Bridging the gap between claimed and actual behaviour

The role of observational research

Sharyn Rundle-Thiele

Department of Marketing, Griffith University, Nathan, Australia

Abstract

Purpose – The purpose of this paper is to understand better the number of people consuming alcohol, the types of beverages chosen and the amount of alcohol consumed.

Design/methodology/approach – Actual alcohol consumption collected using the covert observation method is compared with claimed alcohol consumption collected through surveys to understand the extent of the gap between claimed and actual behaviour.

Findings – A notable gap between claimed and actual drinking levels was evident. A total of 70 percent more males were observed drinking alcohol at risky or high-risk levels while 49 percent more females were observed drinking at risky or high risk levels when compared to claimed behaviour data. Further, a higher proportion of people were observed drinking alcohol than claims lead one to believe.

Research limitations/implications – This research used human covert observation, thus limiting episode length. Further, this study was restricted to six venues in one month of one year. Future research opportunities abound including the use of electronic devices, variation in the observation methodology employed, and extending covert observation to different venue types, locations, and times of year.

Practical implications – The covert observation method can be used to critique the impact of the socially responsible programs and practices. Public policy makers may need to be mindful that alcohol may be consumed by more people in larger amounts than is currently reported in studies employing survey methodologies.

Originality/value – The paper demonstrates how the covert observation method can be used to record what consumers actually do. The covert observation method can be used to extend the understanding of alcohol consumption by enabling researchers to observe behaviour in naturalistic settings.

Keywords Alcoholic drinks, Consumer behaviour, Social norms, Australia, Research methods, Gap analysis

Paper type Research paper

Background

To date observation as a method of collecting data in consumer behaviour research continues to be undervalued with researchers preferring surveys, experiments and depth interviews. While some studies have employed observational methodologies to understand consumer behaviour (examples include Atkin, 1978; Pettigrew, 2002; Rust, 1993; Wells and Lo Sciuto, 1966) survey based (for examples see Marshall, O'Donohue and Kline, 2007; Schooler et al., 1996; Verbeke and Viaene, 1999) and experimental methods (recent examples include Grant and Tyblout, 2008; Labroo et al., 2008; Saini and Monga, 2008) have dominated academic and practical research.

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As noted by Atkin (1978, p. 41) observation methods:

[...] provide a more accurate assessment of varying modes of interaction than would be obtained by self-reports elicited in interviews or direct measurement under laboratory conditions. Interview data would be subject to distortion and memory error, while laboratory behaviour would be artificial when compared to the real-life situation.

The intention here is not to discount or critique the use of survey and experimental methods but rather to encourage researchers to consider the use of observation methodologies to supplement other methods. Observations can be conducted in naturalistic settings, complementing existing methods and further developing our understanding of the phenomena studied. This encouragement is not without precedent. More than 40 years ago Wells and Lo Sciuto (1966, p. 227) stated “it is possible to supplement and enrich questionnaire results by making direct observations of purchasing” and this call continues with researchers (see Hall and Rist, 1999) recently calling for data triangulation involving observations, interviews and document analysis.

A further rationale for continuing to encourage observations as a research method centres upon the gap between claimed and actual behaviour. This gap is acknowledged by the Australian Bureau of Statistics (ABS, 2006a) whose data on alcohol consumption in Australia relies on self-report data of the quantity of alcohol consumed in the previous week. The ABS (2006a) notes that “caution should be exercised when interpreting data from surveys as accurate recall of consumption is difficult”. Despite our knowledge of this claimed and actual behaviour gap we continue to rely upon survey based methodologies to understand consumer behaviour, which suggests that we are willing to accept this gap.

Would Bank customers be willing to accept a lower interest payment based on an imprecise interest rate calculation? Would motorists be willing to accept a speeding fine from an imprecise speeding camera? Would a cancer sufferer be willing to accept a misdiagnosis based on an imprecise measure? Researchers should seek to understand the extent of the gap between claimed and actual behaviour. Qualitative methods are capable of assisting us to understand the extent of the gap between claimed and actual behaviour. Consider observational methodologies which can be used to record phenomena with “the least response bias of any market research methodology”. By utilising observations it is possible to “record what consumers actually do, not what they claim to have done” (Boote and Mathews, 1999, p. 20).

One explanation for the gap between claimed and actual behaviour is that most respondents have a tendency to answer researchers’ questions in ways that make them look good according to current cultural terms (Mick, 1996). Respondents may over-report or under-report, depending on the situation – a phenomenon referred to as socially desirable responding (Baumgartner and Steenkamp, 2005; Mick, 1996). Socially desirable responding is likely to arise during research on sensitive topics, for example child labour or the use of medication. In such cases, there may be strong public opinion, however research participants’ actual behaviour may be incongruent with these opinions (i.e. we all think that taking advantage of cheap child labour in third world countries is hard to defend, but we still buy cheap clothing items produced in sweatshops that employ child labour). Consider research which shows that while many consumers declare concern for the environment, awareness of current environmental issues and intention to buy green products their behaviour (evidenced by low attitude and behaviour correlations) does not reflect this concern (Kalafatis et al., 1999; Paladino, 2005).
The gap between claimed and actual behaviour is likely to be wider in some business and community sectors. For example, we expect the gap between claimed and actual behaviour to be wider in some business sectors where consumers know that excessive consumption is harmful or wrong (Rundle-Thiele et al., 2008). Alcohol, drugs, cigarettes, and fast-foods all represent examples of business sectors where the gap between claimed and actual behaviour is expected to be large. Using the context of alcohol consumption behaviour, this article documents the use of the structured, human covert observation method for a study whose purpose was to understand alcohol consumption. The results from the covert observation study are compared to studies where consumers were asked to self-report alcohol consumption to understand the extent of the gap between claimed and actual behaviour.

Alcohol was chosen as the context for this study because excessive alcohol consumption can be harmful to health (Griffin and Weber, 2006; NHMRC, 2007) and while some consumers know that excessive alcohol consumption can be harmful to health (Rundle-Thiele et al., 2008) they continue to consume alcohol in increasing quantities (ABS, 2006b). For example, in Australia the total volume of beer consumed grew nearly 3 percent, to 1.8 billion litres in 2005, following a 4 percent increase in 2004 (Rundle-Thiele et al., 2008). These growth rates exceeded population growth rates, which are reported by the Australian Bureau of Statistics (2006b) to average 1.3 percent in Australia in the same time period. Growing alcohol consumption in Australia is further supported by the Australian Bureau of Statistics, who reports that one in every eight adults drank at high or risky levels and this proportion is rising (ABS, 2006a).

Methodology
Two methods were selected for this study permitting the same phenomena, namely alcohol consumption, to be viewed through two lenses to consider the extent of the gap between claimed and actual behaviour. Covert observations were used in this research to observe actual alcohol consumption behaviour in bars, and hotels while surveys were used to collect claimed behaviour. Each study will now be detailed in turn.

*Structured human covert observation study*
Observations were chosen to observe actual alcohol consumption behaviour. Ethical clearance was obtained from the researcher’s University to observe public behaviour in a public place. The method of collecting observations was repetitive although not complicated. It is important to note that the researchers were acutely aware that the entire description of what was to be observed could not be recorded (Kellehear, 1993; Rust, 1993) and strategies were used to record as much information as possible. Fact sheets were used to record details about the venue and the area under observation along with issues emerging (see Figure 1). Record sheets were developed to ensure that observers could easily record a wide range of key behaviours and consumer characteristics (see Figure 2). Record sheets allowed researchers to track more than one person at the same time.

Behaviours observed included the number of drinks consumed, the type (brand) and size of alcohol drinks ordered, whether the people were buying drinks for others (e.g. buying in rounds), along with many of the persons activities while on premise (see Figure 2). In order to ensure accuracy in information being recorded the researchers approached the bar when possible on the pretext of ordering a drink to observe...
The brands chosen and drink size were used to calculate the number of standard drinks (also referred to as units of alcohol) consumed. Where the brands were not directly observed the lowest alcohol per volume levels were used to calculate standard drinks. The lowest alcohol levels were chosen to avoid over stating.

Observations were conducted in six different venues in the Australian Capital Territory, with observations occurring between January 8 and January 12, 2008. People were observed on various days and times of the week (Wednesday through to...
Saturday. People were observed in licensed premises including cafes, wine bars, clubs, Irish pubs and nightclubs. Managers agreed to permit observation research, after they had been advised that the (unobtrusive) observations would not hinder normal business practice or their customers. Serving staff were made aware that university researchers were on premise and at times they would answer questions or offer information to provide the researchers with details relating to drinks ordered by patrons.

The observers sat at the venue and recorded partial and complete episodes. An episode was complete when the person was observed entering and exiting the premise. An episode was deemed to be partial when a person was not observed from entry to exit, e.g. some people were present at the time of observers’ arrival or the observer left the premise before the consumer. Once again, the recording of partial episodes avoids over stating the number of standard drinks consumed. Therefore, the data presented in this article is on the conservative side. Episodes ranged from as little as four minutes to as much as four hours and 18 minutes. In all, 437 people were observed in this research with group sizes observed averaging five people and episode lengths averaging 1 hour and 11 minutes. The observations involved 43.5 hours of researcher time at the venues. T-tests (see Hair et al., 2006) were conducted to ascertain whether there were differences between the behaviours observed for different groups.

Survey
A database containing 4,071 e-mail addresses for Australian Capital Territory residents aged 18 years and older was purchased for the purposes of this study. Following Dillman’s (2000) recommendations, e-mails were sent inviting people to

<table>
<thead>
<tr>
<th>Episode</th>
<th>Start time</th>
<th>General Comments</th>
<th>No. in group</th>
<th>Male/female</th>
<th>Credit/contemporary</th>
<th>Mobile phone</th>
<th>Drinking</th>
<th>Beverage</th>
<th>Wine</th>
<th>Spirits</th>
<th>Beer</th>
<th>Vodka</th>
<th>RTD’s</th>
<th>Non-alcoholic</th>
<th>Drink</th>
<th>Serving size</th>
<th>Meal</th>
<th>In a bar</th>
<th>Smoking</th>
<th>Activities undertaken</th>
<th>Finit time</th>
</tr>
</thead>
</table>
participate in an online survey on alcohol. Random prize draws were offered as an incentive and one reminder was posted two weeks after the initial e-mailing date. In addition to demographic questions respondents were asked how many alcoholic drinks they consumed the day before[1]. Alcohol consumption on the previous day was chosen to mirror actual consumption, collected using the covert observation method. The previous day was chosen as it was the most recent and hence likely to be the most memorable day for survey respondents. A total of 797 e-mails were not delivered and 565 completed surveys were returned representing an effective response rate of 17.2 percent. Surveys were completed online at various times of the day and on various days allowing the survey to mirror the observation data as close as was practical.

Results
Drinking behaviour was observed and the actual number of standard drinks consumed is reported. In the survey respondents were asked to report how many standard drinks they consumed the previous day. Actual and claimed behaviour is reported in Table I for the whole sample and by gender to permit comparison.

While one half claimed they did not any drink alcohol when surveyed one quarter of people observed in pubs, clubs and hotels did not consume any alcohol. Observations occurred in public places and people were not observed in private. While an explanation for this discrepancy may be that a greater proportion of people may have chosen not to drink in private this is not likely as “people most often consume alcohol in their own or a friend’s home” with reports that 83 percent of people drink at home compared to 52 percent drinking at licensed premises (NHMRC, 2007).

A total of 10 percent of males claimed they drank at risky or high risk levels (currently defined by the NHMRC (ABS, 2006a) as six or more standard drinks per day for males) in the previous day. Claimed levels reported in this study are consistent with the levels reported in the National Drug Strategy Household Survey (AIHW, 2005) where 10 percent of males reported drinking at risky and high risk levels. This suggests that measures capturing consumption in the previous day are likely to mirror weekly alcohol consumption measures. Of the males, 16 percent were observed drinking at risky or high risk levels. The proportion of males drinking at risky or high risk levels is 70 percent higher than claimed behaviour when actual drinking behaviour is recorded using the structured human covert observation method.

A similar pattern occurred for females. In this study, 9 percent of females in the sample claimed they drank at risky or high risk levels the previous day (defined by the NHMRC (ABS, 2006a) as four or more standard drinks per day for females). Claimed levels reported by females in this study are largely consistent with the levels reported in the National Drug Strategy Household Survey (AIHW, 2005) where 9.6 percent of females reported drinking at risky and high risk levels. Of the females, 13 percent were observed drinking at risky or high risk levels. Again, when the covert observation method is used to capture actual drinking behaviour there is a 49 percent increase in the proportion of individuals found drinking at risky or high risk levels. These figures suggest there is a substantial gap between claimed behaviour and actual behaviour for harmful products such as alcohol.

Independent sample t-tests were conducted to ascertain whether there were differences between males and females for actual and claimed behaviour. According to one t-test ($p < 0.001$) males actually consumed more standard drinks (mean of 2.9)
<table>
<thead>
<tr>
<th>No. of standard drinks</th>
<th>Actual behaviour $(n = 437)^a$ (%)</th>
<th>Actual male behaviour $(n = 235)$ (%)</th>
<th>Actual female behaviour $(n = 201)$ (%)</th>
<th>Claimed behaviour$^b$ $(n = 565)^c$ (%)</th>
<th>Claimed male behaviour $(n = 247)$ (%)</th>
<th>Claimed female behaviour $(n = 301)$ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>25.2</td>
<td>15.3</td>
<td>36.3</td>
<td>51.5</td>
<td>43.3</td>
<td>58.1</td>
</tr>
<tr>
<td>1</td>
<td>10.6</td>
<td>11.0</td>
<td>10.0</td>
<td>13.5</td>
<td>12.5</td>
<td>14.3</td>
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<tr>
<td>2</td>
<td>31.5</td>
<td>31.4</td>
<td>31.7</td>
<td>12.4</td>
<td>14.2</td>
<td>10.9</td>
</tr>
<tr>
<td>3</td>
<td>11.4</td>
<td>13.5</td>
<td>9.0</td>
<td>8.6</td>
<td>9.3</td>
<td>8.0</td>
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<tr>
<td>4</td>
<td>2.6</td>
<td>3.0</td>
<td>2.0</td>
<td>5.6</td>
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<td>5.3</td>
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<tr>
<td>5</td>
<td>8.0</td>
<td>9.4</td>
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<tr>
<td>6</td>
<td>2.9</td>
<td>3.4</td>
<td>2.5</td>
<td>2.7</td>
<td>4.9</td>
<td>1.0</td>
</tr>
<tr>
<td>7</td>
<td>1.1</td>
<td>1.7</td>
<td>0.5</td>
<td>0.4</td>
<td>0.4</td>
<td>0.3</td>
</tr>
<tr>
<td>8</td>
<td>3.2</td>
<td>5.2</td>
<td>1.0</td>
<td>0.9</td>
<td>1.2</td>
<td>0.7</td>
</tr>
<tr>
<td>9</td>
<td>1.6</td>
<td>2.6</td>
<td>0.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10 or more</td>
<td>1.9</td>
<td>3.5</td>
<td>-</td>
<td>1.7</td>
<td>3.2</td>
<td>0.3</td>
</tr>
</tbody>
</table>

Notes: Draft guidelines suggest men and women should drink two standard drinks or less in any one day (NHMRC, 2007). $^a$The gender of one person observed was not recorded as the team of three researchers were not able to agree on this person’s gender. $^b$These data should be treated with caution as respondents are not able to reliably calculate the number of standard drinks or alcohol units in the beverages they consume (name withheld to ensure anonymity during the review process). $^c$A number of people did not report their gender along with other demographic characteristics in the online survey.
than females (mean of 1.6). According to the second \(t\)-test \((p < 0.001)\) males claimed to have consumed more alcohol (mean of 2.0) than females (1.0) yesterday and these results are again consistent with the National Drug Strategy Household Survey. The results of this study suggest that males claim to, and actually drink more alcohol, than females.

A gap between claimed and actual behaviour was evident in this study. A higher proportion of survey respondents claimed to drink no, or one serve, of alcohol in the previous 24 hours than were observed. Further, a lower proportion claimed to drink alcohol at risky and high risk levels in the previous 24 hours than was observed. Survey respondents in this study over reported the incidence of zero or low alcohol consumption and they under reported the incidence of high alcohol consumption.

**Discussion**

Researchers (e.g. AIHW, 2005) have largely relied upon survey methodologies to understand consumer behaviour despite our knowledge of gaps between claimed and actual behaviour. This study sought to understand the extent of the gap between claimed and actual behaviour in a harmful product category, namely alcohol. Covert observations were used in this research to observe what people actually drink distinguishing this research from previous studies where respondents were required to self-report their drinking (termed claimed drinking in this article). The rationale for using observations in this study was to “record what consumers actually do, not what they claim to have done” (Boote and Mathews, 1999, p. 20). More than 400 people were observed drinking in restaurants, hotels, pubs and clubs, with 17.8 percent of people drinking at risky or high risk levels. A result of 17.8 percent is higher than 2004-2005 Australian Bureau of Statistics estimates (Australian Bureau of Statistics, 2006a) of risky and high risk drinking. Further this result is higher than the amounts people claimed to have consumed (see AIHW, 2005). While this data may suggest there has been yet another increase in the proportion of people drinking at risky or high risk levels, or that people may drink more while on-premise, it is also possible that previous estimates were impacted by the research method employed. It is possible that people under report the amount of alcohol that they drink. The under reporting of high alcohol consumption and the over reporting of low alcohol consumption may reflect social desirability reporting (Baumgartner and Steenkamp, 2005). Respondents may seek to make themselves look good according to current cultural terms (Mick, 1996). In this study the covert observation method identified that 70 percent more males drank alcohol at risky or high risk levels while 49 percent more females drank at risky or high risk levels. The results of this study suggest the methodology chosen by the researcher has a significant impact on the study results.

Covert observations distinguish this research from previous studies (AIHW, 2005) concerned with alcohol consumption because rather than asking respondents to recall the quantity of alcohol consumed this research observed people consuming alcohol. Conservative assumptions were made ensuring that standard drink calculations were underestimated rather than overestimated. Observations took place in natural environments ensuring a truer picture of the phenomenon observed (Boote and Matthews, 1999). Covert observations offer researchers the ability to observe actual behaviours.
Implications for practice

Implications are evident for both marketers and public policy makers. At present, corporate social responsibility is high on managements’ agenda and observation can be used to critique the impact of socially responsible programs and practices on alcohol consumption. Covert observation methods can be used by hospitality and alcohol marketers to understand how alcohol consumption can be moderated. For example, researchers can also observe the promotions (e.g., happy hours, serving free soft drinks to drivers, serving food at the bar) implemented by venues to understand the impact these have on the amount of alcohol consumed. Further, researchers can observe the impact of a range of associated behaviours on alcohol consumption. Associated behaviours that may impact alcohol consumption include understanding the impact of people buying drinks in rounds, understanding the impact of drinking water in between alcoholic beverages and understanding the impact of smoking on alcohol consumption. This understanding would assist marketers to emphasise desirable behaviours and de-emphasise undesirable behaviours.

A gap between claimed and actual behaviours was identified in this study. More people consumed alcohol in higher amounts when observed than claimed in other studies (AIHW, 2005). Public policy makers need to be mindful that the research method used impacts the information reported. Methods such as structured human covert observation should be used to supplement quantitative methods such as surveys when researchers are seeking to understand behaviours. According to the results of this research alcohol consumption, which has been identified as an issue of concern in Australia, may be considerably higher than currently thought. Further, high risk levels of alcohol consumption may be more widespread than previously reported. Public policy should encourage research employing multiple methods to gain more accurate insights to inform policy decisions.

Limitations and implications for future research

A key limitation of this study centres upon the method chosen for this study. This study considers two different groups of people to understand whether differences arise between actual and claimed behaviour. Levels of claimed behaviour are consistent with other recent studies (e.g., ABS, 2006a; AIHW, 2005) suggesting the results for claimed behaviour are reliable. However, the actual behaviour observed is not consistent with claimed behaviours. It is possible that respondents in the surveys might have been drinking under different circumstances than those observed in this study. To further refine our understanding of the differences between actual and claimed behaviour research should be conducted to study one group of people. For example, people observed could be asked to report what they thought they had consumed or they could be asked to complete a diary for the week following the observations to compare actual and claimed behaviour.

The conclusions drawn from this study are further limited by the chosen context for this study. This study was restricted to observing public behaviour in public places in one Australian state, with six venues observed in January 2008 from midday to midnight. The venues chosen for this research were clubs, cafes, wine bars, Irish pubs, and a night club. Alcohol consumption is expected to vary and further research is required to develop a more comprehensive understanding of alcohol consumption. First, observations are needed across different months, times of day, venues, states and
countries to develop a more comprehensive understanding of alcohol consumption behaviour. Alcohol consumption is expected to vary in private (AIHW, 2005). Research is also required to extend our understanding of private alcohol drinking behaviour. A participant observation method (see Vinten, 1994) would be required to observe alcohol consumption in people’s own homes and at friends’ homes.

The purpose of this study was to understand the number of people consuming alcohol, the types of beverages chosen and the amount of alcohol consumed. A structured approach where the researchers stand apart from those being observed (see Mulholl, 2003 for definition) was required to fulfil the requirements of this research. However, the conclusions drawn from this study are limited by the structure imposed on this study. Unstructured observations can be used to record entire descriptions of consumer behaviour (for example see Atkin, 1978) providing considerably more detail than was captured in this study for analysis. Future research could use an unstructured observation approach allowing the researcher to adopt a number of roles from complete participant to complete observer (see Mulholl, 2003; Vinten, 1994).

Future research employing electronic capture mechanisms is recommended to further improve the richness of data collected. For example, video data could be reviewed and documented by two ethnographers to increase the breadth and depth of behaviours. The length of time and the number of behaviours could be increased if electronic methods (e.g. videos) are used to capture behaviours.

This study has focussed on one harmful product category. Future research is encouraged to ascertain the extent of the knowledge gap in different product categories. Research is encouraged in other harmful categories, such as cigarette smoking, to understand the extent of the gap between claimed and actual behaviour. Research is also called for to understand the extent of the gap between actual and claimed behaviour in product categories where social desirability bias (see Baumgartner and Steenkamp, 2005) is likely to present. Organic foods and other green products are one example.

This study has focussed on gender differences and the ages of people observed were not estimated by observers in this study. Alcohol consumption levels vary according to age (see ABS, 2006a; AIHW, 2005; Lader and Meltzer, 2002). In the sample reported in this study people underestimated their alcohol consumption. It is possible that a study of young drinkers would yield a different outcome such as over-estimating consumption. Young drinkers often drink alcohol to excess (termed binge drinking) and the amount of alcohol consumed may be a matter of “bravado” and therefore a younger cohort may over-estimate consumption. Future research is recommended to focus on different age cohorts to further our understanding of the gaps between actual and claimed drinking behaviour.

Note
1. This is in contrast to other studies which collect weekly alcohol consumption (see AIHW, 2005; Baum, 2000; Reis and Riley, 2002).

References


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