

**Citation for published version:**

Gurnam Singh Johal, Ruth Bell, Therese Hesketh, Ellen Klemmera, and Fiona Brooks, 'Obesogenic behaviours in South Asian adolescents in England: a literature review and quantitative investigation', Vol. 388 (Supp. 2): S60, November 2016.

**DOI:**

[https://doi.org/10.1016/S0140-6736\(16\)32296-6](https://doi.org/10.1016/S0140-6736(16)32296-6)

**Document Version:**

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## **Title**

A literature review and quantitative investigation of obesogenic behaviours in South Asian Adolescents in England.

## **Background**

WHO has stated that childhood obesity is one of the most serious challenges facing Public Health in the 21st Century, with obese children and adolescents facing a plethora of health complications and increased risk of many chronic diseases. This research describes results of a literature review and quantitative analysis of the WHO Health Behaviour in School-Aged Children (HBSC) data, to better understand obesogenic behaviours in South Asian Adolescents in England.

## **Methods**

We searched electronic searches of computerised databases (Embase, Scopus, Medline, Web of Science) and the references of relevant papers. Grey literature including reports and non-peer reviewed sources were also included. The inclusion criteria for the search were: adolescents aged 11-18 years of age; search from inception of database until 10<sup>th</sup> April 2016; articles in English language and studies based in England.

The quantitative secondary analysis involved the last three rounds of the survey data (2006, 2010 and 2014) and examined variables such as physical activity, dietary behaviours and mental health indicators in these South Asian ethnic groups. Proportions were compared with the Pearson Chi Squared test.

## **Findings**

Proportions of adolescents from Bangladeshi (n=51), Indian (n=96), and Pakistani (n=111) groups for each behaviour, by gender, were compared to White British adolescents (n=3476). Pertinent results were that 2 (8.7%) of 23 Bangladeshi girls undertake 5 or more days' physical activity, compared to 744 (44.1%) of 1688 White British girls, 13 (27.7%) of 47 Indian girls and 16 (33.3%) of 48 Pakistani girls. South Asian adolescents had significantly worse outcomes in terms of number of times physical activity undertaken per week ( $p=0.023$ ); any physical activity in the last 7 days was ( $p=0.002$ ). 11 (20.0%) of 55 Pakistani girls never eat/eat vegetables less than once a week, compared to 94 (5.3%) of 1771 White British girls;

consumption of vegetables ( $p=0.000$ ). Proportion of adolescents who reported being 'on a diet' ( $p=0.034$ ).

### **Interpretation**

Key findings from the literature review and HBSC 2010 data were that South Asians have lower physical activity levels compared to their white peers, have worse dietary behaviours and there were identified barriers to engaging in healthier lifestyles, compared to their non-ethnic counterparts. This research found negative lifestyle behaviours that will need careful consideration of upstream policy and local health service provision/interventions in South Asian ethnic adolescents in England. Taking this 'evidence into action' will be crucial in addressing the obesity epidemic and reducing the existing health inequalities.