Nothing beats taste or convenience: a national survey of where and why people buy sugary drinks in Australia

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Abstract

Objective: There is limited knowledge of what influences sugary drink purchasing decisions in the Australian population. This study aimed to identify the most common locations and reasons across different demographic groups for purchasing sugary drinks in Australia.

Methods: A total of 891 respondents (who purchased sugary drinks for personal consumption at least occasionally) from a broader national population telephone survey of Australian adults conducted in 2017 (n=3,430) were included in the analysis.

Results: 'Taste' was a ubiquitous reason for purchase (94%) and the majority also agreed with 'easily available' (76%). Males, younger people and people of lower socioeconomic status (SES) were significantly more likely to agree that sugary drinks were 'cheap' and 'better value than water'. Furthermore, males and younger people were more likely to report buying sugary drinks because they were 'part of a meal deal'. The most common purchase locations were supermarkets (56%), followed by convenience stores (19%) and food or entertainment venues (17%).

Conclusion: Taste is paramount in decisions to purchase sugary drinks, and widespread availability and value for money support consumption.

Implications for public health: Policies and interventions targeting point-of-sale sugary drink purchasing decisions among the most 'at risk' consumers are warranted.

Key words: sugary drinks, purchasing behaviour, policy

Methods

A computer-assisted telephone-interview survey (~21 minutes) was administered to a nationally representative sample of Australian adults (≥18 years; n=3,430) in 2017, using random digit dialling (landline:mobile phones; 35:65 split). Full methodological details are reported elsewhere.9 This study reports on a subsample of 891 respondents who met the criteria for 'past week sugary drink consumption' and 'bought sugary

References

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The authors have stated the following conflict of interest: SP declares expert membership of Australian Government Health Star Ratings Committees and JC declares membership of the Social Sciences and Economy Advisory Group of Food Standards Australia New Zealand.

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drinks for their own consumption, either occasionally, often or very often. Respondents reported on where they purchased their last sugary drink, agreement with statements ascertaining reasons for purchase, and drink size and type most often purchased (see Supplementary File 1: Questions for definitions and question wording) as well as demographic characteristics. The full dataset was weighted according to chance of selection and demographic characteristics matched to the overall population. Analysis comprised of Pearson chi-square tests with p<0.05 indicating statistical significance.

### Results

Like the taste and easily available had the highest rates of agreement with few differences across demographic characteristics and purchasing behaviours (see Table 1). Males, younger people and

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### Table 1: Reasons for purchasing a sugary drink, by demographic and purchase characteristics (n=891).

<table>
<thead>
<tr>
<th>Proportion of participants who agreed with reasons for purchasing</th>
<th>Reasons for purchasing</th>
<th>Like the taste</th>
<th>Easily available</th>
<th>Preferred brand</th>
<th>Part of a meal deal</th>
<th>Cheap</th>
<th>Better value than water</th>
<th>Ingredients they contain</th>
<th>Info on packaging</th>
<th>Look of packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>p=0.011</td>
<td>p=0.017</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>p=0.029</td>
<td>p=0.002</td>
<td>p=0.002</td>
<td>p=0.029</td>
<td>p=0.029</td>
<td>NS</td>
<td>p&lt;0.001</td>
<td>NS</td>
<td>NS</td>
<td></td>
</tr>
<tr>
<td>Age (years)</td>
<td>18-30</td>
<td>35.5 (±3.1)</td>
<td>94.6 (±2.5)</td>
<td>80.7 (±4.4)</td>
<td>62.1 (±5.5)</td>
<td>49.1 (±4.2)</td>
<td>38.5 (±4.1)</td>
<td>32.5 (±3.9)</td>
<td>15.2 (±3.0)</td>
<td>15.6 (±3.0)</td>
</tr>
<tr>
<td></td>
<td>51-60</td>
<td>23.8 (±2.8)</td>
<td>96.2 (±2.6)</td>
<td>76.5 (±5.7)</td>
<td>62.8 (±6.7)</td>
<td>46.2 (±5.0)</td>
<td>34.2 (±4.8)</td>
<td>31.6 (±4.3)</td>
<td>19.2 (±3.1)</td>
<td>14.1 (±4.7)</td>
</tr>
<tr>
<td></td>
<td>61 and over</td>
<td>33.7 (±2.1)</td>
<td>95.7 (±2.3)</td>
<td>74.8 (±4.9)</td>
<td>58.8 (±5.6)</td>
<td>41.8 (±5.6)</td>
<td>29.4 (±4.9)</td>
<td>29.2 (±5.1)</td>
<td>14.7 (±4.0)</td>
<td>9.4 (±3.3)</td>
</tr>
</tbody>
</table>

### Demographic characteristics

<table>
<thead>
<tr>
<th>Overall sample</th>
<th>Gender</th>
<th>Male</th>
<th>NS</th>
<th>NS</th>
<th>NS</th>
<th>p=0.004</th>
<th>p&lt;0.001</th>
<th>NS</th>
<th>NS</th>
<th>NS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>18-30</td>
<td>61.2 (±3.2)</td>
<td>61.2 (±3.2)</td>
<td>94.6 (±1.9)</td>
<td>94.6 (±2.5)</td>
<td>77.4 (±3.5)</td>
<td>80.7 (±4.4)</td>
<td>62.1 (±5.5)</td>
<td>38.5 (±4.1)</td>
<td>32.5 (±3.9)</td>
</tr>
<tr>
<td></td>
<td>31-45</td>
<td>35.5 (±3.1)</td>
<td>94.6 (±2.5)</td>
<td>80.7 (±4.4)</td>
<td>62.1 (±5.5)</td>
<td>49.1 (±4.2)</td>
<td>38.5 (±4.1)</td>
<td>32.5 (±3.9)</td>
<td>15.2 (±3.0)</td>
<td>15.6 (±3.0)</td>
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<td>58.8 (±5.6)</td>
<td>41.8 (±5.6)</td>
<td>29.4 (±4.9)</td>
<td>29.2 (±5.1)</td>
<td>14.7 (±4.0)</td>
<td>9.4 (±3.3)</td>
</tr>
</tbody>
</table>

### Sugary drink consumption (past week)

| Moderate (1 to 6 times) | 60.3 (±3.2) | 60.3 (±3.2) | 91.5 (±2.1) | 74.3 (±3.7) | 58.4 (±4.2) | 51.0 (±4.2) | 45.0 (±4.2) | 29.4 (±3.9) | 28.3 (±3.8) |
| High (7 or more times) | 39.7 (±2.2) | 39.7 (±2.2) | 95.7 (±2.1) | 77.9 (±4.4) | 63.1 (±5.1) | 41.7 (±5.2) | 47.6 (±5.2) | 34.6 (±5.0) | 30.5 (±4.2) |

### Purchase location

| Supermarket | 55.8 (±3.1) | 93.6 (±2.1) | 71.8 (±4.0) | 62.7 (±4.2) | 35.7 (±4.2) | 49.3 (±4.9) | 29.4 (±3.9) | 35.0 (±4.2) | 18.5 (±3.4) |
| Convenience store | 19.4 (±2.6) | 94.2 (±3.5) | 84.4 (±5.4) | 65.9 (±7.1) | 49.7 (±7.5) | 43.9 (±7.4) | 33.5 (±7.0) | 29.9 (±6.8) | 12.1 (±4.9) |
| Food/entertainment venue | 17.3 (±2.5) | 98.1 (±2.2) | 80.5 (±6.3) | 48.4 (±7.9) | 78.6 (±6.5) | 43.2 (±7.8) | 33.1 (±7.4) | 16.9 (±5.9) | 12.3 (±5.0) |
| Other | 5.8 (±3.1) | 96.1 (±5.3) | 73.1 (±12.1) | 62.7 (±13.3) | 53.8 (±13.6) | 40.4 (±13.3) | 37.3 (±13.3) | 29.4 (±12.5) | 11.5 (±8.7) |

### Usual drink type and size

| NA | 34.1 (±3.1) | 95.4 (±2.4) | 75.3 (±4.8) | 65.1 (±5.6) | 55.9 (±5.6) | 44.1 (±5.6) | 34.9 (±5.4) | 23.4 (±4.8) | 6.9 (±2.8) |

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**Notes:**

- **NA:** Not available; test invalid due to high (25%) number of cells with expected cell count less than 5.
- **NS:** Not significant.
- **CL:** Confidence limits
- a: % somewhat or strongly agree vs other response (somewhat or strongly disagree, neither agree nor disagree, don’t know).
- b: 1.5% don’t know.
- c: 3.1% don’t know.
people of lower socioeconomic status (SES) were significantly more likely to agree that sugary drinks were ‘cheap’ and ‘better value than water’. Furthermore, males and younger people were more likely to report buying sugary drinks because they were ‘part of a meal deal’. Younger people were more likely to report being influenced to purchase by the ‘look of packaging’. Compared to other locations, those purchasing from food/entertainment venues had greater agreement with ‘meal deal’ and lower agreement with ‘preferred brand’ and ‘ingredients they contain’. Convenience store purchasers had greater agreement with ‘easily available’ than supermarket purchasers. Associations between purchase reason and drink type varied. Compared to other drink types, juice purchasers had greater agreement with ‘ingredients they contain’, ‘information on packaging’ and ‘look of packaging’. Conversely, soft drink and sports drink purchasers had greater agreement for ‘better value than water’ and ‘part of a meal deal’, and energy drink purchasers had greater agreement for ‘preferred brand’.

Purchase location was associated with age, gender, consumption and drink type (all p<0.001), but not socioeconomic disadvantage (see Supplementary File 2). Supermarket purchasers had a greater likelihood of purchasing large soft drinks and juices and being female, older and high consumers. Convenience store purchasers had a greater likelihood of purchasing energy and sports drinks and being male, 31 to 45 years of age and high consumers. Those purchasing from food/entertainment venues had a greater likelihood of purchasing small/medium soft drinks and juices and being 18 to 39 years of age and moderate consumers.

**Discussion**

Reasons for purchasing sugary drinks were associated with numerous factors, suggesting that multi-level interventions will be required to effectively target sugary drink consumption. Consistent with other studies,6-8 there was near ubiquitous agreement that taste was a driver to purchase sugary drinks, and easy access also ranked highly. Price and value perceptions were less prominent reasons for purchase but did vary across subgroups. Population groups with high sugary drink consumption, namely young adults, males and the most disadvantaged,10 were more likely to report ‘cheap’ and ‘better value than water’ as reasons for purchase. Young adults were also more likely to agree with ‘meal deals’ as a reason to purchase sugary drinks. Price is a proven driver of purchasing behaviour overall, and sensitivity to price varies across consumers.11 Meal deals offer consumers ‘value’ while frequently pairing sugary drinks with unhealthy foods and upsize deals, compounding dietary risks for those consumers. Our results support the argument for making water the default option in meal deals and adding a health levy to sugary drinks to increase their price and expand the price differential with water.

Unlike purchasers of other drink types, juice purchasers were reportedly less influenced by ‘preferred brand’, and more influenced by ingredients and information on packaging. These results likely reflect the different marketing strategies used for beverage types. Soft drinks, sports drinks and energy drinks market heavily on brand, with Coca-Cola being an iconic example of brand marketing. By comparison, juice marketing often uses ‘better-for-you’ marketing strategies, whereby companies emphasise the healthy contents and characteristics of their products.12 While supermarkets were the most common purchase location, almost half of drinks were purchased elsewhere. Widespread availability of sugary drinks contributes to consumption.13 Purchase location was related to drink type, with small/medium drinks associated with food/entertainment venues, sports and energy drinks associated with convenience stores and large drinks associated with supermarkets. These results suggest that low-cost supply from supermarkets is important for higher-volume purchasers, who are likely also supplying households, but other reasons are more important when purchasing from other locations. Research on Australian food retail types is scant, particularly in relation to convenience stores and food/entertainment venues,14 and regarding the availability of different food retail types in different locations. There are likely to be differences in availability between urban and rural settings, for example. However, international research shows that convenience stores are predominantly stocked with low-quality energy-dense food,1,3 which may correspond with increases in impulse purchases.15 Further investigation of study findings is recommended as self-report data is susceptible to incorrect reporting due to memory effects and social desirability. Qualitative research would be valuable in investigating what factors have the greatest impact on purchasing preferences and practices. Nevertheless, the results from this study show that while taste is paramount, preferences for convenience and value for money are supported by widespread availability, emphasising the need for multi-level policy interventions, particularly in Australia where there has been a lack of policy progress in this area. Policies and interventions targeting point-of-sale sugary drink purchasing decisions among the most ‘at risk’ consumers are warranted.

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**References**


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**Supporting Information**

Additional supporting information may be found in the online version of this article:

**Supplementary File 1**: Questionnaire.
**Supplementary File 2**: Table 1: Purchase location by demographic and purchase characteristics (n=891).