hospitalisation, generally finding the strongest association to be with temperature below a given threshold measured at a lag of 7–14 days. In contrast, very little work has been done on the health effects of exposure to low indoor temperatures, and none on the best metric of this exposure, despite the fact that people have greater exposure to the indoor environment. The scarcity of studies on the association between indoor temperature and health is due to the difficulty in measuring indoor temperatures and health outcomes regularly and simultaneously over an extended time period.

**Methods** The Heating Housing and Health Study is an RCT which investigates the effect of installing heaters in asthmatic children’s homes. It has detailed measurements of lung function (daily) and indoor temperature (hourly).

Lung function and indoor temperature were measured for 309 children over 12049 child-days. For four measures of lung function (FEF25-75% of five consecutive breaths, PEFR morning, PEFR evening, FEV1 morning and FEV1 evening) we attempted to find the strongest association between exposure to low temperatures below particular thresholds averaged over various periods.

**Results** Indoor temperatures were found to have a small, but significant, association with short-term variations in the lung function in children with asthma. This association was greatest for temperatures below 11°C in the child’s bedroom averaged over the preceding 11 days.

**Conclusion** These findings provide valuable information for future studies looking at the effects of low indoor temperatures on respiratory health.

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**04-1.4 NATIONAL INCOME AND INCOME INEQUALITY, FAMILY AFFLUENCE AND LIFE SATISFACTION AMONG ADOLESCENTS IN 35 COUNTRIES**

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**Introduction** This study examines 13 year olds’ life satisfaction cross-nationally and investigates variation in its relationship with family affluence, and the impact of national income and income inequality on this relationship.

**Methods** Data from the 2006 Health Behaviour in School-aged Children: WHO-collaborative Study (N =58 352 across 35 countries) were analysed using multilevel linear and logistic regression for outcome measures life satisfaction score and binary high / low life satisfaction.

**Results** National income and income inequality were associated with national mean life satisfaction score and prevalence of high life satisfaction. The relationship between life satisfaction and family affluence was curvilinear and varied cross-nationally, for example, family affluence was not related to life satisfaction in Denmark and France, while steep relationships were seen in England, Lithuania, Macedonia, Turkey and Romania. When the data were modelled simultaneously, GDP (PPP US$) and Gini were not in themselves associated with the life satisfaction, however this relationship varied depending on young people’s relative affluence. Socioeconomic inequalities were greatest - steepest gradients were seen in poorer countries (lower GDP (PPP US$) and in countries with unequal income distribution (higher Gini score).

**Conclusions** The data were collected prior to the global economic recession and therefore this study may have underestimated current socioeconomic inequalities in life satisfaction and international variation in inequalities. As adolescence is a critical period where many patterns of health and health behaviour are formed, this study highlights the importance of monitoring cross-national inequalities and identifying and addressing national mediating factors during this life stage.