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Sleepless in school? The social dimensions of young people's bedtime rest and routines

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Abstract

There are increasing concerns that social pressures, such as family changes and social media, are 'invading' the sanctuary of the bedroom with the result that students arrive at school tired and stressed. This paper seeks to examine whether these concerns are justified and contribute to the growing literature on the social dimensions of sleep through examining the rest and routines of two cohorts of young people aged 12-13 and 14-15 years old. Our research indicates that, in general, most young people have 'reasonable' amounts of sleep and routines. But a significant proportion do go to school tired, with apparent negative consequences for their wellbeing. The paper examines some of the within-cohort variations, in particular, the significance of volume of sleep, routines and engagement with social media and how these may reflect the material and cultural circumstances of the young people. The paper concludes by arguing for more research on the complex social causes and consequences of sleep deprivation among today's youth.

Introduction

There is increasing anxiety about sleep – or perhaps more accurately, sleeplessness. World-renowned 'sleep expert', William Dement (2000), has argued that the US is experiencing an 'epidemic' of sleep deprivation. In the UK, the report of a Demos survey *Dream On: Sleep in the 24/7 Economy* found that for many adults 'everyday life is a litany of stories about bleary-eyed early starts and late finishes' (Leadbetter 2004:42). A survey conducted by the British Association of Counselling and Psychotherapy also found significant amounts of sleep deprivation. Their report, *Insomniac Britain: Does anyone sleep here any more?*, points to the stress of modern living: 'As global warming shows what's gone wrong with the outer world, chronic insomnia shows what's wrong with the inner world.' (BACP 2005).

Boden *et al.* (2008: 544) in their analysis of newspaper coverage of sleep issues question whether the media 'are themselves engendering a new moral panic or paranoid culture about sleep and, if so, for whom'. Certainly, many of the surveys and narratives emphasize the dangers of sleep deprivation, presenting 'a litany of supposedly 'sleepy' people ... sleepy drivers, doctors, parents, children, teachers and politicians' (Williams, Meadows and Arber, 2010: 278).

The 'problem' of sleep deprivation is usually approached from a medical and health perspective. Even though the precise benefits of sleep have long been debated by

scientists (Williams 2002), sleep clearly has a biological dimension. It is linked to a whole array of psychological and physical factors, such as cognitive functioning, mood and sickness (Martin 2003). For young people going through adolescence, there is a growing body of evidence to indicate that 'inadequate' amounts of sleep and irregular retiring and rising patterns are associated with lower academic performance (see Wolfson and Carskadon, 2003, for a review of research in this area). However, understanding sleep also requires us to take on board its *social* dimensions. It would appear that there is no 'natural' amount or pattern of sleep. Judgements about how much sleep is needed – by whom, at what times and where – vary by place, over time and across and within cultures. As Williams and Boden (2004: 1.3) argue, sleep 'throws up a fascinating range of sociological issues, from the biology-society relations it embodies and expresses, through the social patterning and management of the sleep role, to the broader questions of power and status, surveillance and control this raises.'

In this paper we hope to contribute to the sociological study of sleep – and the newly emerging field that Brunt and Steger (2008) call 'dormatology' – through investigating the sleeping patterns of 850 young people who are participants in a multi-cohort study in Wales. The paper is organised into four sections. The next section provides a brief overview of some of the social issues surrounding sleep in general – and the sleep of the young in particular. After outlining the nature of the research project from which the data we are using here derive, the paper describes the sleep patterns of our young respondents – and how these vary by age, by gender, by ethnicity and by socio-economic status. In addition to exploring the social dimensions of sleep, we also examine the relative significance of the amount of sleep, the routinisation of retiring and rising, and the engagement with social networks for our respondents' sense of tiredness and wellbeing. We conclude by discussing the need for more understanding of the complex social causes and consequences of variations in sleep patterns among today's youth.

The social dimensions of sleep

In 1970, Schwartz wrote what might now be considered the first academic paper devoted to the sociology of sleep. However, very little further sociological research was done in this area until the last decade or so, most likely in parallel with the rise of the 'moral panic' over sleep identified by Boden *et al.* (2008). Schwartz (1970: 485) presents sleep as a 'periodic remission':

By providing relief from the discipline of social life remissions make that life more bearable and are for this reason important modes of social control.

One aspect of this social control is the importance of schedules and, in particular, what Schwartz refers to as the 'transition phase' which 'hardens the boundaries between the prospective sleeper and a potentially disruptive outer-world' (489). These transitions are not only about bedtime routines, but also rising – moving from sleep to wakefulness. As Schwartz indicates, these transitions are important because they don't simply reflect states of sleepiness and wakefulness, they actually *produce* these states.

However, as Schwartz outlines, the organisation and 'transition' arrangements of sleep are as much about hierarchies of power and control and status arrangements as they are about 'escape' from the obligations of waking hours. This is particularly salient for our research. While our young people are clearly approaching adulthood, they are still living at home and subject to the oversight of their parents. Bedtimes are likely to be very much contested terrain. The alleged harmonious bedtimes in middle-class families are not only class-specific but, even for the middle-class families themselves, are as much a myth as a reality (Ben Ari, 2008). Indeed, Wiggs (2007: 1.5) claims that for many children and families 'the sleep period is not, contrary to literary suggestions, a time of peaceful restoration but rather a time of distress, conflict or wakefulness'. Moran-Ellis and Venn's (2007) research into the bed-time experiences of a small sample of young children showed that the transition period was 'replete with false starts, counter-moves, and resistances'. As Schwartz (1970: 497) comments: 'the child is understandably hesitant to retire while he has learned to define his bedtime as a status degradation ceremony'.

The sleeping arrangements and transition phases of children and young people are not only subject to parental control, they also need to be understood in terms of wider social processes. Williams, Lowe and Griffiths (2007), in their small scale qualitative investigation into the 'embodying and embedding' of children's sleep, charted a number of ways in which broader social and economic dimensions impacted on children's rest and routines. According to the children's narratives, one of the most important factors in their sleeping arrangements was whether or not they had their own bedroom. And a key theme that emerged was the *flexibility* of sleeping arrangements for many young people today. As families increasingly fragment and are reconstituted, children may find themselves having multiple bedrooms as they move between parents' and grandparents' houses. In addition, the children in Williams *et al.*'s research also spoke of sleep disruption when family crises led to other relatives moving in.

On top of that, many young people's bedrooms may well now be 'networked zones of social connectivity' (Williams, Meadows and Arber, 2010: 284). Livingstone (2007) chronicles how children's leisure activities have gradually moved from outside to inside the home – and then, as a result of the multiplication of media goods, from the family

living room into kitchens, corridors and finally into the child's bedroom. The extent to which televisions, computer games and mobile phones etc. are impacting on young people's sleeping patterns is unclear. In Williams *et al.*'s (2007) research, children found the presence of technology less intrusive to their sleep than interruptions by other people. And Kaji, Shigeta and Takada's (2007) research on Japanese children's use of technological gadgets at bedtime goes so far as to suggest that they were a source of comfort rather than distraction. However, Venn and Arber (2008) found that social networking, principally through mobile phones, meant that young people were staying awake longer. Their young respondents spoke of being 'totally exhausted', 'very, very tired' and even 'depressed'. There may be a gender and age dimension here. Punamaki *et al.* (2007) found that in early adolescence both boys and girls were equally likely to have their sleep disrupted by mobile phones in early adolescence. In later adolescence (16 to 18 years old) this is particularly an issue for girls, while boys' sleep is reduced through time spent on computer games. However, a general review of the literature in this area (Cain and Gradisar, 2010) finds that while in general there would appear to be a negative association between adolescents' use of technology and sleep, the mechanisms and consequences are unclear. Perhaps the most that one can conclude at this point is that generally very little is known about the 'night-worlds' (Moran-Ellis, 2006) of children and young people.

It also should also be remembered that children and young people are not a homogenous group. Their sleeping arrangements are likely to be culturally and materially circumscribed. And if sleep is a form of remission from the 'daily toil', then some have more remission than others. For example, the prevalence of sharing beds, bedrooms (or having any separate bedroom at all) may well be partly a cultural phenomenon. Schweder, Jensen and Goldstein (1995) identify 'the ritualized isolation and solitude imposed on young children every night' as being a peculiarly Anglo-American and middle-class phenomenon'. But 'co-sleeping' is also most certainly an aspect of material circumstance. It is likely that the precariousness of poverty is reflected in the precariousness of sleep. In terms of socio-economic status, we know there is a linear association for adults between sleep, educational qualifications and household income (Hartz *et al.*, 2007; Arber, Bote and Meadows, 2009). It would be surprising if there were not some relationship between the level of affluence in the home and the quality of sleeping arrangements of children. There is also a gender dimension to sleep. Almost every study on sleep and sleep problems confirms that women are more likely than men to report poor quality sleep (see Arber *et al.*, 2007 for a review of the evidence). A range of explanations has been proposed, from physiological to psychological, but key aspects include not only the physical aspects of catering for the needs of others, but also the emotional labour of worrying about others (see for instance, Bianchera and Arber, 2007).

In the next section, we examine the extent to which these patterns are evident in the rest and routines of our young respondents before examining the consequences and impact of their relative 'sleeplessness' for their wellbeing.

The research

The main dataset used in this paper is from the WISERDEducation Multi-Cohort Study (WCMDs). This is a longitudinal study that has collected data from children living in Wales every year over a four-year period. The study contains four cohorts of children who entered the study at various ages during the academic year 2012/13: 300 Year 1 pupils (aged 5-6 years) (Cohort A), 345 Year 6 pupils (aged 10-11 years) (Cohort B), 412 Year 8 pupils (aged 12-13 years) (Cohort C) and 436 Year 10 pupils (aged 14-15 years) (Cohort D). The sample design for WMCDS is based on a form of clustered sampling. This involved the random selection of a number of schools across Wales. Researchers visit the young people in their schools, usually during the Spring Term in each academic year, and ask them to complete a questionnaire on a tablet PC. Responses are securely saved on the Tablet PCs until the research team transfer data to a secure online database. This ensures that the collection of data is kept as safe and confidential as possible.

For this analysis, we draw upon data from two cohorts of the WISERDEducation Multi-Cohort Study (WMCS) – Cohorts C and D – and from just one sweep of data. This means we use responses from 486 children aged 12-13 years old in Year 8 (Cohort C) and 480 children aged 14-15 years old in Year 10 (Cohort D).

We also invited all of their parents to participate in the research through a paper-based questionnaire delivered to their homes. This questionnaire asked a range of more detailed questions relating to their home circumstances. As one might expect, the response rate to this was relatively low (21%) and undoubtedly skewed to the more advantaged parents. We know, for example, that the proportion of minority ethnic parent respondents is lower than the proportion of minority ethnic students in the study (9.1% as opposed to 11.7%).

Descriptive and inferential statistical analysis of the distribution and patterns of rest and routines was then undertaken and investigated for associations with a range of variables, such as gender and ethnicity. The relative impact of these patterns is then explored through a range of indicators relating to what is often termed 'subjective wellbeing'. Undertaking research into the volume and patterns of sleep is problematic. As Williams (2002: 176) argues, it is 'one of the great mysteries of life: something we all do, yet difficult nonetheless, for all that, to fathom or pin down precisely, let alone define.' The boundaries between sleep and non-sleep are blurred, and sleep may be interrupted or of different 'qualities' without our being aware of it. We know that self-

reported measurements of sleep appear to suffer from reliability and interpretability (Devine, Hakim and Green, 2005). Our own data relate not to respondents reporting how long they sleep, but to the times of going to bed and waking. The key questions are:

Do you go to bed at the same time each school night?

[Yes; Usually; Sometimes; No]

About what time did you go to bed last night?

[Earlier than 7pm; 8pm; 9pm; 10pm; 11pm; 12am; 1am; Later than 1am]

Do you get up for school at the same time every day?

[Yes; Usually; Sometimes; No]

About what time did you wake up to get ready for school today?

[Before 5am; 5am; 6am; 7am; 8am; Later than 8am]

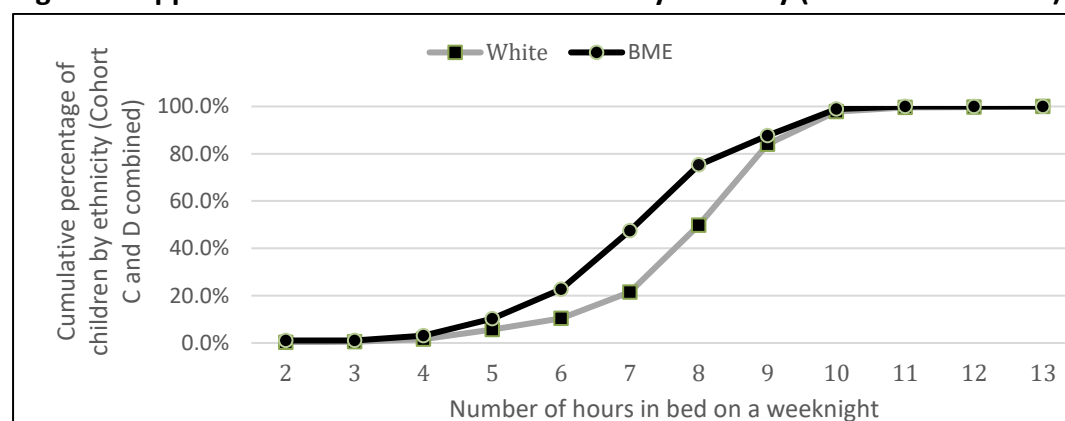
Using these responses it is possible to calculate the approximate lengths of time for which our young people are asleep. These can only be approximate, since a) the questions asked were about the time they go to bed and wake, not specifically the time they fall asleep, and b) the times provided are aggregated, usually to the nearest hour.

Patterns of sleep

If we look across the cohorts, we can see (Figure 1) that the majority of young people were in bed for eight or nine hours. Not surprisingly, the slightly older cohort of 14-15 year-olds spent slightly less time in bed than the younger cohort of 12-13 year-olds – having modal values of 8 and 9 hours respectively. However, over a fifth of the young respondents and over a quarter of older respondents were in bed for fewer than eight hours – 21.2% of 12-13 year-olds and 27.5% of 14-15 year-olds. Indeed, one in ten (of 12-13 and 14-15 year-olds) appears to have spent six hours or fewer in bed.

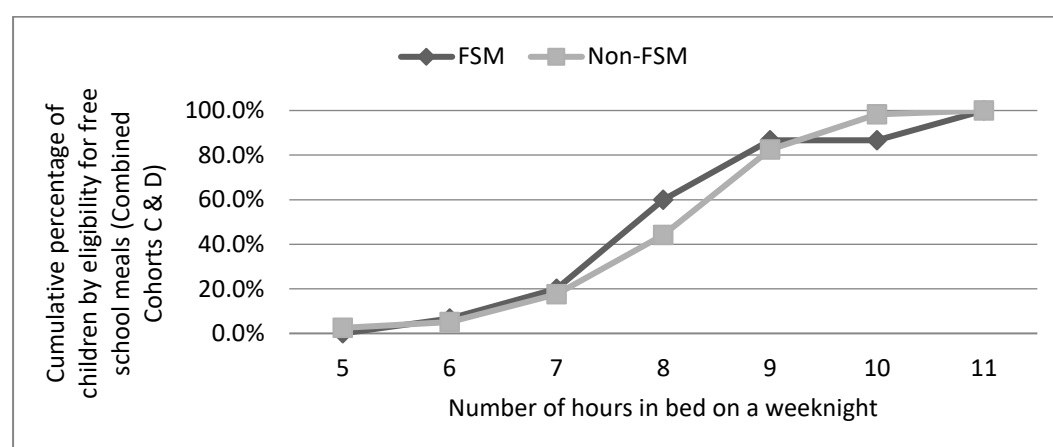
There are, though, considerable variations within this overall distribution, which may well reflect a range of socio-economic, cultural and family circumstances. As we noted earlier, research into adult sleep patterns indicates that women report getting less sleep than men. Our data suggest that this may not be the case for school students. Indeed, it is our male respondents who appear to be spending less time in bed as they get older compared to our female respondents.

Figure 1: Approximate number of hours in bed by ethnicity (Cohorts combined)



However, we did find quite marked differences in terms of ethnicity (Figure 2). Our black and minority ethnic (BME) respondents report spending significantly less time in bed than their white counterparts – and this is consistent across both cohorts.

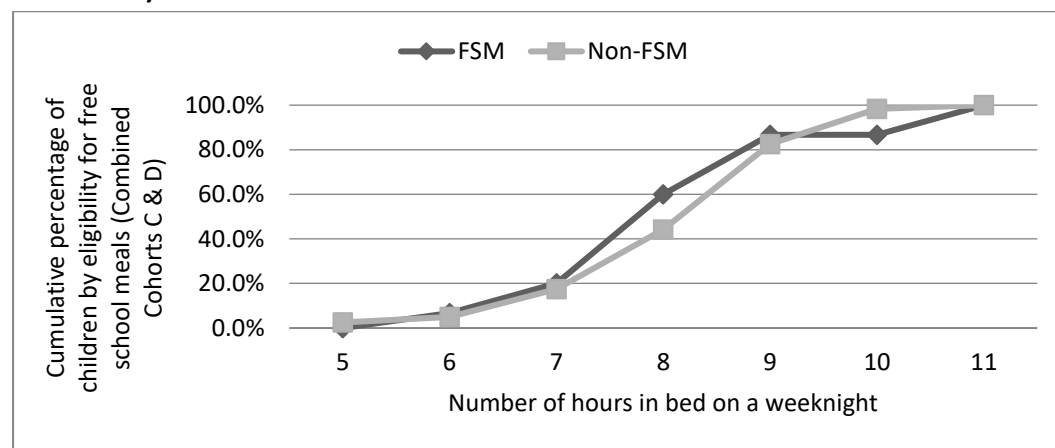
Figure 2: Approximate number of hours in bed by FSM eligibility (Cohorts combined)



Explaining why this might be the case is likely to involve looking at a combination of factors. For example, we know that BME families are more likely to suffer from poorer accommodation in general, and overcrowding in particular (Elahi and Khan, 2016). In addition, bedroom-sharing may be more prevalent on cultural grounds – as argued by Schweder *et al.* (1995) in their claim that ‘isolated’ sleeping is a peculiarly Anglo-American and middle-class phenomenon. Our own data are inconclusive here – partly because of the small number of parents (5.6%) who report that their child shares a bedroom. However, as already mentioned, we know that there is under-representation of BME respondents in the parent survey.

There is, though, some evidence of a relationship between time spent in bed and poverty as measured through eligibility for free school meals (FSM) – one of the indicators for financial hardship commonly used in the UK (Figure 3). As with our BME respondents, the children of parents who report their child is FSM-eligible spend less time in bed than their non-FSM eligible counterparts. This is particularly marked for our younger respondents. These findings support recent research on the relationship between sleep, stress and subjective social status (Huynh and Chiang, 2016) which shows that sleep disruption was associated with lower levels of social status.

Figure 3: Approximate number of hours in bed by FSM eligibility (Cohorts combined)



Routines

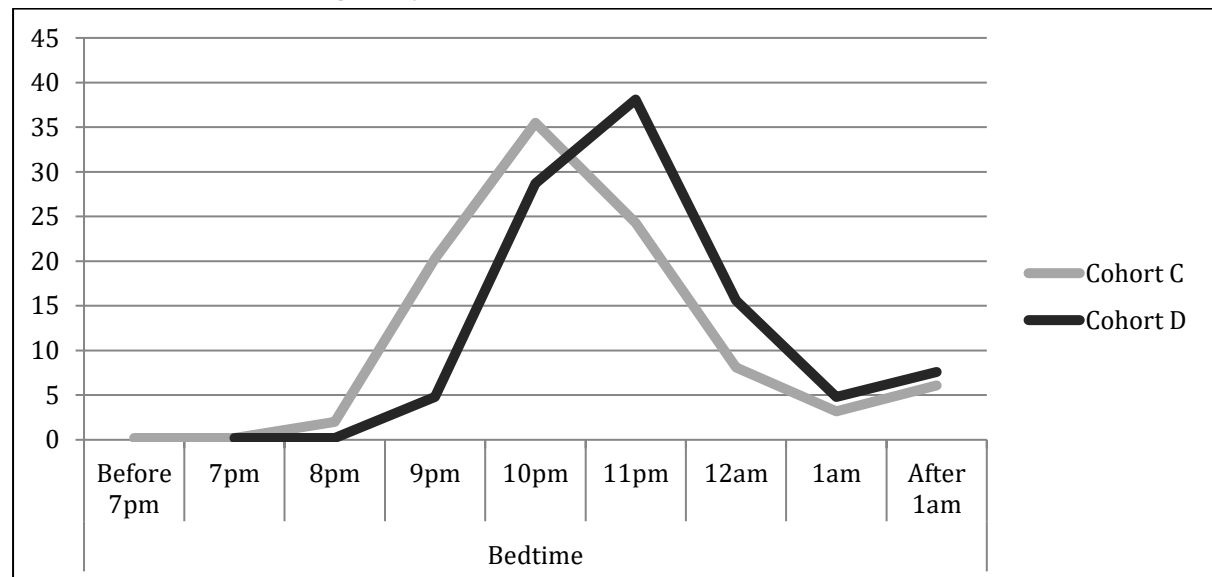
An important consideration of sleep and sleeplessness is not only the volume of hours spent in bed, but the transitional arrangements of retiring and rising. As Schwartz (1970) notes, these arrangements don't simply reflect states of tiredness and alertness – they actually produce these states. There is growing recognition that *routinisation* is a key component of producing these states – and routinisation itself is also likely to be more or less achievable according to the age of the young person, as well as to the financial and domestic precariousness of home life.

Retiring

To draw from Schwartz (1970: 496) again, 'it is generally true that older children, by dint of their age, are ascribed with the privilege of remaining awake longer than younger ones. Certainly among our sample, the most common bedtime for our 12-13 years olds is around 10pm and for our 13-14 year-olds is it nearly an hour later at 11pm (see Figure 4). What is noteworthy, though, is the large proportion of both 12-13 year-olds (17.4%) and 14-15 year-olds (28.0%) who reported that they went to bed around or after midnight. There is also a relationship between bed-time and routine. For

example, more than half (58.0%) of 14-15 year-olds who *always* have a regular bedtime say they go to bed before 11pm. This contrasts with only 12.2% of those that *rarely* have a regular bedtime and just 11.1% of those that *never* have a regular bedtime. Conversely, those with irregular bedtimes are much more likely to go to bed at or after midnight.

Figure 4: **Bedtime (last night) by Cohort**



Although age is clearly an important determinant of bedtimes, the degree of routinisation appears to be related to ethnicity and material circumstances. While one fifth of our 'white' respondents said they had no regular bedtime, this was the case for one third of our BME respondents. The relationship between bedtimes and FSM-eligibility is messy and it is not possible to find a clear association.

Waking

Over 80% of all our respondents wake to get ready for school at around 7am. And perhaps not surprisingly, given common school start times, there is a high degree of routinisation. The majority of 12-13 year-olds (58.2%) and 14-15 year-olds (59.8%) say they *always* get up at a regular time on a school day. Only 12.4% of 12-13 year-olds and 8.8% of 14-15 year-olds say they *never* or *rarely* get up at a regular time on a school day.

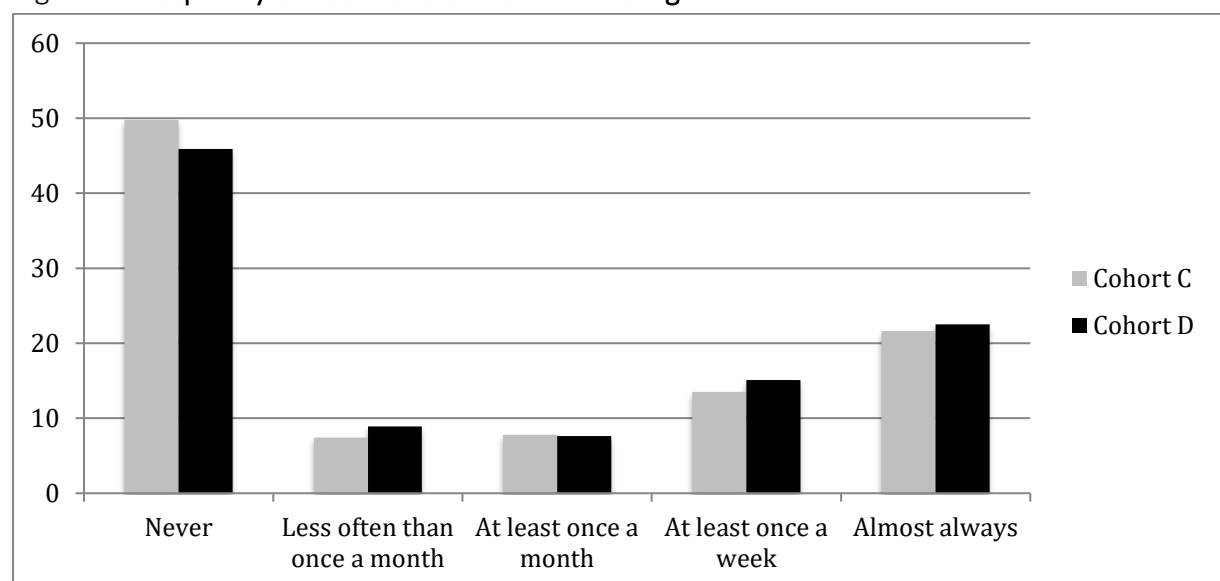
However, in terms of variations within our cohort, we again find similar patterns to routinisation as we did to volumes of time spent in bed. While there was no significant gender pattern in wake-times, there *is* a relationship between poverty, ethnicity and waking. FSM-eligible children and BME children, particularly from the older cohort -

were less likely to have regular rising routines. This again indicates the importance of material and cultural circumstances in sleeping patterns.

Social media and sleep

We have argued that time spent in bed, as measured through retiring and rising routines provides a useful indicator of sleeplessness and rest. However, there are increasingly other aspects that need to be considered when thinking about young people's time 'at rest' – and particularly the growing use of social media during the night. We asked our young people how often they wake up during the night to contact friends or check messages on a computer, tablet, or phone. Although nearly half of all respondents said they never did this, a substantial proportion said they did so on a regular basis (Figure 5). Indeed 21.6% of 12-13 year-olds and 22.5% of 14-15 year-olds reported that they almost always wake up during the night to use social media. A further 13.5% and 15.1%, respectively, said they did this at least once a week – over a third of young people appear to be waking up during the night to send or check messages via social media.

Figure 5: Frequency of use of social media in the night



There is a strong gender dimension to this. Our female respondents were far more likely to use social media during the night than their male counterparts. This was particularly the case for our younger cohort – over one quarter (26.4%) of 12-13 year-old girls said they *always* woke during the night to check their phone or tablet for messages, compared with less than one fifth (16.5%) of boys. We can find no clear relationship between the night-time use of social media and ethnicity – though there is a negative association for FSM-eligible children. This may be one of the few instances where material hardship may act as a protective factor.

The impact of time in bed, routines and disruption on wellbeing

We have seen that there are both common patterns and significant variations in the volume of sleep, the routinisation of rest and disruption through social media experienced by our young people. In this section, we explore the significance of these patterns for their wellbeing. To put it bluntly, does it matter if some children get more sleep than others, have regular routines or look at their messages in the night? In short, the answer would appear to be ‘yes’, but the causes and consequences are complex.

Feeling tired

In terms of levels of tiredness, around a third of all the young people said that they ‘almost always’ go to school feeling tired (Figure 6). A further third said that they go to school feeling tired ‘at least once a week’. Our older respondents are slightly more likely to go to school feeling tired than the younger respondents. One might be tempted to explain tiredness simply in terms of lack of volume of sleep. For example, we know that our older respondents get less sleep than their younger counterparts, and they are also more likely to report being tired. However, this explanation would not apply to our female respondents, who report as much sleep and more routinisation than their male classmates. Girls’ tiredness may be associated with the sleep disruption associated with their greater engagement with social media in the night. However, this explanation would not apply to our FSM-eligible respondents who were *less* likely to use social media in the night – or our BME respondents. Both FSM-eligible and BME respondents are more likely to say they went to school feeling tired. For these groups it may be the lower levels of routinisation that also need to be considered. In order to try and tease out these relationships, we undertook a binary logistic regression using all these variables. The results of this are presented in Table 1 – one binary logistic regression model for 12-13 year-olds and one for 14-15 year-olds.

Figure 6: How often do you go to school feeling tired?

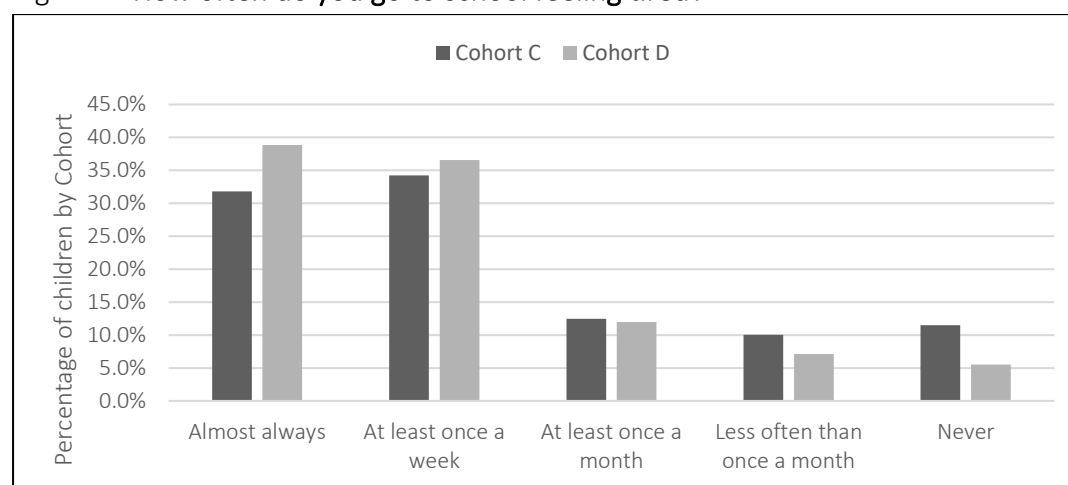


Table 1. Binary logistic regression model results to predict whether young people say they almost always feel tired when they go to school

| | | 12-13 year-olds | | | 14-15 year-olds | | |
|-------------------------------|------------------|-----------------|--------|-------|-----------------|--------|-------|
| n | | 400 | | | 428 | | |
| -2 Log likelihood | | 425.16 | | | 526.97 | | |
| Cox & Snell R ² | | 0.174 | | | 0.095 | | |
| | | Exp(B) | 95% CI | | Exp(B) | 95% CI | |
| | | | Lower | Upper | | Lower | Upper |
| Regular bedtime | Almost always | <i>Ref.</i> | | | <i>Ref.</i> | | |
| | Usually | 0.63 | 0.30 | 1.32 | 0.86 | 0.46 | 1.62 |
| | Rarely | 1.52 | 0.68 | 3.40 | 1.04 | 0.47 | 2.29 |
| | Never | 1.42 | 0.63 | 3.20 | 1.37 | 0.62 | 3.02 |
| Regular waketime | Almost always | <i>Ref.</i> | | | <i>Ref.</i> | | |
| | Usually | 1.34 | 0.78 | 2.29 | 1.35 | 0.84 | 2.18 |
| | Rarely | 0.88 | 0.30 | 2.53 | 1.55 | 0.57 | 4.21 |
| | Never | 3.11* | 1.16 | 8.34 | 3.91* | 0.92 | 16.63 |
| Bedtime | 9pm or earlier | <i>Ref.</i> | | | <i>Ref.</i> | | |
| | Around 10pm | 0.94 | 0.30 | 2.96 | 0.27** | 0.08 | 0.90 |
| | Around 11pm | 1.59 | 0.26 | 9.71 | 0.20** | 0.04 | 0.94 |
| | 12 am or later | 1.95 | 0.16 | 23.78 | 0.17 | 0.02 | 1.42 |
| Waketime | 6am or earlier | <i>Ref.</i> | | | <i>Ref.</i> | | |
| | Around 7am | 0.59 | 0.20 | 1.70 | 1.79 | 0.79 | 4.10 |
| | 8am or later | 0.81 | 0.16 | 4.23 | 3.33* | 0.83 | 13.36 |
| Time in bed | 10 or more hours | <i>Ref.</i> | | | <i>Ref.</i> | | |
| | 9 hours | 1.40 | 0.43 | 4.61 | 1.94 | 0.70 | 5.36 |
| | 8 hours | 1.24 | 0.19 | 8.01 | 1.93 | 0.45 | 8.34 |
| | 6-7 hours | 1.13 | 0.09 | 13.91 | 4.08 | 0.55 | 30.11 |
| | 2-5 hours | 1.24 | 0.06 | 24.03 | 6.75 | 0.61 | 75.38 |
| Use social media during night | Never | <i>Ref.</i> | | | <i>Ref.</i> | | |
| | Sometimes | 1.33 | 0.75 | 2.34 | 0.94 | 0.57 | 1.54 |
| | Almost always | 2.88** | 1.52 | 5.46 | 1.90** | 1.10 | 3.28 |
| Gender | Female | <i>Ref.</i> | | | <i>Ref.</i> | | |
| | Male | 0.67 | 0.41 | 1.08 | 0.61** | 0.40 | 0.95 |
| Ethnicity | BME | <i>Ref.</i> | | | <i>Ref.</i> | | |
| | White | 0.95 | 0.47 | 1.92 | 1.01 | 0.50 | 2.03 |

* p<0.10; ** p<0.05; *** p<0.01

These statistical models provide one way of attempting to distinguish between the relative importance of each of the characteristics associated with rest and routines amongst adolescent children. In both examples the dependent variable the models are trying to predict is whether a young person reports that they almost always feel tired when they go to school. By including all the variables in these models we can begin to

see how each factor is related to the dependent variable whilst controlling for the other characteristics – an important procedure given how they are all inter-related. However, these results should be treated with some caution, since the data they are based upon is not a random sample and nor does it consider other possible explanations for why a young person might feel tired when they go to school (such as diet, attitudes towards school, etc.). Furthermore, it should be remembered that responses to these questions are highly context-dependent.

Nevertheless, the results provide some insight into the relationships between rest and routine and how often young people feel tired when they go to school. For example, this shows that 12-13 year-olds who report never having a regular waketime are three times more likely to say they ‘almost always’ feel tired for school compared to 12-13 year-olds who always have a regular waketime. Similarly, 12-13 year-olds who regularly wake up in the night to use social media are three times more likely to say they ‘almost always’ feel tired for school compared to 12-13 year-olds who never use social media during the night. Similar trends, albeit with weak associations, can also be observed for 12-13 year-olds having a regular bedtime and the time they go to bed – the less regular their bedtime and the later they go to bed, the more likely that they say they are always tired when they go to school. Interestingly for these younger respondents there is no obvious relationship with how long they are in bed for.

For the older respondents the trends are slightly different. Again we see that never having a regular waketime is strongly associated whether they are always tired when they go to school (four times more likely compared to other older respondents who have a regular wake time). And also, for this group, waking up during the night to use social media is a strong predictor for feeling tired (although not as large a potential impact as it is for 12-13 year-olds). But in contrast with the younger respondents, the shorter the time they are in bed, the more likely they say they are tired when they go to school. For example, those in bed for just two to five hours are nearly six times more likely to say they are always tired when they go to school than other 14-15 year-olds who spend ten or more hours in bed. Also, the later 14-15 year-olds wake up in the morning the more likely they are tired when they go to school. Another important observation is that older respondents are less likely to go to school feeling tired the later they reportedly go to bed. Finally, whilst the gender and ethnicity of younger respondents did not appear to be related to going to school feeling tired, our older male respondents are 39% less likely to say they are always tired when they go to school than their female counterparts.

As has already been noted these results should be treated with caution due to the limitations of the sample, the imprecisions associated with measuring ‘sleep’ and the nature of the variables included in the models. It is also possible that the relationships

between these characteristics and feeling tired are not entirely linear – e.g. young people who go to bed early may be those that feel tired during the day.

Subjective wellbeing

In this final section of the paper we consider the extent to which tiredness at school affects other aspects of young people’s lives. These data were collected in the second sweep of the study, one year after data were collected about their rest and routines. The young people were asked to rate how happy they were with various aspects of their lives – their schoolwork, their school overall, the way they look, their family, their friends and their life as a whole. For each measure of subjective wellbeing we compare the average ratings of young people who go to school always feeling tired with other young people. Table 2 presents the results of this comparison and highlights where levels of subjective wellbeing are different for the two groups of young people.

On every measure of subjective wellbeing, young people who always feel tired when going to school are, on average, significantly less happy than other young people. If these results are a reliable indicator then this would suggest that rest and routines are intertwined with levels of subjective of wellbeing.

Table 2. Comparison of subjective wellbeing (Cohorts C and D Sweep 1 and 2)

| | Mean score ¹ | | Independent t statistic | Sig. |
|----------------------|-------------------------|--------------|-------------------------|-------|
| | Not always tired | Always tired | | |
| Your school work | 2.54 | 2.98 | 4.05 | 0.000 |
| Your school overall | 2.80 | 3.35 | 4.16 | 0.000 |
| The way you look | 3.09 | 3.68 | 3.98 | 0.000 |
| Your family | 1.70 | 2.20 | 4.23 | 0.000 |
| Your friends | 1.70 | 2.03 | 3.01 | 0.003 |
| Your life as a whole | 2.14 | 2.88 | 6.00 | 0.000 |
| n | 406 | 193 | | |

¹ Wellbeing is measured here on a scale of 1 to 7, where 1 is completely happy and 7 is not happy at all.

Conclusions

This paper began by discussing concerns over the ‘epidemic’ of sleeplessness (Dement 2000) that is allegedly an increasing feature of everyday life. Our research suggests that these concerns may be somewhat exaggerated. The majority of our young people do not report that they go to school feeling tired. However, beneath this overall picture, it is clear that there are significant variations between young people, some of which are

associated with material and cultural factors. For example, it may be that material deprivation in particular contributes to sleep deprivation.

However, precisely what it is that leads to some young people being more or less 'sleep deprived' is complicated. While there are likely to be individual differences in circadian rhythms that affect school performance (eg Randler and Frech, 2009), our data suggest that it is the routinisation of rest (and particularly of waking up) and engagement with social media in the night-time that are more important in determining whether a young person is tired during the day than the time of going to bed and the amount of time spent in bed. Our analysis also indicates that there is no evidence that young people would benefit from a prescribed amount of sleep. This may not be that surprising when one considers that any benefits from routinisation and time in bed are entirely expunged if young people are then waking up during the night to use social media. In contrast to the more positive findings about children's use of new technologies (eg Kaji *et al.*, 2007), our results confirm other research (eg Venn and Arber, 2008) which indicates there are significant and serious implications of the night-time use of social media for levels of tiredness and wellbeing.

In conclusion, our research shows that sleep is clearly important – though the significance of the social arrangements that surround sleep are complex and as yet only poorly understood. These social arrangements include the extent to which young people's transitions into and out of sleep are routinized, and how much social media 'intrude' into the night-time. These routines and resources themselves are likely to reflect broader socio-economic inequalities. Unravelling these relationships is an important research task if we are to understand and address the circumstances which appear to jeopardise young people's wellbeing. If sleep is remission from the 'daily toil' of school, it is surely important to ensure that all young people experience its benefits.

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