1. Introduction

- There is an obesity epidemic occurring with the UK, so gaining an understanding of the factors which may contribute to overeating is therefore important.
- People encounter daily hassles and stressors throughout their day, particularly in the workplace.
- 80% of individuals are believed to change their caloric intake in response to stress, particularly increasing consumption of high fat, sugary foods (O’Connor et al. 2008).
- Accordingly, chronic stress may contribute to the obesity epidemic.

This study aims to assess:
- The effect of perceived workplace stress on eating behaviour;
- The impact of workplace shift patterns on perceived daily stress and eating behaviour.

2. Methods

Participants

450 participants, from 3 public sector workplaces. The 3rd workplace is comprised of the emergency services who work shifts.

Measures

Food Intake is measured using a 7-day weighed intake food-diary, detailing all food and drink consumed over this period (figure 1). Hourly measures of hunger, fullness, stress were recorded on a VAS using a pro-diary (figure 2).

3. Results

Both BMI and stress were significantly associated with eating behaviour (figure 3 & table 2). High BMI in the overweight category was associated with restrained eating and emotional eating, although those with a BMI over 30 showed no significant difference from normal weight BMI in eating behaviour (figure 3).

Table 1; Descriptive statistics for 130 participants.

<table>
<thead>
<tr>
<th>Group</th>
<th>Age (yrs)</th>
<th>BMI (kg/m2)</th>
<th>Stress (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMI &lt;25 (n=73)</td>
<td>39.7 (SD=12.0)</td>
<td>22.5 ± 0.2 (17.6 - 25.0)</td>
<td>10.11 (7.6)</td>
</tr>
<tr>
<td>BMI 25-30 (n=40)</td>
<td>44.5 (SD=9.7)</td>
<td>27.0 ± 0.2 (25.2 - 29.6)</td>
<td>13.10 (9.3)</td>
</tr>
<tr>
<td>BMI &gt;30 (n=17)</td>
<td>42.2 (SD=12.6)</td>
<td>33.4 ± 0.7 (30.0 - 39.1)</td>
<td>10.82 (8.3)</td>
</tr>
<tr>
<td>ALL (n=130)</td>
<td>41.5 (11.5)</td>
<td>25.3 ± 0.4 (17.6 - 39.1)</td>
<td>11.12 (8.3)</td>
</tr>
</tbody>
</table>

3. Results

4. Future Analysis

Upon completion of recruitment, detailed analysis will investigate the relationship between stress and caloric intake, as well as the source of the calories (ie. snacking versus meals). The role of personality driven eating behaviour will also be assessed as well as the role of shift work and work environment.

5. Conclusions

- Early results indicate stress to be significantly associated with eating behaviour, independently of BMI.
- The findings of this study will:
  - increase our understanding of stress-induced eating
  - assess the impact of workplace shift patterns on daily stress and eating behaviour
  - evaluate the impact of a health-promoting work environment on daily stress and eating behaviour in a large group of men and women
  - influence policy by directly targeting the role of diet composition in our ‘obesogenic environment’

References


Table 2; Significant associations between stress and eating behaviour.

<table>
<thead>
<tr>
<th>Stress (DASS)</th>
<th>Restrained (DEBQ)</th>
<th>Emotional (DEBQ)</th>
<th>Externality (DEBQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress (DASS)</td>
<td>.112</td>
<td>.334**</td>
<td>.221*</td>
</tr>
</tbody>
</table>

Table 3; Significant associations between stress and eating behaviour. Controlling for BMI

** p < .01 * p < .001