking up later. Thus the typical adolescent's natural time to fall asleep may be 11 pm or later; because of this change in their internal clocks, teens may feel wide awake at bedtime, even

when they are very tired (Wolfson & Carskadon, 1998). On a school day this leads to sleep deprivation due to waking up early for school, and not getting the 8.5 - 9.25 hours of sleep that they need. It also causes irregular sleep patterns affecting the quality of sleep, since the weekend sleep schedule often ends up being much different from the schoolday schedule as teenagers try to catch up on lost sleep (Dahl & Carskadon, 1995).

Carskadon et al., (1998), also found that more mature adolescents had later circadian rhythm timing, based on melatonin secretions in saliva samples. This showed that melatonin secretion occurred at a later time in adolescents as they mature; thus, it is difficult for them to go to sleep earlier at night. The melatonin secretion also turns off later in the morning, which makes it harder to wake up early.

School start times

In 1997, following the medical research that found that teenagers have biologically different sleep and wake patterns, the seven comprehensive high schools in the Minneapolis Public School District shifted the school start time from 7:15 a.m. to 8:40 a.m. In 2002, Kyla Wahlstrom published the results of a 4-year study that affected more than 12,000 secondary students. Among the many findings were: "Numerous 'beneficiaries' of a later high school start time emerge from the evidence in the study. The students benefited the most. For example, attendance rates for all students in grades 9, 10, and 11 improved in the years from 1995 to 2000, with the greatest rate of improvement for grade 9 students. Perhaps the most surprising finding was the discovery that Minneapolis high school students continue to get an hour's more sleep each school night than is the case for students whose schools begin an hour earlier. This is contrary to the fears and expectations that a later start would result in students staying awake an hour later on school nights. Instead, students in Minneapolis high schools get 5 more hours of sleep per week than do their peers in schools that start earlier in the

day."

"Similar studies on students have recently been completed in Brazil, Italy, and Israel Those studies have revealed that the sleep-wake cycle for students in those countries is nearly identical to that found among students in the United States. In other words, the sleep phase shift occurring in adolescents' neurological systems is not culturally based; it is, instead, a phenomenon of human development." (Wahlstrom, 2002).

A study in Kentucky, in 1998, focused on improved safety as a successful outcome of later school start times. A school district in Fayette County moved its start time from 7:30 am to 8:30 am, and students averaged up to 50 minutes more sleep per night. Comparisons in the car collision rates of Fayette County teenagers revealed that the car crash rate for 16-18 year olds dropped following the change (Danner et al. 2008).

Academic performance

Some of the studies that consider later school start times and academic performance include:

A study by Judith Owens et al. (2010), examined the impact of a 30-minute delay in school start time at a Rhode Island school on 210 adolescents' sleep, mood, and behavior. After the start time delay, mean school night sleep duration increased by 45 minutes, and average bedtime advanced by 18 minutes. The percentage of students getting less than 7 hours of sleep decreased by 79.4%, and those reporting at least 8 hours of sleep increased from 16.4% to 54.7%. Students reported significantly more satisfaction with sleep and experienced improved motivation. Daytime sleepiness, fatigue, and depressed mood were all reduced. Most health-related variables, including Health Center visits for fatigue-related complaints, and class attendance also improved. A modest delay in school start time was associated with significant improvements in measures of adolescent alertness, mood, and health. The results of this study support the potential benefits of adjusting school schedules to adolescents' sleep needs, circadian rhythm, and developmental stage.

Peter Hinrichs' research used data from 1993-2002 and looked at the impact of later school start times on academic performance using statewide standardized tests. The results did

not suggest an effect of school starting times on achievement. (Hinrichs, 2011).

Eric Eidea and Mark Showaltera, (2012), explored the relationship between the amount of sleep adolescents receive and their performance on standardized tests and then estimate the "optimal" hours of sleep that maximize student test score performance. Results showed a statistically significant relationship between sleep and test scores using nationally representative data on students ages 10 through 19. Optimal sleep declines substantially by age: optimal sleep for 10-year-olds is about 9.0-9.5 hours, while for 18-year-olds it is slightly under 7 hours.

Finley Edwards used data from 1999-2006 to study the impact of start times on academic performance. Using variation in start times within and across schools he found that starting school one hour later leads to a three percentile point gain in both math and reading test scores. Using only variation in start times within schools over time, the effect is a two percentile point gain. Evidence was also shown for an association with later start times and decreased absences, less time spent watching television and a greater amount of time spent on homework. Edwards suggested that these factors may explain why later starting students have higher test scores. (Edwards, 2012).

Complex problems

Some of the complexities of changing school start times can arise due to the need to involve many people, including - parents, teachers, students, principals, school boards, and healthcare professionals. In addition, problems associated with re-organising transportation and extracurricular activities can be enough to delay or put-off attempts to bring about change. However, as the debates continue across America, the movement to alter school start times appears to be gaining momentum.

"Even without the pressure of biological changes, if we combine an early school starting time - say 7:30 am, which, with a modest commute, makes 6:15 am a viable rising time--with our knowledge that optimal sleep need is 9 1/4 hours, we are asking that 16-year olds go to bed at 9 pm. Rare is a teenager that will keep such a schedule. School work, sports practices, clubs, volunteer work, and paid employment take precedence. When biological changes are factored in, the ability even to have merely 'adequate' sleep is lost." Mary Carskadon.

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Other useful websites

<http://sleepforscience.org/about/><http://www.sleepfoundation.org/article/sleep-topics/school-start-time-and-sleep>**SHEU**

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Neralie Cain

Ready, willing, and able? Sleep hygiene education, motivational interviewing and cognitive behaviour therapy for insomnia in an Australian high school setting.

Cognitive behaviour therapy for insomnia (CBT-i) is well-regarded as an effective treatment for insomnia in adults. Previous studies also suggest that CBT-i can be successfully applied to adolescents experiencing insomnia and other sleep problems, which most commonly involve delayed sleep timing (Bootzin & Stevens, 2005; Gradisar et al., 2011). The recommended treatment involves a combined program of morning bright light therapy, stimulus control therapy, and education about sleep hygiene (see Lack & Wright, 2007, for further details). Improving sleep pattern regularity by getting up earlier on weekends (i.e., at a time closer to the weekday wake-up time) can play a particularly important role in increasing total sleep time during the week and decreasing daytime sleepiness (Taylor, Wright, & Lack, 2008).

Recent research suggests that the school classroom may be a promising arena for the dissemination of sleep interventions for adolescents (for a review, see Blunden, Chapman, & Rigney, 2012). However, many of the earlier studies in this area have been plagued by problems such as inappropriate outcome measures, small sample size, lack of control group, and lack of follow-up data. Reporting has also been poor, with a number of studies presented only in abstract form. Results have been mixed: some studies showed improved knowledge about sleep, despite having no data about actual changes in sleep habits or behaviours (Azevedo et al., 2008; Cortesi et al., 2004); another study measured sleep habits but found no change from pre- to post-treatment (de Sousa et al., 2007). Finally, some studies found changes in sleep habits from pre- to post-treatment, although these results must be interpreted with caution due to

the previously mentioned problems of small sample size, lack of control group, and lack of follow-up data (Rossi et al., 2002; Vo et al., 2003).

School-based intervention programs

A series of two studies conducted by researchers at Flinders University in Adelaide, Australia, attempted to overcome the limitations of previous research by conducting randomised controlled trials evaluating school-based intervention programs aimed at improving the sleep of adolescents (Cain, Gradisar, & Moseley, 2011; Moseley & Gradisar, 2009). Full details of these studies can be found in earlier publications; however, an outline of the main findings are presented here, along with recommendations for others planning school-based interventions for adolescent sleep problems.

Study 1 (Moseley & Gradisar, 2009)

Participants were 81 Year 11 students from two co-educational high schools, with 41 adolescents attending four sleep education classes (once per week for four weeks) and 40 adolescents participating as the control group (i.e., attending classes-as-usual). Sleep content was embedded in an "adolescent well-being" program in order to reduce demand effects, and was based on principles of CBT-i. This included sleep hygiene education, simple cognitive restructuring, goal-setting, relaxation strategies, and recommendations to reduce weekend sleep-ins.

Baseline data revealed that students had considerable sleep problems, with 53% of students getting insufficient sleep on school nights and 78% of students having a clinically significant discrepancy between their weekend and weekday out of bed times (suggesting that

a sleep education program was relevant to this group of adolescents). Students in the intervention group improved significantly in their sleep knowledge from baseline to post-program. When examining actual sleep habits, however, there were no significant improvements in any of the target sleep variables. Nonetheless, data from a subgroup of students who were classified as having a delayed sleep timing revealed a significant reduction in the discrepancy between weekday and weekend rise times (i.e., less sleeping-in on weekends).

Surprisingly, demand effects were limited as students honestly stated that they were not motivated to change their weekend and school-morning behaviour in order to get more sleep. This suggests that program content did not need to be disguised and non-sleep content could be replaced with more sleep information aimed at motivating adolescents to change their behaviour. It was also concluded that one lesson of cognitive therapy was inappropriate, as it introduced the students to their unhelpful thoughts and beliefs but did not provide enough time to fully work through them (due to time constraints in the program). Considering the findings that students improved in their knowledge about sleep but were not convinced about why they should get up earlier on weekends, it was concluded that principles of motivational interviewing (Miller & Rollnick, 2002) may be appropriate to help students improve their overall motivation to attempt and maintain changes in key sleep-related behaviours. Motivational interviewing is an effective, evidence-based approach to overcoming feelings of ambivalence that prevent many people from making desired changes in their lives, and has been successfully applied with adolescents (Miller & Rollnick, 2002).

Study 2 (Cain et al., 2011)

This study aimed to develop a revised sleep education program for Year 11 students based upon the conclusions of Moseley and Gradisar (2009) and feedback received from students and teachers. The primary aims of the revised program were: (1) to increase students' knowledge about sleep, (2) to improve students' motivation to get up earlier on weekends, and (3) to improve students' sleep-related

behaviours and daytime functioning.

Participants were 104 Year 11 students from three co-educational high schools. Again approximately half of these students attended four 50-minute sleep education classes, held once per week for four weeks, and the remaining students attended classes-as-usual. The lessons were tailored to fit a motivational interviewing framework, although they also retained some aspects of the earlier CBT-i framework (e.g., sleep hygiene education, relaxation strategies, recommendations to reduce weekend sleep-ins and increase morning bright light exposure).

Baseline prevalence of sleep problems was again high, with 37.9% of the sample reporting difficulty initiating sleep, 59.2% reporting insufficient sleep on school nights, and 74.8% reporting a clinically significant discrepancy between their weekend and weekday out of bed times. Over the course of the program, students in the intervention group improved significantly in their sleep knowledge over time relative to the control group. Within the intervention group, students' motivation to get up about the same time every day also improved during the program, and there was a trend towards improved motivation to increase average total sleep time. In addition, students reported attempting to make changes to their sleep behaviour during the program. However, their increase in motivation and initial attempts at changing their sleep habits failed to translate into longer-term behavioural change.

Conclusions

The results of our research, along with recent research from other groups (Azevedo et al., 2008; Cortesi et al., 2004), suggest that school-based interventions are an effective method of increasing adolescents' knowledge about sleep. Furthermore, these interventions appear to improve students' motivation to change their sleep habits, despite difficulties in maintaining any attempted changes beyond the duration of the program.

Several key sleep-related behaviours were targeted in these school-based sleep intervention programs. We observed improvements in students' motivation to regularise their out-of-bed times and to increase their average total sleep time during the program. However, students were not

convinced that they should spend half an hour outside soon after waking up (to increase exposure to morning bright light). This finding is consistent with clinical observations that adolescents with delayed sleep timing have a tendency to avoid morning bright light, despite this being commonly recommended as a component of treatment (Gradisar et al., 2011). This suggests that improving motivation to use morning bright light may be a key to improving adolescent sleep habits. Future school-based sleep interventions could provide students with alternative ways of obtaining morning bright light, without necessitating exposure to sunlight (i.e., with the use of portable light devices; e.g., see www.re-timer.com).

According to Miller and Rollnick (2002), behavioural change requires the individual to be "ready, willing and able" (p.10). This means that the individual must consider the proposed change to be important (i.e., willing), must have confidence in their own ability to change (i.e., able), and feel that this is the right time for change to occur (i.e., ready). While our second study focused on improving adolescents' perception of the importance of change, future school-based sleep interventions should incorporate exercises designed to improve all three of these components of motivation to improve the likelihood that improvements in motivation will translate to longer-term behaviour change. For example, activities that may enhance students' confidence in their ability to change could include a review of past successes, brainstorming specifically how change could be achieved, and considering who else could support their attempt to change their behaviour (Miller & Rollnick, 2002). Interestingly, the inclusion of parent information sessions was also spontaneously suggested by two out of the three teachers involved in the program, when asked for their recommendations for future interventions. Recent research also suggests that parent-set bedtimes are associated with improved sleep and daytime functioning among adolescents (Short et al., 2011).

Recommendations for future research and practice

School-based interventions are effective in improving sleep knowledge among adolescents; however, an increase in sleep-

related knowledge does not always translate into changes in behaviour that are maintained over time. While school-based interventions can improve students' motivation to change sleep-related behaviours, and students are happy to engage with homework-based behavioural experiments, future work in this area should focus on motivating students to maintain these changes over time. This could include providing students with artificial sources of morning bright light (Gradisar et al., 2011), offering sleep education sessions for parents and/or encouraging parental involvement in treatment (Short et al., 2011), and encouraging students to consider how to overcome potential obstacles before they arise.

Feedback from students and teachers suggests that school-based sleep intervention programs are generally found to be interesting and enjoyable (Blunden, 2007; Cain et al., 2011; Cortesi et al., 2004; Moseley & Gradisar, 2009). In particular, our research has found that interactive learning activities promote student engagement (Cain et al., 2011), so these should also be an important component of any future school-based sleep intervention.

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Jane Ansell is the director and founder of Sleep Scotland.
For more information please visit the website: <http://www.sleepscotland.org>

Jane Ansell

Sound Sleep: raising awareness in schools of the importance of sleep for our emotional and physical wellbeing

Sleep Scotland is a charity, established in 1998, providing support to families of children and young people with additional support needs and severe sleep problems. Sleep Scotland has worked throughout Scotland developing services and providing intensive sleep programmes for children by establishing sleep clinics and training sleep counsellors.

Sound Sleep

Based on experience gained from their work, Sleep Scotland launched a new project in 2010. *Sound Sleep* aims at raising awareness, in mainstream secondary schools, of the importance of sleep for students' emotional and physical wellbeing.

Jane Ansell, the director and founder of Sleep Scotland, said lack of sleep among UK teenagers was a "huge problem". "We began in 1998 working with children with special needs with sleep problems," she said. "In my teenage clinic I felt I'd got a lot of kids who maybe didn't have ADHD or Asperger's - they had total sleep deprivation."

Glasgow city council estimated that as many as one in four teenagers were not getting the appropriate nine hours of sleep at night, and said there was "increasing evidence" suggesting a link between lack of sleep and obesity, lower academic achievement and depression.

Pilot project

Using funding from *BBC Children in Need Scotland*, Sleep Scotland, put together an outline for a pilot project that specifically supported teenagers who have sleep problems.

Part of the project involved conducting school workshops with three secondary schools in Glasgow in an attempt to tackle problems caused by a lack of sleep. Surveys in the schools

showed that after going to bed at 11 pm or midnight, teenagers were staying awake for hours watching television, playing on games consoles, or browsing the Internet. Some pupils were getting as little as four or five hours sleep a night.

Ms Ansell said, "Sleep is when the brain rewires and consolidates the memory. If that is being deprived, not only do you have a kid who is too tired to concentrate, but also his brain won't work to full capacity." Ms Ansell also said that addressing the problem has been made harder by a wider social attitude towards getting by on small amounts of sleep, but insisted that ensuring children were getting sufficient sleep was as important as making sure they ate five pieces of fruit and vegetables a day and did regular exercise.

Workshops

The classes were offered as workshops for groups of 20 secondary school pupils, with an after-school session for parents and staff advising how to support teenagers to get good sleep.

One 15-year-old who attended the first of a series of sessions said he had tried going to bed early as a result of what he had been taught. "I went to bed at ten-ish rather than 11, and I do feel a little bit more awake," he said. "I wasn't sleeping in French, as I usually do, so my French teacher is pleased anyway."

Better sleep

The pilot project enabled students to understand the process of sleep, why it is so important for their well being and strategies that they could implement to promote a good night's sleep.

Some of the strategies Sleep Scotland

discussed with students were:

- o Make sure you have a substantial main meal at a regular teatime
- o Restrict homework, exercise and computer games to the early evening
- o The hour before bedtime should be for relaxing and bathing, and should include no stimulating activities
- o Switch off the computer, mobile and television before having a bath. Try listening to music, radio, or read a book
- o Avoid chocolate, caffeine, additives, alcohol and nicotine before bedtime Have a warm milky drink instead
- o Your bedroom should be quiet and dark; make sure it is a media-free zone
- o Keep to a regular bedtime
- o In order to have a good sleeping pattern it is important to be consistent. This also includes having a set waking time

Outcomes

One of the outcomes of the pilot project was the development of a teaching pack which was then offered to other schools. The pack was supported by training days for education professionals throughout the UK.

Teaching pack

The *Sound Sleep* teaching pack aims to raise awareness of the importance of sleep to young people in secondary schools across the UK and encourages them to make informed decisions. By providing young people with information about sleep and its importance, they will be enabled to understand how the choices they make will impact upon their ability to learn and their general health and wellbeing.

Young people will have an opportunity to learn about, discuss and implement strategies to develop a good sleep routine that will help them to achieve their full potential. Having sleep on their agenda helps young people to discuss it in peer, teacher and parental relationships. Information about different agencies also provides additional support.

The pack includes: User's guide: Background reading for teachers; Curriculum guidelines;

Detailed lesson plans for different ages throughout secondary schools; Resources for lessons including PowerPoint presentations and handouts; Resources to address staff and parental awareness of sleep and its importance for wellbeing.

Training Days

The *Sound Sleep* training for trainers provides delegates with the skills and resources to deliver training to secondary school staff about sleep awareness and how to implement the *Sound Sleep* pack into schools.

The training includes: Sleep: An introduction to the physiology of sleep, adolescent sleep and sleep disorders; How to sleep well: Overview of sleep hygiene theory and putting it into practice; The Sound Sleep Pack: Aims & objectives; Becoming a Sleep Ambassador: Planning, implementing and monitoring sleep awareness in schools.

Developments

Jane Ansell said '*Sound Sleep* fits perfectly into our Curriculum for Excellence. We are delighted to work with education on this new project giving our future citizens sound sleep.'

Sound Sleep one day training events will be held in Perth on Friday 16th November 2012 and in Glasgow on Wednesday 13th February 2013. For more information visit Sleep Scotland's website at www.sleepscotland.org or contact Karen Jenkinson on 0131 651 1392.

Lisa Artis is the PR and Marketing Officer for The Sleep Council. For correspondence, email: lisa@sleepcouncil.com

Lisa Artis

The Sleep Council's teaching resource: '*Better Brains with More Sleep*'

With numerous reports in the media that children and teenagers do not get enough sleep, The Sleep Council believes that sleep should be on every school's agenda and this article describes what it is doing to help 'sleep awareness'.

"Sleep is absolutely essential to health and well-being," says Jessica Alexander of The Sleep Council. "We have actively promoted the importance of sleep for children and teens over the years and have conducted research surveys on the subject."

"It is my belief that teaching children the value of good sleep should rank alongside the importance of healthy food and exercise in schools.

"The government's *Change 4 Life* programme is a great initiative but, unfortunately, it does not mention sleep, let alone teach it in school. Yes, diet and exercise are extremely important but so is sleep. Today's way of life is seeing more and more children and teenagers getting less and less sleep due to the popularity of smartphones and tablets and the rise of social networking." With no legal requirement to include anything about sleep on the school timetable, the word 'sleep' does not even appear in official national curriculum guidelines.

"It's not just us that think sleep should be taught," says Jessica. "Our *Pillow Time* survey in 2009 found that 73% of respondents thought children should be taught about the importance of a good night's sleep at school. Six out of 10 went as far as to say sleep education should be included in the national curriculum."

"Sleep is something that every single one of us does without giving too much thought to just how important a good bed is to a good night's sleep. And how important good sleep is to how well we cope with everyday life. Students, in

particular, need to ensure they get a good night's sleep or they risk obesity, heart disease and mental illness. It is crucial for memory, learning and growth."

'Sleep awareness' education project

In March 2012, The Sleep Council launched its first-ever 'sleep awareness' education project in primary schools for its annual awareness event, National Bed Month.

A free learning resource was provided to schools nationally, with the aim of teaching primary school children the importance of a good night's sleep and factors - such as regular bedtimes and a good bed - that can affect it.

"There is a lack of understanding and education about the subject," says Jessica. "Daytime tiredness in young students is a real issue, so schools need to provide more formalised information about the benefits of sleep as part of ongoing compulsory health education."

"Some parents, for instance, don't know how many hours sleep their child needs. As a general rule of thumb under three's need 12 hours sleep a night; four to six year olds between 10.5 and 11.5 hours; six to 12 year olds around 10 hours and teenagers about eight to nine hours."

The 'sleep awareness' initiative followed the results of a survey '*Time to Learn*' of 250 primary school teachers conducted on behalf of The Sleep Council. The survey was carried out, between February 8 and February 14 2012, by Opinion Matters via an online survey/telephone survey. A total of 251 UK primary school teachers (teaching pupils aged between 4 and 11-years-old - reception to Year 6 classes) took part.

The survey revealed that lack of sleep among

primary school children was having a devastating effect in schools with nine out of 10 teachers (92%) complaining that pupils were so tired they were unable to pay attention in class. More than a third (38%) said lack of sleep among youngsters is a daily problem for them.

"As part of our 'sleep awareness' project we wanted to establish just how much of an issue lack of sleep has become among young schoolchildren," said Jessica. "Even we have been taken aback by the sheer scale of the problem."

'Better Brains with More Sleep'

The learning resource, '*Better Brains with More Sleep*', consists of four lesson plans with clearly identified learning outcomes suitable for eight to 11 year olds. Each lesson plan includes teacher's notes on how to structure the lesson and photocopiable activity sheets for pupils. As part of the activity, pupils will be asked to produce a 'sleep diary' which is designed to get them thinking about, and interested in their own sleep patterns, as well as their parents', and to help them understand that people have different routines.

Said Jessica, "The resource pack is designed to teach pupils about the importance of a good bed and a good night's sleep in a fun, informative and interactive way. Our survey would suggest this is information that needs reinforcing among primary school children."

"We are very lucky to have Fara Butt of Shire Beds on our marketing committee. Fara's teaching background has been extremely helpful in preparing what we think is a really good educative lesson plan."

Said Fara Butt: "Speaking as a teacher myself,

I think the lesson plan is very good. Not only is it a fun and much needed tool to help educate children from an early age on sleep but also their parents! The fact that kids can take the lesson plan home and do it with their families makes it an enjoyable, interactive tool that is extremely relatable to everyday life."

According to the '*Time To Learn*' survey, lack of sleep has become such a widespread issue in primary schools that nearly a quarter (24%) of the teachers questioned admitted that they had had to resort to letting children who are very tired sleep in a corner of the classroom.

Nearly nine out of 10 teachers (88%) felt that too many distractions in the bedroom (games machines, TVs etc) were at the root of sleep related problems along with the fact parents are simply not strict enough about enforcing bedtimes (82%). And more than half (55%) agreed that the brightest children in the classroom are the best slept and most wide awake.

Said Jessica, "Lack of sleep would appear to be a problem across all primary school age groups which is a real concern. Our schools project will involve pupils monitoring the sleep habits of their parents which will hopefully also serve to remind them of the need to ensure their children get a decent night's sleep if they are to do well at school."

For more information or to request a '*Better Brains with More Sleep*' teaching resource please email lisa@sleepcouncil.com

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