

# Online vs. In-Store: How food outlet type is linked to dietary behaviours in Great Britain

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**Background:** As online food delivery service (OFDS) platforms gain popularity, understanding their impact alongside physical food outlets is important for addressing dietary quality. This study examined the associations of physical and online food outlet availability, independently and in combination, with dietary behaviours. We also explored how associations between physical outlet availability and dietary behaviours might be modified by online food outlet availability.

**Methods:** In this cross-sectional analysis, we used British data from the International Food Policy Study (IFPS) in 2022. We focused on three dietary behaviours: physical food outlet use, online food outlet use, and frequency of out-of-home meal consumption. To assess food outlet availability, we quantified neighbourhood food outlets using data from the Ordnance Survey Points of Interest dataset, and identified available delivery options from three OFDS platforms through web scraping techniques.

**Results:** Mean age of participants ( $n = 3663$ ) was 50 (SD 18). Both physical and online availability measures were independently associated with online food outlet use and out-of-home meal consumption. After mutual adjustment, only delivery options from OFDS platforms remained associated with these outcomes. For example, a one standard deviation increase in delivery options from OFDS platforms was associated with 7% (95%CI 1%; 12%) greater out-of-home meal consumption. Online food outlet availability moderated the association between physical food outlet availability and dietary behaviours.

**Conclusion:** The findings highlight the increasing importance of the online food environment in explaining dietary behaviours, and highlights the need for researchers and public health strategies to focus on this evolving aspect of food availability.

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