

IMPACT AND EFFECTIVENESS

TABLE 30

Menu Labeling

Effectiveness Tables

p. 2

Impact Tables

p. 6

EFFECTIVENESS TABLES

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
United States				
<p>Author Harnack, French (2008) Minnesota</p> <p>Design Intervention Evaluation Randomized trial</p> <p>Duration Medium 7 months</p>	<p>Measures <i>Access to healthy food options and nutrition information</i> (addition of calorie and price information to a fast food menu and elimination of value size pricing and use of standardized prices)</p> <p>Outcome(s) Affected Nutrition (nutrient composition using a food composition table and gram weight information estimated calories consumed)</p>	<p>Net Neutral for Nutrition in the Study Population (Menu Labeling)</p> <p>Net Negative for Nutrition in Men (Menu Labeling)</p> <p>Menu Labeling <u>NUTRITION:</u></p> <ol style="list-style-type: none"> No significant differences (p=0.25) in the average number of calories consumed by those in the calorie, price, calorie plus price, and control menu conditions (805, 813, 761 and 739 respectively). Selection and consumption of major food categories and portion sizes did not differ by condition. Average energy intake was higher among males in the calorie, price and calorie plus price conditions compared to controls (p=0.01). 	<p>Not Effective for Nutrition in the Study Population</p> <p>Not Effective for Nutrition in Men</p> <p>Study design = Intervention evaluation</p> <p>Intervention duration = Medium</p> <p>Effect size = Net neutral for nutrition in the study population and net negative for nutrition in men</p>	<p>Maintenance Not Reported</p> <p>Sampling / Representativeness Not Reported</p>
<p>Author Yamamoto, Yamamoto (2005) United States</p> <p>Design Intervention Evaluation Before and after study</p> <p>Duration Low <6 months</p>	<p>Measures <i>Access to nutrition information</i> (addition of calorie information to a fast food and sit-down restaurant menus)</p> <p>Outcome(s) Affected Food purchases - calories and fat (documentation of food choices)</p>	<p>Not Reported (for desired health outcome)</p> <p>Net Positive for Purchasing Behavior in the Study Population (Menu Labeling)</p> <p>Menu Labeling <u>PURCHASING BEHAVIOR:</u></p> <ol style="list-style-type: none"> The modified menus resulted in significantly lower calories ordered from McDonald's (933 ± 354 [standard menu] vs. 888 ± 385 [modified menu], p=0.002) and Panda Express (874 ± 301 vs. 837 ± 342, p=0.005), but not at Denny's. The modified menus resulted in significantly lower amounts of fat ordered from McDonald's (40.3 ± 15.8 vs. 38.2 ± 16.9, p=0.001) and Panda Express (29.9 ± 14.6 vs. 28.3 ± 15.9, p=0.004), but not at Denny's. Although calorie and fat reductions were statistically significant, the changes occurred in fewer than 20% of the subjects. For the 31 adolescents who changed at least one of their orders (3 orders per subject, 93 orders total), 43 meals resulted in decreased calories and 11 meals resulted in increased calories (remaining 39 meals unchanged). Of the 54 total orders changed after menu modification, 43 meals resulted in decreased calories and 11 meals resulted in increased calories. Of the 27 who rated themselves as too fat or slightly overweight, only 9 (32%) changed their orders after menu modification, and only 3 changed their orders for all 3 restaurants (16 meals changed to lower calories and one meal changed to higher calories). Of the 8 who rated themselves as too skinny, only 2 changed their orders after menu modification (2 meals changed to higher calories and one meal changed to lower calories). 	<p>More Evidence Needed</p> <p>Study design = Intervention evaluation</p> <p>Intervention duration = Low</p> <p>Effect size = Not reported</p>	<p>Maintenance Not Reported</p> <p>Sampling / Representativeness Not Reported</p>

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
<p>Author Bassett, Dumanovsky (2008) New York</p> <p>Design Association Cross-sectional</p> <p>Duration Not Applicable Only cross-sectional data provided</p>	<p>Measures <i>Access to nutrition information</i> (addition of calorie information to fast-food restaurant chain menus)</p> <p>Outcome(s) Affected Food purchases -amount of calories purchased (survey and receipts)</p>	<p>Not Reported (for desired health outcome)</p> <p>Positive Association for Purchasing Behavior in the Study Population (Menu Labeling) (Assumption: Greater access to menu labels will lead to higher knowledge of healthy and unhealthy foods, which will lead to a greater consumption of healthy foods and lower body mass index and overweight/obesity.)</p> <p>Menu Labeling <u>PURCHASING BEHAVIOR:</u></p> <ol style="list-style-type: none"> 1. Subway patrons who reported seeing menu labels purchased 52 fewer calories than those who reported not seeing calorie information (mean calories: 714 vs. 766; $p < 0.01$), and fewer purchased high-calorie meals (17% vs. 23% purchased > 1000 calories; $p < 0.01$; and 7% vs. 10% purchased > 1250 calories; $p < 0.05$). 2. 37% of Subway patrons who reported seeing menu labels also reported that this information had an effect on their purchases. 3. Subway patrons who reported seeing and using calorie information purchased 99 fewer calories than those who reported seeing, not using the information (mean calories: 647 vs 746; $p < 0.001$), and lower-calorie meals (4% vs. 9% purchased > 1250 calories; $p < 0.03$). 4. No difference in mean calories purchased by patrons reporting seeing but not using calorie information and those not seeing calorie information (mean calories: 746 vs. 766; $p = 0.29$). 	<p>More Evidence Needed</p> <p>Study design = Association</p> <p>Effect size = Not reported</p>	<p>Maintenance Not Applicable</p> <p>Only cross-sectional data provided</p> <p>Sampling / Representativeness Not Reported</p>
<p>Author Harnack (2006) Minnesota</p> <p>Design Descriptive Uncontrolled, descriptive study</p> <p>Duration Not Applicable Only descriptive data provided</p>	<p>Measures <i>Access to nutrition information</i> (addition of nutrition information to menus at major sit-down chain restaurants)</p> <p>Outcome(s) Affected Presence of nutrition information for menu items</p>	<p>Not Reported (for desired health outcome)</p> <p>(Assumption: Greater access to menu labels will lead to higher knowledge of healthy and unhealthy foods, which will lead to a greater consumption of healthy foods and lower body mass index and overweight/obesity.)</p> <p>Menu Labeling <u>MENU DESCRIPTION:</u></p> <ol style="list-style-type: none"> 1. 10 of the 15 restaurants provided nutrient composition information on the standard menu. Of these, 9 only provided information for menu items with specific health claims like “heart-healthy” or “low fat.” 2. None of the restaurants provided nutrient composition information for more than half of the food items on their menu. 3. Of those restaurants with a children’s section on their main menu (n=4) or a separate children’s menu (n=9), only 1 had any nutrient composition information available. 4. Overall, 9 of the restaurants provided at least some nutrient composition information for menu items and 1 restaurant provided information for children’s menu items. Of the 9 restaurants providing online information, 6 provided this information for an estimated “less than half” of menu items; 3 provided information for all menu items. 5. 11 out of 12 restaurants which provided no information or information for less than half of the menu items online responded to an email inquiry to obtain nutrient information. 	<p>More Evidence Needed</p> <p>Study design = Association</p> <p>Effect size = Not reported</p>	<p>Maintenance Not Applicable</p> <p>Only cross-sectional data provided</p> <p>Sampling / Representativeness Not Reported</p>
<p>Author Roberto, Agnew (2009) Connecticut & New York</p> <p>Design Descriptive Descriptive study</p> <p>Duration Not Applicable Only descriptive data provided</p>	<p>Measures <i>Access to nutrition information</i> (addition of nutritional facts at fast-food restaurants)</p> <p>Outcome(s) Affected Use of calorie information (direct observation)</p>	<p>Not Reported (for desired health outcome)</p> <p>(Assumption: Greater access to menu labels will lead to higher knowledge of healthy and unhealthy foods, which will lead to a greater consumption of healthy foods and lower body mass index and overweight/obesity.)</p> <p>Menu Labeling <u>ACCESSING NUTRITION INFORMATION:</u></p> <ol style="list-style-type: none"> 1. Of the 1,501 people who entered the McDonald’s outlets, 1 woman and 1 man (0.1%) were observed accessing nutrition information prior to purchasing food, and 1 woman and 1 man accessed the information after making their purchase. 2. Of the 482 people who entered the Burger Kings, only 2 men and 1 woman (0.6%) looked at the nutrition poster. 3. Of the 1,671 customers who entered the Au Bon Pains, 1 woman (0.06%) was observed accessing nutrition information. 4. None of the 657 people who entered Starbucks accessed information. 	<p>More Evidence Needed</p> <p>Study design = Descriptive</p> <p>Effect size = Not reported</p>	<p>Maintenance Not Applicable</p> <p>Only cross-sectional data provided</p> <p>Sampling / Representativeness Not Reported</p>

Study Description	Measures & Outcomes	Effect Size or % Change	Effectiveness	Maintenance & Representativeness
International				
<p>Author Stubenitsky, Aaron (2000) United Kingdom</p> <p>Design Intervention Evaluation Non-randomized trial</p> <p>Duration Low 2 weeks</p>	<p>Measures <i>Access to nutrition information</i> (nutritional facts on restaurant menus)</p> <p>Outcome(s) Affected Dietary consumption (energy, fat) and food purchases (questionnaire)</p>	<p>Net Neutral for Nutrition in the Study Population (Menu Labeling)</p> <p>Net Neutral for Purchasing Behavior in the Study Population (Menu Labeling)</p> <p>Menu Labeling</p> <p><u>NUTRITION:</u></p> <ol style="list-style-type: none"> Among patrons choosing the target haddock dish, treatment condition only had a significant influence on total energy and grams of fat intake for the full-fat blind (FFB) group ($F=5.27, p=0.002$; $F=13.82, p<0.001$, respectively). This effect directly reflected the actual difference in energy and grams of fat between the full-fat and reduced-fat dish. No significant influence of menu information on grams of fat and energy intake for subjects selecting the stir fry beef dish and the pasta dish. The FFB group had the highest intake of grams of fat and energy of all treatment dish selection combinations. Among the 3 groups receiving the reduced-fat dish, menu information had no effect on total energy and fat intake. <p><u>PURCHASING BEHAVIOR:</u></p> <ol style="list-style-type: none"> The proportion of subjects choosing the haddock dish was not significantly higher when no information was presented (35% of subjects) versus when the reduced-fat version was identified (25% of subjects, $p=0.151$). The proportion of subjects choosing the other main dishes (excluding the target dish) was not influenced by the presence of information on the menu ($p>0.05$). 	<p>Not Effective for Nutrition in the Study Population</p> <p>Study design = Intervention evaluation</p> <p>Intervention duration = Low</p> <p>Effect size = Net neutral for nutrition in the study population</p>	<p>Maintenance Not Reported</p> <p>Sampling / Representativeness Not Reported</p>

IMPACT TABLES

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
United States						
<p>Author Harnack, French (2008) Minnesota</p>	<p>Participation/Potential Exposure Participation = Not Reported Exposure = Not Reported</p> <p>High-Risk Population Not Reported</p> <p>~25% racial/ethnic populations (evaluation sample)</p>	<p>Representative Not Reported</p> <p>Potential Population Reach More Evidence Needed</p> <p>Participation/potential exposure = Not reported</p> <p>Representativeness = Not reported</p> <p>Potential High Risk Population Reach More Evidence Needed</p> <p>High-risk population = Not reported</p> <p>Representativeness = Not reported</p>	<p>Intervention Components Multi-Component</p> <p>Menu labels added (calorie information) and removed (value pricing) at McDonald's</p> <p>MULTI-COMPONENT: 1. Elimination of value size pricing (per unit cost decreases as portion size increases) and use of standardized prices (price per ounce standardized across portions size options)</p> <p>Feasibility Intervention Feasibility = Low Policy Components Feasibility = High</p> <p>Intervention activities: Menu labels, price changes (standardized pricing)</p> <p>Specialized expertise: Not reported</p> <p>Resources needed: Incentives (\$25 gift card), advertisements for recruitment, personnel to distribute menus and pick up food, funds for the meals ordered, car to pick up the meals, menus, conference room and basement in church</p> <p>Costs: Not reported</p> <p>Implementation Complexity High</p> <p>Intervention components = Multi-component Feasibility = High</p>	<p>Population Impact No Impact for Nutrition in the Study Population No Impact for Nutrition in Men</p> <p>Effectiveness = Not effective for nutrition in the study population and men</p> <p>Potential population reach = More Evidence Needed</p> <p>Implementation complexity = High</p> <p>High-risk Population Impact More Evidence Needed</p> <p>Effectiveness = Not reported for high-risk populations</p> <p>Potential high-risk population reach = More evidence needed</p> <p>Implementation complexity = High</p> <p>Sustainability Not Applicable Efficacy trial</p>	<p>1. Among those who reported that nutrition was important when buying food from a fast food restaurant, average energy intake was significantly lower among those who received the control and calorie plus price menus relative to those that reported nutrition was not important ($p < 0.01$).</p> <p>2. Among those who reported price was not important when buying food from a fast food restaurant, average energy intake was lowest among those in the control condition (598 kilocalories [kcal]) and highest among those in the calorie plus price condition (948 kcal, $p = 0.01$).</p> <p>3. Multivariate regression indicated that average energy intake was comparable between those who reported noticing the calorie information and those who did not (690 kcal versus 671 kcal; $p = 0.65$).</p>	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<p>Author Yamamoto, Yamamoto (2005) United States</p>	<p>Participation/ Potential Exposure Participation = Not Reported Exposure = Not Reported</p> <p>High-Risk Population Not Reported 11-18 year olds</p>	<p>Representative Not Reported</p> <p>Potential Population Reach More Evidence Needed Participation/potential exposure = Not reported</p> <p>Potential High Risk Population Reach More Evidence Needed High-risk population = Not reported Representativeness = Not reported</p>	<p>Intervention Components Simple Menu labels (calorie and fat content) in McDonald's, Denny's and Panda express</p> <p>Feasibility Intervention Feasibility = High Policy Component Feasibility = High Intervention activities: Menu labels Specialized expertise: Not reported Resources needed: Restaurant menus; personnel to create the menu labels; nutritional information from the restaurants Costs: Not reported</p> <p>Implementation Complexity Low Intervention components = Simple Feasibility = High</p>	<p>Population Impact More Evidence Needed Effectiveness = More evidence needed Potential population reach = More evidence needed Implementation complexity = Low</p> <p>High-risk Population Impact More Evidence Needed Effectiveness = Not reported for high-risk populations Potential high-risk population reach = More evidence needed Implementation complexity = Low</p> <p>Sustainability Not Applicable Pilot study</p>	Not Reported	1. Of the 54 meals changed after the menu modification, 20 resulted in a more expensive meal, 23 resulted in a less expensive meal, and 11 resulted in no change. There was an average change of \$0.027 increase.
<p>Author Bassett, Dumanovsky (2008) New York</p>	<p>Participation/ Potential Exposure Not Applicable Only cross-sectional data provided</p> <p>High-Risk Population Not Applicable Only cross-sectional data provided Adults</p>	<p>Representative Not Applicable</p> <p>Potential Population Reach Not Applicable</p> <p>Potential High Risk Population Reach Not Applicable</p>	<p>Intervention Components Not Applicable Only cross-sectional data provided Menu labels with calorie information at fast-food chain restaurants</p> <p>Feasibility Not Applicable</p> <p>Implementation Complexity Not Applicable</p>	<p>Population Impact Not Applicable</p> <p>High-risk Population Impact Not Applicable</p> <p>Sustainability Not Applicable</p>	Not Reported	<p>1. Excluding Subway patrons, only 4% of patrons reported seeing calorie information as currently provided.</p> <p>2. Subway patrons were much more likely to report seeing menu labels than patrons of other chains (32% vs. 4%, p<.001).</p>
<p>Author Harnack (2006) Minnesota</p>	<p>Participation/ Potential Exposure Descriptive Uncontrolled, descriptive study</p> <p>High-Risk Population Not Applicable</p>	<p>Representative Not Applicable</p> <p>Potential Population Reach Not Applicable</p> <p>Potential High Risk Population Reach Not Applicable</p>	<p>Intervention Components Not Applicable Only descriptive data provided Menu labels were presented at major chain table-service restaurants</p> <p>Feasibility Not Applicable</p> <p>Implementation Complexity Not Applicable</p>	<p>Population Impact Not Applicable</p> <p>High-risk Population Impact Not Applicable</p> <p>Sustainability Not Applicable</p>	Not Reported	Not Reported

Study Description	Population	Reach	Intervention	Impact & Sustainability	Other Results	Related Benefits & Consequences
<p>Author Roberto, Agnew (2009) Connecticut & New York</p>	<p>Participation/Potential Exposure Not Applicable</p> <p>Only descriptive data provided</p> <p>High-Risk Population Not Applicable</p>	<p>Representative Not Applicable</p> <p>Potential Population Reach Not Applicable</p> <p>Potential High Risk Population Reach Not Applicable</p>	<p>Intervention Components Not Applicable</p> <p>Only descriptive data provided</p> <p>Menu labels (calories) in McDonald's, Burger King, Au Bon Pain and Starbucks restaurants (posters, pamphlets, website)</p> <p>Feasibility Not Applicable</p> <p>Implementation Complexity Not Applicable</p>	<p>Population Impact Not Applicable</p> <p>High-risk Population Impact Not Applicable</p> <p>Sustainability Not Applicable</p>	Not Reported	Not Reported
International						
<p>Author Stubenitsky, Aaron (2000) United Kingdom</p>	<p>Participation/Potential Exposure Participation = Not Reported</p> <p>Exposure = Not Reported</p> <p>High-Risk Population Not Reported</p>	<p>Representative High</p> <p>Other than a somewhat older than average age, the socio-demographic characteristics of the intervention population were typical of the United Kingdom population as a whole.</p> <p>Potential Population Reach More Evidence Needed</p> <p>Participation/potential exposure = Not reported</p> <p>Representativeness = High</p> <p>Potential High Risk Population Reach More Evidence Needed</p> <p>High-risk population = Not reported</p> <p>Representativeness = High</p>	<p>Intervention Components Multi-Component</p> <p>Menu labels (nutrition information) on restaurant menus</p> <p>MULTI-COMPONENT: 1. Chef modified the target dish so that it had lower energy and percent energy from fat than the original version.</p> <p>Feasibility Intervention Feasibility = High</p> <p>Policy Components Feasibility = High</p> <p>Intervention activities: Menu labels, menu modification for one item</p> <p>Specialized expertise: Not reported</p> <p>Resources needed: Recipe details for each food, menus</p> <p>Costs: Not reported</p> <p>Implementation Complexity High</p> <p>Intervention components = Multi-component</p> <p>Feasibility = High</p>	<p>Population Impact No Impact for Nutrition in the Study Population</p> <p>Effectiveness = Not effective for nutrition in the study population</p> <p>Potential population reach = More evidence needed</p> <p>Implementation complexity = High</p> <p>High-risk Population Impact More Evidence Needed</p> <p>Effectiveness = Not reported for high-risk populations</p> <p>Potential high-risk population reach = More evidence needed</p> <p>Implementation complexity = High</p> <p>Sustainability Not Reported</p>	Not Reported	<p>1. Subjects in stage 2 and 3 of behavioral change ('should choose' or 'usually try to eat a healthy option when eating out') had overall significantly higher post-meal liking ratings than those in stage 1 of behavioral change ('am not interested in choosing a healthy option when eating out'), and were more likely to purchase again [F(1,77)= 4.19, p=0.04; F(1,78)= 9.07, p=0.004, respectively]</p>