SLEEP DURATION AND BREAST CANCER RISK: A META-ANALYSIS

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Background It is hypothesised that sleep duration affects the production of melatonin and subsequently influences cancer risk. The relationship between sleep duration and risk of breast cancer has been investigated recently but findings from epidemiological studies have been inconsistent and have not been summarised quantitatively. We aimed to conduct a meta-analysis of observational studies of the association between sleep duration and breast cancer.

Methods Relevant publications were identified from reviews and computer-aided searches using PubMed, with keywords “sleep duration”, “breast cancer”, “survival rate”, “mortality”, “morbidity”, “incidence” and “risk”, up to July 23rd, 2009. RR estimates and 95% CIs were extracted for the comparison between the highest exposure group, women who slept ≥ 9 hours, and the reference group that comprised women who had a moderate sleep duration (7 or 8 hours). Summary RRs were estimated by calculating the average of the log RRs, weighted by the inverse variances of the log RRs.

Results Five studies, four with prospective data and one case-control study, were identified on the risk of breast cancer in relation to sleep duration. The published data include 9166 women with incident invasive breast cancer and 147,544 women without breast cancer. When results from these studies were combined, the aggregate RR was 0.96 (95% CI 0.86 to 1.07) for women with the longest sleep duration compared to those in the reference group with a shorter sleep duration. When analysis was restricted to prospective data, the aggregate RR was 0.89 (95% CI 0.78 to 1.01). There was no evidence for significant heterogeneity in this association by menopausal status.

Conclusion Meta-analysis of the published epidemiological data provides no strong evidence for a relationship between sleep duration and risk of breast cancer.

MATERNAL EMPLOYMENT AND CHILD SOCIO-EMOTIONAL BEHAVIOUR: LONGITUDINAL EVIDENCE FROM THE MILLENNIUM COHORT STUDY

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Objective To examine the effects of parental employment in the early years on child socio-emotional development at age 5 in a recent birth cohort study in the UK.

Design Prospective cohort study.

Setting The Millennium Cohort Study (MCS): a large, representative sample of children born in the UK between September 2000 and January 2002 (n=18,819 at sweep 1).

Participants Singleton births in households in which a mother was present in the first three sweeps of the MCS, when participants were 9 months, 3 years and 5 years. Analysis was restricted to white children as there was large ethnic variation in maternal employment, but inadequate power to stratify by ethnicity.

Main outcome measure The Strengths and Difficulties Questionnaire (SDQ) with clinically relevant cut-points for problem behaviours. The SDQ is a widely used instrument for assessing socio-emotional difficulties in children.

Methods Data on parental employment across the three sweeps were used to investigate: (i) whether children whose mothers were in paid work during their first five years were more likely than children whose mothers were at home full-time to display adverse behavioural symptoms at age 5, independent of maternal education, mental health or economic position; (ii) whether effects of maternal employment on child socio-emotional development were cumulative in nature, or whether children were more sensitive to the effects of maternal employment during their first year; and (iii) the effects of different types of parental work arrangements on child socio-emotional behaviour at age 5.