

**Abstracts: Sleep & Health Policy Seminar, UCL, Tue 3 June 2014.**

We all know that a good night's sleep makes you feel better but is sleep also a necessary ingredient for health, learning and longevity? This seminar presents new findings on the precursors and consequences of a good night's sleep at different stages in life. The first talk outlines the relationship between scheduled feeding and sleep in infancy and then links these to sleep routines and obesity in childhood. The second presentation follows up on this theme by reporting on the association of childhood bedtime routines with cognitive and behavioural development. We then move to the other end of the lifespan for the third talk showing how older Europeans' health and social circumstances interfere with sleep quantity and quality. The seminar rounds off with a presentation on the health consequences of poor sleep, which finds mortality risk is raised in those who do not sleep well.

**Introduction:** Amanda Sacker is a Professor of Lifecourse Studies at UCL and Director of ICLS.

**Presentation 1: Scheduled versus demand feeding of infants: how do different feeding modes affect sleeping patterns in older childhood, and do they affect the risk of obesity?**

Previous research has shown that demand-feeding of infants promotes the successful establishment of breastfeeding, and that demand-feeding is also linked to better cognitive and psycho-social development among children. However, popular books promoting feeding and sleeping schedules for infants argue that such schedules promote healthy sleep into older childhood and adulthood, with associated health benefits. This research explores the validity of these claims, using data from ALSPAC (the Avon Longitudinal Study of Parents and Children) to investigate the relationship between how children were fed as infants, and their sleeping patterns at ages 9 and 11.

We find very little evidence to suggest that the incidence of sleeping problems differs between children who as babies were fed on demand or to a schedule; intriguingly, the only difference between the two groups is that children who as babies were fed on a schedule sleep for around 12 minutes longer each night than their demand-fed counterparts. This difference amounts to around 1/3 of a standard deviation, and is robust to the inclusion of sociodemographic controls. While differences in sleep durations are associated with differences in the risk of obesity, we find no evidence to suggest that the shorter sleep durations of children who were demand-fed as babies are linked to an increased risk of obesity

**Speaker: Maria Iacovou** is a Reader in Quantitative Sociology, Department of Sociology, University of Cambridge. Her research interests include household structures and family forms; the transition to parenthood; and infant feeding and early parenting.

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**Presentation 2: Time for bed?** Sleep, health and development in the first decade of life: findings from the Millennium Cohort Study

Our need for sleep has intrigued scientists for centuries, and recent research in children and adolescents demonstrates more clearly than ever before the links between sleep and healthy development. This presentation highlights our findings from the analysis of data on over 10,000 children from the UK Millennium Cohort Study. Revealed are links between bedtime schedules and various aspects of healthy development. We show that the regularity of bedtimes is important for markers of intellectual ability and behavioural problems. This may be to do with disruptions to natural body rhythms leading to sleep deprivation, which undermines the brain's ability to acquire and retain information and to regulate behaviour. We find that later bedtimes are linked to the risk of childhood obesity which may be due to hormonal influences. Given that early child development has profound influences on health and wellbeing across our lives, it follows that disruptions to sleep, especially at key times in development, could have long-term implications too.

**Speaker: Yvonne Kelly**, Professor of Lifecourse Epidemiology at UCL and Associate Director of ICLS. Her research interests include the causes and consequences of socioeconomic inequalities in child and adolescent health and development.

**Presentation 3. Sleep disturbance, sleep duration and mortality in British civil servants**

Poor quality sleep has been found to be associated with a range of health outcomes and mortality. However, whether this is due to how long people sleep, whether they experience insomnia symptoms or an interaction between these is less clear. This presentation will use data from the Whitehall II study to examine this association between sleep duration and insomnia symptoms with all-cause mortality. Mortality follow-up was available for the study population through the National Health Service. This presentation finds that there is evidence for an interaction between short sleep duration and disturbance, such that participants with both short sleep duration and high levels of sleep disturbance have the highest risk of all-cause mortality.

**Speaker: Jessica Abell**, Research Associate in the Whitehall II research group at UCL, and former ICLS PhD student. She is funded alongside other colleagues by a grant from The Dunhill Medical Trust. Her interests broadly lie in the social determinants of ageing with particular focus on sleep and health.

**Presentation 4: Troubled sleep: A cross-national study of the influence of age, health, social and psychosocial factors.**

Trouble with sleep is often accepted as a part of ageing with its prevalence reported in up to half of the population surveyed. However it has been persuasively argued that in healthy ageing individuals, sleep need not diminish significantly in quantity or quality. Using data from the Study of Health, Ageing and Retirement in Europe SHARE, we show that there were differences among European countries in the prevalence of sleep problems. There were differences between men and women in the association of age with sleeping problems. Health was the major influence but psychosocial factors like trust in others and social factors like receiving help were also associated.

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**Speaker: Gopalakrishnan Netuveli**, Professor of Public Health, Institute of Health and Human Development, UEL and a member of ICLS. His research interests include comparative study of ageing and wellbeing with a life course perspective.

### **Glossary: Sleep & Health Policy Seminar, UCL, Tuesday 3 June 2014**

Based at the University of Bristol, the Avon Longitudinal Study of Parents and Children (ALSPAC), also known as Children of the 90s, is a world-leading birth cohort study. Between April 1991 and December 1992 more than 14,000 pregnant women were recruited into the study and these women (some of whom had two pregnancies or multiple births during the recruitment period), the children arising from the pregnancy, and their partners have been followed up intensively over two decades.

Cohort studies sample a cohort (defined as a group of subjects experiencing some event - typically birth - in a selected time period) and study them at intervals through time.

A longitudinal study is a research study involving repeated surveys of the same individuals over long periods of time — often many decades, unlike cross-sectional studies that are conducted for a set period.

The Millennium Cohort Study (MCS) follows the lives of a sample of about 19,000 babies born in the UK in the year 2000/2001. It is the fourth longitudinal birth cohort study conducted in the UK and is aimed at creating a multi-purpose dataset which describes the diversity of backgrounds into which children are born in the beginning of the 21st century. The MCS is funded mainly by the Economic and Social Research Council (ESRC) and various government departments and managed by the Centre for Longitudinal Studies (CLS).

Study of Health, Ageing and Retirement in Europe (SHARE) is a cross-national panel study on health, socio-economic status and social and family networks of more than 85,000 individuals from 19 European countries (+Israel) aged 50 or over. The study details and data available at <http://www.share-project.org/>

Statistical significance is the probability that an effect is not due to just chance alone. It is an integral part of statistical hypothesis testing where it is used as an important value judgment. In statistics, a result is considered significant not because it is important or meaningful, but because it has been predicted as unlikely to have occurred by chance alone.

Whitehall II study The Whitehall II study was established in 1985 to investigate the importance of social class for health by following a cohort of 10,308 working men and women. Looking towards the future, the study seeks to answer questions about how previous and current circumstances affect health and quality of life in an ageing cohort.

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