“Consumer Researchers For Public Health: Insights from Three Government-Funded Programs” Session Chair: Cristel Antonia Russell
Obesity and the Social Environment: A Tale of Five Cities
Jerome D. Williams, University of Texas, Chiquita A. Collins, University of Texas, William J. McCarthy, UCLA, and Antronette K. Yancey, UCLA
This research examines the relationship between obesity and other health indicators to environmental factors, such as billboard advertising, quick-service restaurants, neighborhood walkability, etc. In addition, supermarket scanner data are analyzed to assess how these factors relate to purchasing behavior. Data are collected by zip codes in five cities: Los Angeles, Fresno, Sacramento, Philadelphia, and Austin. Hypotheses are developed to test whether African American and Latino consumers are disproportionately targeted by advertising of high-energy, low nutrient density food and beverage products, and underexposed to advertising for nutritious food and beverage products and physical activity-related products and services, and to examine the relationships between the environment, purchasing, and community health.

The Impact of Media on Adolescent Sexual Development
Martin Fishbein and Amy Jordan
Annenberg Public Policy Center, University of Pennsylvania
This research is funded by the National Institute of Health. There can be little doubt that the amount of sexual content in the media has been steadily increasing. At the same time however, unwanted pregnancies and sexually transmitted diseases have been declining. Despite this apparent negative relationship, there is a great deal of concern that sexual content in the media is increasing the likelihood that young adolescents will engage in sexual behaviors. This presentation describes some of the formative research conducted in preparation for developing a longitudinal survey to assess the impact of six media on the sexual beliefs, attitudes, intentions and behaviors of adolescents. Documenting the Nature and Impact of Alcohol Portrayals In TV Programs
Cristel Antonia Russell, San Diego State University, Dale W. Russell, University of Amsterdam, and Joel Grube, Pacific Institute for Research and Evaluation
This research, funded by the National Institute on Alcohol Abuse and Alcoholism, investigates the frequencies and types of alcohol portrayals in current television series and studies the processes through which such portrayals shape consumers’ drinking beliefs and behaviors. The theoretical model, which is rooted in cognitive social learning theory, incorporates existing product placement research and the mediating role of audience connectedness. The program analyses include both quantitative and qualitative aspects of alcohol portrayals to document both explicit and implicit themes, images and other characteristics of alcohol portrayals in TV programming.

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SESSION SUMMARY

This session was organized around the conference’s transformative consumer research theme and follows its call for research designed for and communicated to consumers. In the spirit of this mission, the session included three current government-funded research programs that address important public health issues. The first project, by Jerome Williams and colleagues, examines the relationship between obesity and other health indicators among minority consumers to environmental factors, such as billboard advertising, and purchasing behavior using scanner data. The second project, by Marty Fishbein and Amy Jordan, investigates the relationship between exposure to sex in the media and AIDS-related sexual behavior. The third project, by Cristel Russell and colleagues, documents the amount and nature of alcohol portrayals in television series to examine how they affect consumers’ attitudes and beliefs about drinking.

As the existence of specialized journals and conferences focusing on public policy issues attests, consumer researchers have long considered the implications of their research for public policy. In addition to providing guidance to policy makers that way, consumer researchers are increasingly answering health organizations’ requests for focused and applied research and developing research programs that center on the issues. Problems such as tobacco, drug, alcohol and excess food consumption, or the HIV-AIDS epidemic plague all societies and ultimately cost nations large sums of money resulting from lost productivity and increased healthcare expenditures. In the spirit of Kotler and Levy’s (1969) original call for extending marketing research outside the traditional for-profit arena, it is crucial for consumer researchers to apply their knowledge of consumer behavior to directly tackle society’s preventable health problems.

In the U.S., a multitude of health organizations strive to better understand these issues. Although each state has its own health research activities, the National Institute of Health (NIH) leads the U.S.’s health research efforts with a total budget exceeding $28 billion, with over 80 percent of the budget going to 50,000+ research grants annually. The NIH’s Office of Extramural Research (OER) has oversight of national behavior research. The OER has continued to see its annual research budget grow to nearly $14 billion; and has increased its efforts to promote applied social science research, including consumer behavior. Presently, academic institutions (excluding medical schools) receive approximately $3 billion of the OER’s overall research budget. This amount continues to increase as the NIH strives to improve the knowledge surrounding influential sources and consumer behavior, in order to improve policies and educational tools for consumers in the hopes of improving public health.

All three research programs presented in this session are funded through government grants. All three document the themes and prevalence of damaging health-related information across a variety of media in order to understand how they affect consumers’ beliefs and behaviors. We take a broad approach to the consumer environment by documenting the effects of both traditional advertising messages (Williams et al.) and those messages imbedded in the media content (Fishbein and Jordan), such as product placements (Russell et al.). All projects include a content analytic phase and an effects-testing phase (with scanner data in the first project and survey data in the other two).

“Obesity and the Built Environment: A Tale of Five Cities”
Jerome D. Williams, University of Texas at Austin
Chiquita A. Collins, University of Texas at Austin
William J. McCarthy, University of California at Los Angeles
Antronette K. Yancey, University of California at Los Angeles

Obesity has reached pandemic proportions in the U.S. (Flegal et al. 2002; Koplan and Dietz 1999). Environmental intervention approaches are necessary to stem this epidemic, as the environment is becoming increasingly “obesogenic,” particularly in communities of color, and individual-level change efforts have demonstrated little sustainability (Yancey et al. 2004; Fontaine et al. 2003; Sloane et al. 2003; French et al. 2002; Kersh and Morone 2002; Nestle and Jacobsen 2000; Swinburn et al. 1999; King et al. 1995). A similar shift in level of focus of intervention is credited with the dramatic declines in tobacco use and, recently, particularly in California as the leader in this arena, in tobacco-related disease burden, with important lessons for obesity control (Daynard 2004).

A critical but understudied element of the sociocultural environment influencing the food and beverage preferences and purchasing behaviors of Americans is commercial advertising, marketing and promotion (Nestle et al. 1998). The U.S. food industry spends approximately $36 billion per year on advertising (Thomas 1998), making it the second largest advertiser in the American economy (Gallo, 2000). A growing literature endeavors to characterize the cultural variations in commercial advertisements in magazines, on billboards, and on television that may contribute to health risk behavior disparities (Wallack and Dorfman 1994; Mitchell and Greenberg 1995; Pratt and Pratt 1995; 1996; Byrd-Brenner and Grasso 2000; Lohmann and Kant 2000; Hackbarth et al. 2001; Story et al. 2000; Tirodkar and Jain 2003; Wakefield et al. 2003). A pattern of findings demonstrate significantly fewer ads for healthier food/beverage products, e.g., fruits, vegetables and dairy products, in magazines and television shows targeting African Americans compared with those targeting “general audiences,” and a significantly greater number of ads for unhealthy products, e.g., sodas, candy and alcoholic beverages (Pratt and Pratt 1995; Tirodkar and Jain 2003). On billboards in predominantly African-American and Latino neighborhoods, alcohol products were advertised five times as frequently as in predominantly white areas (Hackbarth et al. 2001), and advertising themes included images of sex, youth and affluence to sell these products (Mitchell and Greenberg 1995).

The primary objective of this study is to conduct a content analysis of food, beverage, and physical activity products and services billboard advertisements to test the hypothesis that African Americans and Latinos are disproportionately targeted by advertising of high-energy, low nutrient density food and beverage products, and underexposed to advertising for nutritious food and beverage products and physical activity-related products and services. The study also will describe the attributes of billboard ads which may influence purchasing and consumption of unhealthy food and beverage products and examine weight-related body imagery in billboard ads. Finally, the study will examine the geographical positioning of billboards relative to schools, to exam-
ine whether the content of billboards near schools differs from the content of billboards far from schools.

To carry out the study, representative zip codes were selected in five cities. Two Los Angeles County health districts (HDs) with large proportions of African-Americans, 2 predominantly Latino HDs, and 2 predominantly white HDs were selected and analyzed using demographic and other data from the Los Angeles County Health Survey. A similar selection strategy was employed in Sacramento and Fresno, using California Health Interview Survey data. In Austin, Texas, zip codes were selected and analyzed using data from the Behavioral Risk Factor Surveillance Survey, Texas Hospital Patient Discharge Data, and STEPS to a Healthier Austin. Similar steps were taken to identify appropriate zip codes in Philadelphia. Each billboard was photographed with a digital camera, and the photographs were attached to a content analysis abstraction form, accompanied by a GIS map highlighting its location and its distance from nearby public schools. To complement the billboard data, arrangements have been made to obtain scanner purchasing data from the major food store chains in each neighborhood. This will allow analysis of not only differential media exposure but also differential food purchases in the same neighborhoods.

The implications of this work for policymaker and decision-maker education at the local and state levels are substantive. Examples of regulatory and legislative action that might be prompted or supported by the findings include: increased FCC oversight of Spanish-language media content; restrictions on food industry billboard placement modeled on those on tobacco; taxes on foods disproportionately advertised in poor neighborhoods to subsidize parks and recreational facilities or farmers’ markets in those areas; and requirements for food establishment menu item nutrition labeling.

The research is in its first year. The neighborhood content analysis of billboards for all five cities were completed in 2005. The health data already is available, as well as the scanner data. Preliminary analysis of the billboard data in six zip codes has been conducted at the Austin site. Below are a few of the highlights of this preliminary analysis:

- Alcoholic beverages are the most advertised item in all zip codes.
- Fast food is the second most advertised item.
- The largest number of alcoholic beverage and fast food advertisements was found in the zip code with High Black and High Hispanic Low Income households.
- Only one water advertisement was found across all six zip codes.
- Milk was advertised in four of the six zip codes.
- None of the zip codes displayed advertisements for exercise.

“The Impact of Media on Adolescent Sexual Development”
Martin Fishbein, University of Pennsylvania
Amy Jordan, University of Pennsylvania

There can be little doubt that the amount of sexual content in the media has been steadily increasing. At the same time however, unwanted pregnancies and sexually transmitted diseases have been declining. Despite this apparent negative relationship, there is great deal of concern that sexual content in the media is increasing the likelihood that young adolescents will engage in sexual behaviors. This presentation described some of the formative research conducted in preparation for developing a longitudinal survey to assess the impact of six media (TV, Music, Magazines, Movies, Video Games, and the Internet) on the sexual beliefs, attitudes, intentions and behaviors of adolescents.

More specifically, this presentation addressed some of the methodological issues involved in attempting to link exposure to sexual content in six different media to adolescent’s sexual beliefs, attitudes, intentions and behaviors. For example, it focused on some of the problems involved in assessing the amount of time adolescents spend with different media and the extent to which the time spent with those media exposes them to sexual content. Among other things, data were presented showing that media use varies as a function of day of the week as well as by whether the media use estimates are obtained when school is in or out of session (e.g., Spring versus Summer). Moreover, media use estimates vary considerably as a function of the type of measurement instrument used (e.g., a daily diary versus a weekly log versus an open-ended survey) and the question format. In addition the relation between various measures of exposure varies with the medium being considered. The importance of taking multi-media use and multi-tasking into account in attempting to estimate the extent to which one is exposed to sexual content was discussed. Data were also presented showing that adolescents and adults have different perceptions of what is (or is not) sexual content. Thus it is necessary to obtain “objective” (content analytic) as well as “subjective” estimates of the extent to which one is exposed to sexual content.

While the above discussion focuses primarily on the independent variable (i.e., assessing exposure to sexual content), there are also a number of methodological issues concerning dependent variables. Since we wished to go beyond a dichotomous measure of whether an adolescent did or did not engage in sexual intercourse, we wanted to look at behavioral progression toward sexual intercourse. Thus we needed to develop a measure that included both non-coital and coital sexual behavior. This turned out to be a difficult task. For example, given the recent phenomenon of “hooking up,” and the apparent confusion among adolescents as to whether oral sex is, or is not “real sex”, the old notions of “bases” or of progressing from kissing to necking to petting to sex are no longer viable. Perhaps not surprisingly, what is an appropriate (or at least acceptable) progression of sexual activities varies as a function of the nature of the relationship (“hooking up”, forming a new relationship; or being in an “established” relationship) as well as the gender of the adolescent. Finally, the presentation showed that adolescents’ intentions to engage in sexual intercourse can be very accurately predicted from a knowledge of their attitudes toward, perceived norms concerning, and self-efficacy with respect to their personally engaging in sexual intercourse. In addition, these attitudes, norms and judgments of self-efficacy are themselves accurately predicted from behavioral, normative, and control beliefs respectively. One implication of these latter findings is that it is important to explore the link between various measures of exposure to sexual content in the media and a wide range of psychosocial and behavioral outcomes.

“Documenting the Nature and Impact of Alcohol Portrayals in TV Programs”
Cristel Antonia Russell, San Diego State University
Dale Russell, University of Amsterdam
Joel Grube, Pacific Institute for Research and Evaluation

This project is funded by the NIH’s National Institute on Alcohol Abuse and Alcoholism. It tackles the widespread concern over the potential effects of alcohol product placements and other media portrayals of drinking on alcohol consumption and drinking-related problems. Television, radio, film, and popular music are often identified as potential sources through which consumers learn...
about alcohol and as potential influences on their drinking and drinking problems (e.g., Christensen, Henriksen, and Roberts 2000; Gerbner 1995; Stockdale 2001; Strasburger 1993; Villani 2001). In particular, public health advocates routinely call for stricter self- or governmental regulation of alcohol portrayals in television, film, and music and of alcohol advertising (e.g., Hacker and Stuart 1995; Hill and Casswell 2001; Mosher 1994; Strasburger 1993). The objective of this grant is to document how television programming contributes to the development of preferences and symbolic associations related to alcohol and to inform policymakers who are concerned about the effects of alcohol portrayals in television programming.

The research program includes two inter-related studies: a content analysis of a composite sample of regular TV series focusing on the themes, images, and other characteristics of alcohol portrayals in television programming; and a cross-sectional survey of viewers to investigate the effects of such alcohol portrayals on perceptions and beliefs regarding drinking. The aim is to document the frequencies and types of alcohol portrayals in current television programming and identify the processes through which such portrayals shape consumers’ responses and behaviors. The results will provide a firmer basis for designing prevention strategies to counter the effects of TV-based alcohol portrayals on drinking beliefs and behaviors.

The theoretical model builds upon research on the effects of product placements (Russell 2002) that identified the conditions under which a product included in a program is remembered and whether attitudes toward it are positively affected. We apply the product placement typology to the context of alcohol products in television programming to investigate objectively both explicit and implicit themes, images and other characteristics of alcohol portrayals in TV programming. The model is rooted in cognitive social learning theory (e.g., Bandura 1986) and classic attitude theories (e.g., Ajzen 1989; Fazio 1989; Petty and Cacioppo 1983, 1986) and incorporates the mediating role of audience connectedness (Russell and Puto 1999) to specify different mechanisms by which programs contribute to consumers’ schemas and beliefs related to alcohol. We propose that consumption portrayals in the television program context more strongly affect highly connected viewers' beliefs and behaviors because they view the TV characters displaying these consumptions as referent others (Newton and Buck 1985) and behavioral models (Nord and Peter 1980). Connectedness to TV characters is a key factor influencing viewers’ recall of alcohol depictions, which in turn affects normative beliefs about drinking and alcohol expectancies and, ultimately shapes viewers’ drinking intentions and drinking behavior. Further, the nature of alcohol portrayals in a series is expected to moderate the relationships between recall and drinking beliefs: recall of or connectedness to programs high in positive alcohol portrayals will have a greater effect, increasing drinking beliefs and behaviors, than will recall of or connectedness to programs with less alcohol portrayals.

**REFERENCES**


