

Beginning to Explore Dashboard Dining

By David Walczak

It can be nutritious and healthy if done right. Fruits and vegetables, a granola bar, smoothie, or some fresh squeezed Florida orange juice would be good choices. On the other hand, it can poison you. Perishable protein and dairy products must be packed in a well-insulated cooler with plenty of ice and a refrigerator thermometer kept inside to ensure the food stays below 40 degrees Fahrenheit. If you are not completely safe, it can kill you. According to Hagerty Insurance of Traverse City, Michigan, the top ten worst foods to consume are coffee, hot soups, tacos, chili, juicy hamburgers, fried chicken, any barbecued food, filled doughnuts, soft drinks, and chocolate. (see Lisa Chin, 2003) It simply takes a sudden scalding spill, an unexpected splash, or dripping condiments, any of which demand your immediate attention, to become an instant fatality.

Introduction

Dashboard dining goes by many different names: cup-holder cuisine, drive-through cuisine, one-handed food, port-a-fuel, meals-on-the-move, and “car-nivores” are used interchangeably. All refer to the same idea: consuming food and nonalcoholic drinks while driving a car or truck.

It is fast becoming part of everyday life for drivers across America. People eat while they drive because of their busy lifestyles, while stuck in traffic, or as a way to kill time on a long, boring commute to and from work. New products such as hamburgers in the shape of hot dogs, applesauce, yogurt, peanut butter, or pudding in squeezable tubes, and snacks in cup-holder friendly containers are being produced to make dining easier for drivers.

Most of what has been written about dashboard dining appears in the popular press, mostly newspaper stories, and is anecdotal and speculative. Few independent, scientific studies have been conducted on this topic. This paper attempts to shed a little scientific light on the practice of dashboard dining by reporting on the results of a survey. The information should give some insight into the behavior of dashboard diners that could help fast-food, convenience store, and gas station mini-mart operators, as well as food and beverage manufacturers, to make more informed decisions about which products and services to provide.

Literature review

Few studies address the topic of dashboard dining. Those that do focus on eating and drinking while driving as a source of driver distraction. In 2002, the Network of Employers for Traffic Safety conducted a national telephone survey of 1,013 drivers. Eating a meal or snack while driving was the third most likely distracting activity followed by talking with a passenger and adjusting the vehicle’s stereo or climate control. The survey also revealed that only 10% of those who eat a meal or snack while driving consider the activity to be “very dangerous,” compared to 19% of the general public, i.e., those who do not dashboard dine.

These results were supported by a telephone survey of a nationally representative sample of 4,010 drivers conducted by the National Highway Traffic Safety Administration (2002). Talking with passengers, changing radio stations, or looking for CDs/ tapes were potential distracting behaviors that drivers engaged in more frequently than eating or drinking. When asked to rate twelve potentially distracting behaviors that make driving more dangerous, drivers rated eating and drinking in eleventh place.

These studies looked at eating and drinking only as a potential source of distraction. They did not consider the role this behavior plays in specific crashes. In the mid-90s, the University of North Carolina Highway Safety Research Center was awarded a contract by the American Automobile Associations’ Foundation for Traffic Safety to study the role of driver distraction in traffic crashes. The project was divided into two phases. The primary focus of

Phase I was the analysis of five years of National Automotive Sampling System Crashworthiness Data System data covering the years 1995-1999. (see Stutts, *et. al.* 2001) During Phase II, the researchers videotaped the behavior of 70 volunteers while driving. (Stutts, *et. al.* 2003)

Results from Phase II indicate that distractions are a common component of everyday driving with eating and drinking right at the top of the list. It was surpassed only by conversing with a passenger. A little more than 4.6% of driving time was spent either preparing to, or actually, eating or drinking something, again surpassed only by talking with a passenger (15% of total driving time). Preparing to, or actually, eating or drinking while driving were associated with no hands on the steering wheel, and eyes directed inward, but only preparing to eat or drink something was associated with adverse vehicle events such as a vehicle encroaching across the lane or a vehicle breaking suddenly.

Surprisingly, few of these negative outcomes seem to translate into increased crashes on the highway. Analysis of the 1995-1999 Phase I data reveals that 8.3% of drivers were identified as distracted at the time of the crash. Of these, eating and drinking was cited as the specific source of the distraction in only 1.7% of the crashes. Distraction outside the vehicle, adjusting audio equipment, another occupant in the vehicle, a moving object in the vehicle, some object brought into the vehicle, and adjusting vehicle controls, were distraction all found to be more likely to be causes of a crash than eating or drinking. Additionally, drivers who were age 50 to 64, as well as those driving pickups, vans, and sport utility vehicles were associated with higher incidences of collisions while eating and drinking.

Driver inattention and distraction was also studied over a 2 ½ year period in Virginia. (Virginia Commonwealth University, 2001) Eating or drinking while driving was found to be involved in less than 4% of the traffic crashes studied.

Another line of research is on the topic of dashboard dining is that approximately 75% of drivers engage in this activity. Both the Network for Employers Traffic Safety study and Phase II of the study conducted by the University of North Carolina Highway Safety Research Center support this finding. A "Driver Friendly" survey sponsored by Exxon (1999) confirms these results. According to Exxon, 83% of drivers drink coffee, juice, or soda while in their cars. This is up from 74% in 1995. In 1995, 58% of drivers said they eat a snack in the car. By 1999, this number had jumped to 70%. A study conducted by Nationwide Insurance Company in 2002 found that 65% of Americans "occasionally" eat or drink while driving, while 17% said they do so "often." (National Association of Convenience Stores, 2002).

Research Study

In the Fall of 2004, nine Art Institute of Fort Lauderdale students who were enrolled in an 11-week upper-level honors survey research methods course dashboard dining as a topic for research. It was chosen because it is a relatively new idea and little research has been done in this area. The class followed the steps for conducting a survey outlined in Priscilla Salant and Don A. Dillman's How to Conduct Your Own Survey (1994).

The target population was the administrative staff at the Art Institute of Fort Lauderdale. To minimize coverage error, the most recent list of administrative employees was obtained from the Director of Human Resources. The list included the names of 191 administrative staff employed as of Fall 2004. Based on the assumption of homogeneity of respondents, choosing a 95 percent confidence level, and anticipating a +/-5% sampling error, 98 employees were randomly selected to participate in the study.

The final questionnaire designed by the students included twenty questions covering various aspects of eating and drinking non-alcoholic beverages while driving a car or truck. During the first week of class, each student conducted an informal focus group with friends and family to brainstorm the topic. The questionnaire was written during weeks 2-4. To test

the survey, the author administered it to two separate classes during week 5. At this time each student also worked on a graphic design for the front cover of the survey. Final decisions about the questionnaire and the front cover were made during week 5, and a cover letter was written. The following week, envelopes were stuffed and sent via inter-office mail to the staff selected in the random sample.

Initially, 54 employees returned the survey. The class re-sent the survey to non-respondents, writing "second request" on the cover letter. Fifteen employees responded to the follow-up request to participate. However, 11 of the 69 returned surveys turned out not to be useable. The analysis, therefore, is based on 58 useful questionnaires: a response rate of 59%.

Results

Sixty-six percent of the respondents were female and nearly three-fourths were over thirty years old. Sixty-one percent were white, 16% Hispanic and 14% Black.

Consistent with the results of studies described earlier, 81% drink non-alcoholic beverages and 68% eat while driving. Forty-two percent dashboard dine because they are too busy or do not have enough time to eat regular sit down meals, and 36% do so while running errands during short lunch breaks or between jobs.

Most respondents do not engage in these activities very often. Nearly two-thirds (62%) said they drink nonalcoholic beverages while driving only sometimes or rarely. And nearly everyone in this survey, 95%, said they only sometimes or rarely eat while driving. Furthermore, 63% either disagreed or strongly disagreed that eating while driving is becoming more and more a part of their daily routine.

For both men and women water is the most popular nonalcoholic beverage to drink while driving. For women, coffee was the second most popular drink, while for men, juice was the second choice.

Forty-four percent of the respondents do not experience any problems drinking their beverage of choice while driving. One quarter said that spills from drink covers and straws that do not fit tightly are the biggest problems they experience, while for 15% it was inconvenient, hard to reach, or lack of cup holders. (see Table 1)

**Table 1: Products Drivers Said Would Improve Dashboard Dining
Products to Improve Drinking Nonalcoholic Beverages**

	<u>N</u>	<u>%</u>
Cup holders (sturdier, adjustable)	25	35
Covers and straws that fit tighter/more snug	19	26
Soda in sports-type bottles with easy open-close tops	14	19
Mini-cooler/refrigerator for keeping drinks cold	7	10
Built in hot/cold thermos	7	10
Built in coffee maker	<u>0</u>	<u>0</u>
Totals	72	100
Products to Improve Eating	<u>N</u>	<u>%</u>
Trays that fold out for holding food	24	29
More food in mini-bite sizes	21	25
More durable, less crumbly food items	13	15
Hot dog shaped omelet's and hamburgers	8	10
Disposable bibs for protecting clothes	7	8
Sauces packaged in containers that fit in cup holders	6	7
Bagels in stick form	5	6
Microwave oven for warming food	<u>0</u>	<u>0</u>
Totals	84	100

Predictably, 35% want more sturdy or adjustable cup holders to help improve their experience of drinking nonalcoholic beverages while driving, and 26% said the same about better fitting covers and straws. (See Table 1) Consistent with this latter finding is the 19% who would like to see soda made available in sports-type plastic bottles with easy open-close tops. Seven respondents, or 10%, would like to see vehicles equipped with a mini-cooler/refrigerator. Another 10% would like to see vehicles equipped with a hot-cold thermos.

The three most popular breakfast items eaten while driving were as follows: breakfast sandwich (38%); fruit (28%); and something sweet such as a doughnut or pastry (22%). Sandwiches, including hamburgers, hot dogs, subs, tacos, and wraps were also popular foods eaten by drivers during both lunch and dinner times. French fries and onion rings were the second most popular food items eaten during both lunch and dinner, while chicken nuggets, fingers, and wings came in third. The three most popular snack items fit into the following categories: chips, pretzels, or crackers (30%); fruits and vegetables (28%); and cookies, candy, and snack cakes (23%).

Only 12 percent of respondents do not experience any problems with the food they eat while driving. Most problems were evenly distributed among the following four categories: food falling apart, messy food, moist and soggy breads, buns, and wraps; difficulty holding food with one hand; inconvenient, hard to reach, or no place to hold food; and, staining clothes or greasy hands.

When drivers were asked to identify the products they thought would improve their dashboard dining experience, trays that fold out for holding food were the most popular suggestion. (See Table 1) This was closely followed by more food in mini-bite size pieces, and more durable, less crumbly food items.

Discussion

Like other research on dashboard dining, this study found that most drivers dine while driving. Unlike the Nationwide Insurance study, most of the respondents to this survey do not do it very often. And, nearly two-thirds said it is not likely to become part of their daily routine in the future.

The difference is probably the result of the populations studied. The results of this study are generalizable only to a limited population: middle-aged, female, office workers. The young, the elderly, people who rely on their vehicles for a living such as truck drivers, cab drivers, policemen, sales personnel, as well as blue-collar workers and professionals are excluded.

Similar to most dashboard diners, respondents in this study are interested in portability and ease of consumption. While some may want or need the 15-17 cup holders such as are available in the 2005 Honda Odyssey Touring automobile, sturdier and adjustable cup holders are even more important.

Another suggestion might be a reusable or disposable, functional, fashionable driver bib endorsed by and emblazoned with an image of your favorite NASCAR or Formula 1 driver. One does not need an Army surplus camouflage outfit to dashboard dine safely as Stan Freberg once suggested on the radio. The bib can be a light-weight, clear, disposable, plastic type that outlets can offer their customers as a convenience, or it can be more traditional, reusable cloth for purchase. In this survey, 8% of respondents stated they thought a disposable bib for protecting clothes would improve their experience of eating while driving. One can only imagine how many more would have said yes to this idea if they were told the bib was provided free by operators or endorsed by and engraved with images of popular race car drivers.

David Podeschi, Senior Vice President for merchandising at 7-Eleven has it right when he says "food in 'grippable' packages that 'pops in your mouth'...flies off the shelf." (National

Association of Convenience Stores, 2003) This is what needs to be done with hamburgers, hot dogs, subs, tacos, and wraps. Fast food operators need to take a lesson from ready-to-eat snack food manufacturers. Dashboard diners want more bite size, single serve products.

Perhaps insights for new products that fit the bite size idea can be gleaned from the gourmet chef. Tea sandwiches are thin slices of bread, crusts trimmed off, cut into quarters. Canapés use a thin bread, cracker, or pastry base covered with a spread topped with one or more ingredients and a garnish. Traditional tea sandwiches and canapés such as filet mignon with horseradish cream or goat cheese with cracked pepper would be new for dashboard diners to eat, while the traditional foods of dashboard diners, hamburgers, hot dogs, subs etc, would provide new ingredients with which the the gourmet chef could experiment. The varieties are endless and can be served or packaged individually or in multiples.

Evidence does not seem to support operators' concerns and fears about the possibility of legislation banning eating and drinking nonalcoholic beverages while driving. Dashboard dining is not increasingly becoming a dangerous trend because at this time it has not been proven to be a major cause of crashes. As more and more drivers dashboard dine it may increase the potential risk of a crash, but legislation would first have to ban talking with passengers, adjusting vehicle controls or audio equipment, looking for CDs or tapes, and objects brought into or flying around the vehicle, if potential risk is the concern.

Perhaps the main reason why eating and drinking distractions do not easily translate into vehicle crashes is because drivers may be less likely to engage in this activity at inappropriate times while driving. "While some distracting events are outside the driver's control (e.g. the actions of another vehicle, or a child's sudden cries), most can be avoided by some simple precautionary measures (for example) hot drinks and messy foods can be saved until the vehicle is safely stopped." (Stutts, 2003)

It is just too early to draw firm conclusions about the role of dashboard dining in vehicle crashes. Because of the small sample size, the fact that researchers analyzed only 3 of 10 hours recorded, lack of inter-rater reliability, and no measures of cognitive distraction, Stutts concludes we are "not able to provide a definitive answer as to which activities, or which driver distractions, carry the greatest risk of crash involvement." The main finding to emerge from the Virginia study is that the results are probably underrepresented because most police crash reports do not require specific driver distractions to be identified.

While distractions caused by eating or drinking non-alcoholic beverages during the operation of a motor vehicle do not appear to be a major cause of traffic crashes, more research is needed.

Conclusion

Operators need to continue to make dashboard dining safe. The National Association of Convenience Stores suggests that in addition to different kinds of containers operators should take such proactive measures as "signage that could help alert consumers to the dangers of certain kinds of foods eaten while driving. It could also be as simple as drive-up window personnel being willing and able to put milk and sugar into coffee instead of requiring that the driver to it himself." (National Association of Convenience Stores, 2002)

Fast-food, convenience store, and gas station mini-mart outlets are quickly becoming the new DMV, Department of Motor Victuals. Managers need to make sure that their "CARte" "du jour is portable, convenient, delicious, safe, and based on scientific principles similar to those used by students in this study.

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