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Background

- Studies have shown various diseases are linked to excessive consumption of white sugar.
- Sugar, like alcohol and tobacco, acts on the brain similarly to induce subsequent intakes.
- This study uses sugar’s chequered history in the slave trade and its physiological effects on the body to arouse guilt emotions among consumers.
- The aim is to highlight the dark side of sugar and help raise awareness to members of the public regarding the effects of sugar.
- An integrated Norm Activation Model and Theory of Planned Behaviour (NAM+TPB) framework was used to incorporate arousal and its impact on sugar consumption.

Blood Tainted Sugar

- The first recorded boycott in relation to sugar was in the 1792, due the treacherous manner in which African female slaves were treated in sugar plantations.
- The sugar plantations were described as ‘hell’ for the slave workers because of the endless labour required and the high mortality rates.
- It is common that 15% of African and Chinese sugar plantation workers on board to West Indies would perish.
- Child labour and forced prostitution for female sugar plantation workers still exists till today.

Sugar Triggered Diseases

- Among diseases attributed to white sugar consumption includes coronary diseases, constipation, dental related diseases, diabetes, hemorrhoids, obesity, peptic ulcer, abnormal skin conditions and varicose veins.
- Some of these diseases such as diabetes result in further health complications such as cardio vascular diseases, kidney diseases, stroke, glaucoma and in some cases amputation of limbs.
- Sulphated sugar, a form of sugar chemical found in dietary supplements, is said to be associated to 11 types of cancers such as; breasts, lung, colorectal, stomach, prostate, ovary, pancreas, kidney, esophagus, liver and thyroid.

Experimental Survey

- Of the 128 healthy participants who took part in this study, 40 (31.2%) were males and 88 (68.8%) were females.
- The intervention comes in a form of text content depicting sugar’s dark side; both regarding its history and its effects physiologically to evoke guilt arousal.
- Participants were randomly assigned into two groups, one with the intervention (text article) and another without the intervention.
- The (IV); intention to consume sugar and (DVs); personal norms regarding sugar consumption, awareness regarding sugar, and guilt of consuming sugar were measured.
- A path analysis was conducted on the surveyed data to test the NAM+TPB model.

Results

<table>
<thead>
<tr>
<th>Model</th>
<th>χ² (d.f.)</th>
<th>CFI</th>
<th>RMSEA</th>
<th>TLI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Revised NAM-TPB model</td>
<td>14.033 (6)</td>
<td>0.87</td>
<td>0.03</td>
<td>0.78</td>
</tr>
<tr>
<td>2nd Revised NAM-TPB model</td>
<td>10.971 (6)</td>
<td>0.92</td>
<td>0.00</td>
<td>0.865</td>
</tr>
</tbody>
</table>

* A non-significant Chi-square is desirable
^ CFI = comparative fit index. Range 0.1 – 1.00; > 0.90 is desirable
^ RMSEA = root mean square error of approximation. < 0.06 is acceptable
^ TLI = Tucker Lewis index. > 0.9 are acceptable

Discussions

- Guilt arousal has been used to fight drug addiction, promote responsible sexual practices and discourage smoking.
- The results indicated that the model can incorporate guilt arousal and that it is a good representation of the determinants of intention.
- This study shares some light on how evoking guilt can counter the perverse marketing and craving of sugar.

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THE DARK SIDE OF SUGAR
Using Guilt As A Counter Measure