

# IDENTIFYING KEY METRICS FOR MAGAZINE PLANNING

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## SYNOPSIS

The objective of this study is to prioritize the generally available print planning resources and metrics with respect to their potential to predict advertising effectiveness. Advertising effectiveness is a broad and expansive notion. Therefore, for the purposes of this research, it is defined as advertising recall. The study is designed as a first step in discerning the hierarchy among metrics for different print ad campaigns spanning product categories and magazine genres. The project expands upon the work undertaken by the Magazine Involvement Alliance – presented at the 2003 Worldwide Readership Research Symposium – by broadening the focus to assess the relative contributions of multiple drivers of ad effectiveness, not simply involvement.

For this study, one branded campaign within each of three product categories is selected to assess a set of working assumptions. All three campaigns ran in the U.S. in the spring of 2005. The subject brands include a widely recognized consumer package good, a prescription pharmaceutical drug (promoted direct-to-consumers), and an apparel brand. All are considered leading brands within their respective categories. The respondents, recruited from Knowledge Networks' representative online consumer panel, answer a series of questions probing their relationship with the magazines using the language of MRI's qualitative measures, as well as their recall of the advertisements from the three ad campaigns.

For each subject magazine, standard, planner-accessible metrics are obtained including frequency of reading, qualitative measures (e.g., time spent reading, place of reading, actions taken, etc.), audited circulation, ad/edit ratio, category involvement, positioning and editorial environment. Also included are a number of variables, usually beyond a print planner's immediate control, that may relate to advertising effectiveness, such as strength of copy and potential frequency of exposure to the campaign.

For the purposes of the analyses, each of these measures is treated both separately and in combination as independent variables that predict the dependent advertising effectiveness variable. The paper will show summary data indicating which measures are most predictive of advertising effectiveness in total and the differences, if any, by product category and by magazine genre. As a result, it will identify the most valuable resources for planning print advertising campaigns and the magnitude of their contribution.

In short, our goal is to initiate the development of a "planning toolbox" for the media planning community to better guide the increasingly complex print planning process and, more generally, to further understand the dynamics of print advertising effectiveness.

## I. BACKGROUND

What drives advertising recall? How can media planners improve the opportunity for an ad to be seen and remembered? How much of ad recall can be measured and how much can be controlled by the planner?

Over the past five years, increasing attention has been paid to the role that involvement or engagement plays in generating advertising recall or attention. This focus on engagement is particularly prevalent in the magazine publishing community, where publishers are capitalizing on the relationship between a magazine and its readers. Studies have been conducted by publishers (Magazine Involvement Alliance), agencies (Starcom) and the Magazine Publishers' Association, among others, focusing on the value and role that metrics like involvement and engagement play in enhancing advertising effectiveness.

This paper expands on some of this work by examining the relative impact of measurable predictors of advertising recall – those that are within and outside the media planner's control.

According to the paper presented at the WRRS in Cambridge by the Magazine Involvement Alliance ("Quantifying the Effects of Reader Involvement on Magazine Advertising Effectiveness"), 10.9% of unaided advertising recall was explained by a variety of involvement measures and 15.4% was explained in total. This learning supported the intuitive belief that involvement with the magazines translated into involvement and recall of the advertisements they carried. These findings, coupled with similar learning from the Northwestern "Reader Experience Study" (sponsored by the MPA and ASME) and Starcom's ACE study, rekindled the interest in qualitative measures which focus on reader involvement as a planning tool, and sparked the growth of other studies that measure the reader's relationship with magazines. These included MMR's PRSS study, Affinity Research's VISTA, and Advertiser Perception's Power Metrics.

How can a media planner's decisions enhance advertising recall using tools that are readily available to them? Media planners have become overloaded with tools that purport to guide them in the print planning process. Which ones are most valuable? Which ones are nice, but not necessary? Where should a media planner's time be spent – negotiating front of book placement? Evaluating a magazine's involvement level? This paper is presented from the dual perspectives of an advertising agency and a publisher with the goal of providing the media community with a guide to help focus the planning process on what really matters.

## II. OBJECTIVES AND WORKING ASSUMPTIONS

The overall objective of the study is to identify which key measures are most predictive of print advertising effectiveness in order to maximize the media planner's ability to develop optimal print campaigns using existing tools.

Specifically, the study seeks to...

- Initiate the development of guidelines for media planners to navigate through the increasingly complex world of print planning tools by identifying the current planning metrics that best predict the connection between the reader and the ad.
- Determine the contribution of available planning metrics to advertising effectiveness (defined as advertising recall).
- Prioritize the available planning metrics through their relationship with advertising effectiveness, at an aggregate level, by product category and magazine genre.
- Identify and quantify the contribution of factors outside the media planner's knowledge or control that influence ad effectiveness.

These objectives reflect the following assumptions:

- Among all the print planning tools now being offered, some are more valuable than others; this "value" differs by product category and magazine genre.
  - Implication: Planners should focus their time and analysis on these tools rather than those with no measurable link to ad effectiveness.
- There are significant differences in what contributes to advertising recall between product categories, magazine genres, and potentially, brands.
  - Implication: Different campaigns and categories may call for a different prioritization of planning tools.
- Additional factors outside of a media planner's control can be identified and their contribution to ad effectiveness quantified.
  - Implication: Ad effectiveness is influenced by actions of the agency (creative), the client (product user satisfaction), and the consumer (level of category interest/involvement).
- The role of environment (e.g. placement by quartile) can be quantified and varies by magazine genre and/or product category. In some magazine genres or categories, involvement or other factors may have more influence on effectiveness than placement.
  - Implication: Negotiated ad placement is more important in some magazine genres and/or product categories than in others.

## III. OVERVIEW OF THE RESEARCH DESIGN

The research design broadens the work undertaken by the Magazine Involvement Alliance by assessing the relative contributions of multiple drivers of ad effectiveness, not just the contribution of magazine involvement. This study also concentrates on existing measures rather than creating a new metric. Magazine planner-accessible metrics, strength of copy scoring, and potential exposure to the ad campaign are evaluated for one brand in each of three product categories (consumer package goods, pharmaceutical, and apparel) across twenty-four consumer magazines where the test campaigns ran.

- **Methodology:** Knowledge Networks' representative online panel was used as the sample frame because it is representative of the entire U.S. consumer population (including respondents recruited with and without online access) while also offering the ability to expose respondents to cover shots of magazines and images of actual ads, thereby strengthening the reliability of aided question sequences.
- **Questionnaire:** The questionnaire was structured as follows:
  1. Past three-month readership of forty magazines, including the twenty-four target magazines in which the three test campaigns ran. Magazine logos were used to prompt recall of exposure in the three months prior to the interview. If the respondent had not read any of the twenty-four target magazines (in which the three test campaigns ran) in the three months prior to the interview, the interview was terminated. ("Which of these magazines have you read or looked into in the last three months?")
  2. Frequency of reading for each magazine screened. ("On average, out of every four issues that are published, about how many issues of each magazine listed below do you read or look into?")
  3. Readership of the twenty-four target magazine specific issues (31 in total). Cover shots were used as memory aids. If the respondent had not read any of these issues, the interview was terminated; if the respondent had read multiple issues, one was selected at random. ("Which issue or issues of [magazine title] shown below have you read or looked into?")

The magazine issues tested in the main study were:

- |  |                                     |
|--|-------------------------------------|
| ➤ Better Homes & Gardens (March and April) | ➤ House Beautiful (March)           |
| ➤ Child (April)                            | ➤ Ladies' Home Journal (April)      |
| ➤ Cottage Living (March)                   | ➤ Metropolitan Home (April)         |
| ➤ Country Home (April)                     | ➤ Midwest Living (March and April)  |
| ➤ Country Living (March and April)         | ➤ More (March and April)            |
| ➤ Family Circle (April)                    | ➤ Outdoor Life (April)              |
| ➤ First for Women (March)                  | ➤ Parenting (April)                 |
| ➤ Fitness (April)                          | ➤ Parents (March)                   |
| ➤ Good Housekeeping (April)                | ➤ Reader's Digest (March and April) |
| ➤ Health (April)                           | ➤ Southern Living (April)           |
| ➤ Home (March and April)                   | ➤ Weight Watchers (March and April) |
| ➤ House & Garden (April)                   | ➤ Woman's Day (March)               |

4. Eight MRI involvement questions, rephrased slightly so that they focused on the *specific* issue, rather than the last publication period that is used by MRI.
  - "Below is a list of places where people can read or look into magazines. Please indicate all the places where you read or looked into the April issue of ...."
  - "On how many different days did you read or look into the April issue of...?"
  - "Approximately how much time have you spent in total reading or looking into that issue of...?"
  - "Which of the things listed below did you do as a result of reading or looking into the April issue of...?"
  - "Thinking about the April issue of [magazine title] that you read or looked into, which of the following statements best describes how you obtained this issue of [magazine title]?"
  - "Think about the last time before today that you read the April issue of [magazine title]. About what percent of the pages in that issue did you open just on that day?"
  - "How would you rate [magazine title] overall?"
  - "How much interest do you have in the advertising that appears in [magazine title]?"
5. How soon after obtaining the issue, the respondent read or looked into the magazine, and when the respondent last read the selected issue (embedded within the magazine involvement questions). ("How soon after you obtained this issue of [magazine title] did you read or look into the magazine?"; "When was the last time you read or looked into the April issue of...?")
6. Categories of products the respondent had seen advertised in the selected issue. The categories listed spanned the three ad campaigns and included a "ghost" ad for a cable network. ("Do you recall seeing ads for any of the following types of products or categories in the April issue of...?")
7. Open-end questions asking recall of any *brands* in those categories that the respondent reported seeing advertised in the selected issue. ("Which [product category] brands did you see advertised in the April issue of...?")
8. Recall of the *brands* that the respondent reported seeing advertised in that issue, aided by a list of brands within each category, for those categories for which the respondent did recall advertising in the selected issue. ("Which of the following brands of [product category] did you see advertised in the April issue of...?")
9. *Written aided recall* of each of the ads in the selected issue, plus the "ghost" ad, based on a one-line description of each ad was asked of all respondents. ("Please indicate whether you recall seeing each of the following ads in the April issue of ...?" Example response: "Ad for The Discovery Channel with three bears sitting on each other's shoulders on a waterfall while waiting to catch Atlantic salmon.")
10. *Visual aided recall* of each of the ads that appeared in the selected issue, plus the "ghost" ad, with the images of the actual ads shown as memory aids was asked of all respondents. ("Do you recall seeing the ad shown below in the April issue of...?")
11. A *simple copy test* of the ads using seven-point agreement scales to measure attention, communication of main message, believability, persuasion, and appeal was asked of all respondents ("Whether or not you have seen this advertisement before, we would like you to carefully look at the ad and rate it on a few statements listed below.")
12. Other media where the respondent had seen the ad campaign before. ("Where else have you seen this ad campaign?")
13. Main reason why respondent read selected magazine. ("What is the main reason you read this April issue of...?")
14. Past and future six-month category participation in the three product categories tested. ("Which of the following have you purchased or used in the last 6 months or plan to purchase or use in the next 6 months?")

- **Sample and Fieldwork:** The survey was initially assigned to a randomly drawn sample of 8,327 Knowledge Networks panelists representing the U.S. general adult population (age 18+). The assigned 8,327 panel members (effective sample frame) were invited to participate in the survey via e-mail on April 20, 2005. The qualified sample for this study consisted of 1,506 respondents who had read at least one of the twenty-four magazine issues in which the ads for the three test campaigns ran. This was further winnowed down to 1,268 usable respondents after those recalling “ghost” ads were excluded from the analysis. The 1,268 respondents recorded 1,560 exposures to at least one of the three ad campaigns (some respondents were exposed to more than one ad campaign in cases when multiple test ads ran in the same issue that the respondent had read or looked into). *[These 1,560 exposures are not to be confused with the 1,506 qualified respondents.]*

The disposition of the unweighted sample is shown below. The study field period closed on April 25<sup>th</sup> 2005.

Effective sample frame	8,327
Responded to the survey invitation	5,061 (61% of 8,327)
Qualified and completed survey	1,506 (25% of 5,061)
Recalled “ghost” ad (false positive)	238 (16% of 1,506)
Respondents used in analysis	1,268 (84% of 1,506)

- **Weighting:** The data were sample-balanced to the U.S. Census and weighted to demographic distributions based on the MRI demographics representative of the readership of twenty-four magazine titles, netted into four magazine genres (health, home services, parenting, women’s) and one unclassifiable grouping<sup>1</sup>. Weighting was based specifically on reader gender, age, and income.
- **Survey Length:** The median survey time to complete the survey was 13.7 minutes (among qualified respondents who completed the main body of the survey).

#### IV. OVERVIEW OF ANALYTICS

Advanced statistical methods are employed to accurately capture the relationship between potential predictors of ad recall. This analysis provides a stronger indication of the links between drivers and recall than simple descriptive statistics since it is based on a more thorough examination of the appropriate ways in which all of the measures should be coded in order to understand the underlying nature of the relationships between them. At the core of the analysis is a Binary Logit Model, which measures the impact of all of the potential predictors together so that the effects of each one can be calibrated in relation to the others. The steps below are a more comprehensive explanation of the process.

##### Step 1. Formulate Dependent Measure of Advertising Effectiveness

Ad recall (1 if yes, 0 if no) is used as the dependent variable. An intensity score is created based on respondents’ level of recall - the weakest measure being visually aided recall and the strongest measure being completely unaided recall. The depth of recall is used to weight the respondents’ influence in the model.

##### Step 2. Formulate and Define Potential Predictors (Independent Variables)

There are five categories of potential predictors:

- Involvement Measures (both MRI standard measures and experimental measures)
- Ad Quality Measures (factor analysis reduces the five copy test metrics to two factors)
- Magazine Exposure Measures (read or looked into other magazines where the ad ran)
- Category Participation Measures
- Other Magazine Characteristics (like positioning and editorial composition)

For many of these variables, several transformations of the original measures are tested. In addition to intuitively created transformations, CaRT models (Classification & Regression Tree) are used to identify potentially more powerful transformations of the original measures. The intention of creating these transformations is to identify those that have the greatest impact on recall. Exhibit 1 contains the original questions as well as the definitions and values for each of the transformed variables.

##### Step 3. Develop Binary Logit Model

Binary responses (for example, recall and did not recall) and ordinal responses (for example, high, medium, and low preference) are common in consumer research. Logit models are often used to investigate the relationship between these discrete responses and a set of explanatory variables. In this case, a Binary Logit Model is used because the dependent measure - advertising recall - only takes on two values (1 if yes, 0 if no).

A stepwise procedure is used to select variables to include in the model. The procedure starts by selecting the one variable that is most statistically significant and also meets an “entry” level criterion (a 90% confidence level is used to allow a driver to enter the model). The evaluation process is then repeated. However, after the next variable is added, the stepwise procedure looks at all of the variables already included in the model and eliminates any that do not meet a “stay” level criterion (the standard increases to a 95% confidence level to allow a variable to stay in the model). Only after this check is made and the necessary eliminations accomplished can another variable be entered into the model. The stepwise selection continues until no further variables can be added to the model and every variable already in the model is significant at the “stay” level.

##### Step 4. Model Validation

This step involves testing the Binary Logit Model on bootstrap re-samples to ensure that the model would be robust in predicting

<sup>1</sup> Reader’s Digest and Outdoor Life were considered unclassifiable since there were no similarities on the magazine genre level.

ad recall in the future. The variables identified in Step 3 are validated by re-running the model on 200 bootstrap samples from the original data set (1,560 records). Those variables for which the estimate is positive at least 90% of the time (180 out of 200 bootstrap samples) are kept in the model.

**Step 5. Assess Percent Contribution to Ad Recall**

The percent contribution (or “variance explained”) for all of the variables together is measured by Nagelkerke’s adjusted coefficient of determination (“R-Square”) for logit models.

To translate the coefficient of each variable in this model to a more meaningful metric, a percent contribution figure for each variable is derived by normalizing the (standardized) coefficient for each variable (by dividing the coefficient by sum of the coefficients for all of the variables in the model) and then multiplying by the full model R-Square.

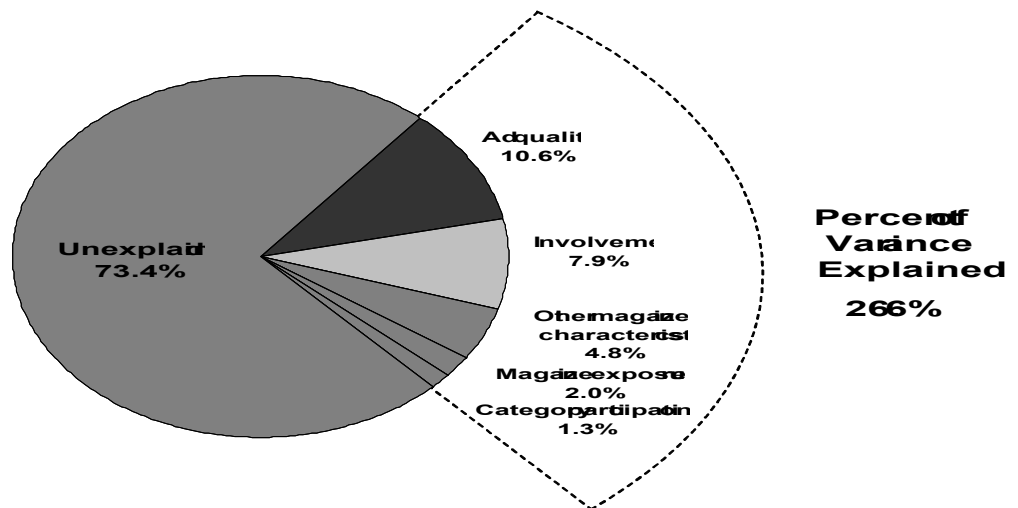
**V. OVERVIEW OF FINDINGS**

This section presents the results of the predictive models with the focus on overall findings, as well as differences by product category and by magazine genre.

**Summary Findings**

In total, 26.6% of the variance in ad recall is explained. By comparison, 15.4% of variance in unaided recall was explained in the 2003 Magazine Involvement Alliance study. This represents a substantial improvement over prior studies that attempt to explain differences in advertising effectiveness in terms of only one or two variables. Figure 1 illustrates these findings at an aggregate level.

**Figure 1**  
**PERCENT OF VARIANCE IN AD RECALL EXPLAINED**  
**– TOTAL MODEL –**

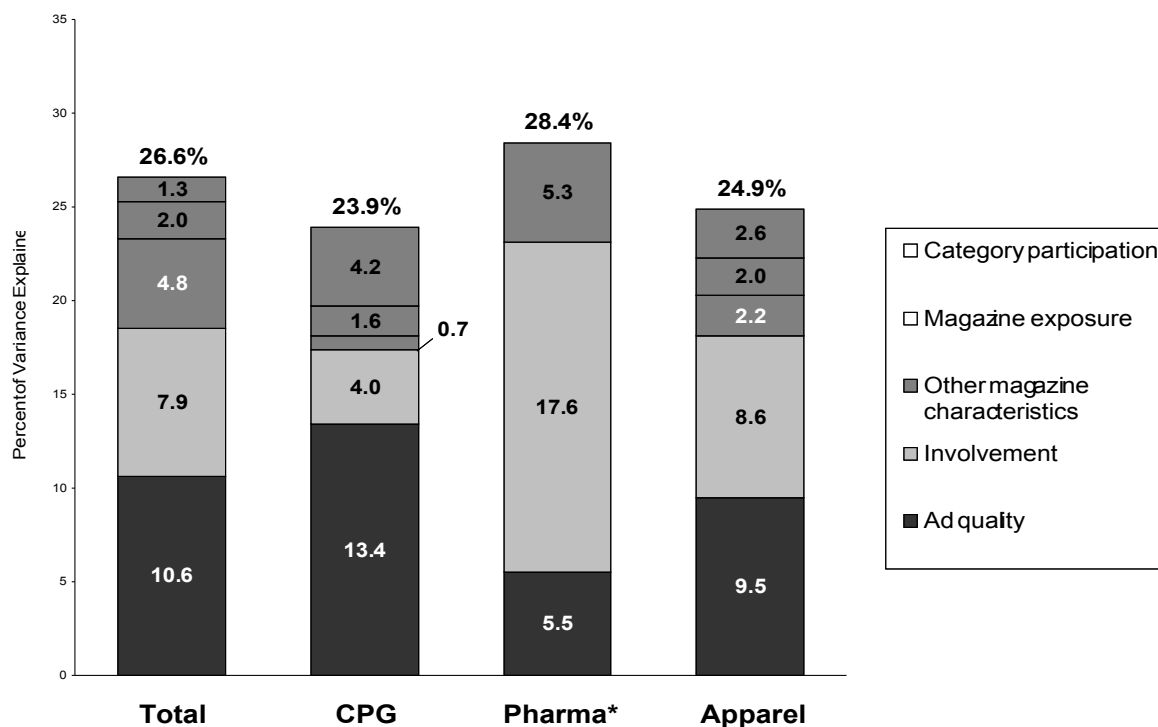


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 Note: Logit Model @ 95% Confidence

Ad quality (10.6%) and magazine involvement (7.9%) emerge as the two strongest predictors of ad effectiveness. Overall, they explain 18.5% of the variance in the aggregate model, marginalizing the effect of other variables like category participation and positioning, both of which explain variances of 1.3% and 4.8% respectively. Magazine exposure (ad exposure frequency) contributes less than 5% of explained variance.

Figure 2 illustrates the differences in these top-level predictors across product categories. While the percent of variance explained overall is similar across product categories (ranging from 23.9% to 28.4%), the relative influence of each of the predictors of magazine ad effectiveness differs within category, suggesting that a generic “one size fits all” approach to planning decisions is susceptible to failure.

**Figure 2**  
**PERCENT OF VARIANCE IN AD RECALL EXPLAINED**  
**– TOTAL VS. PRODUCT CATEGORY MODELS –**



\* 0% for Category Participation and Other Magazine Characteristics for Pharma

Note: Logit Model @ 95% Confidence

Ad quality emerges as the strongest predictor of ad effectiveness in the CPG category, explaining 13.4% variance compared to 9.5% in the apparel category and 5.5% in pharmaceuticals. Involvement, on the other hand, is most influential in the pharmaceutical category and least influential in predicting advertising effectiveness within the CPG category. These significant differences may be attributable to the individual characteristics of each campaign tested, as only one campaign is examined for each product category. Nonetheless, it suggests that creative may be less of a determinant of the effectiveness of pharmaceutical advertising, given the strict regulatory limits around DTC advertising, whereas a reader’s involvement with the magazines takes on greater importance in this category. Conversely, the CPG ad tested is visually arresting, which may account for the higher percent of variance explained by ad quality in this category. The apparel category example tracks most closely with the overall model.

**Differences by Product Category and Magazine Genre**

Table 1 summarizes the results for the total model and specific models by product category and by magazine genre. This presents a more detailed view of the influence of specific components within each of the five drivers of advertising effectiveness captured in this study.

**Table 1**  
**PERCENT OF VARIANCE IN AD RECALL EXPLAINED BY LOGIT MODEL**

	<u>PRODUCT CATEGORY</u>				<u>MAGAZINE GENRE</u>			
	<u>Total</u>	<u>CPG</u>	<u>Pharm</u>	<u>Apparel</u>	<u>Health</u>	<u>Home</u>	<u>Parenting</u>	<u>Women's</u>
Percent of Variance Explained	26.6%	23.9%	28.4%	24.9%	40.0%	28.0%	42.8%	28.7%
<b><u>INVOLVEMENT</u></b>								
Any actions taken	1.6	1.9	-	1.9	-	-	7.9	-
Read away from home only	2.1	-	4.2	-	-	-	-	2.6
Obtained from newsstand	1.5	-	5.5	-	6.3	-	-	-
Total cumulative reading time	0.5	1.6	-	-	-	-	-	-
Reading time > 15 minutes	-	-	-	-	-	-	-	2.8
Reading time > 30 minutes	-	-	-	-	14.6	-	-	-
Reading time > 45 minutes	-	-	-	3.7	-	2.0	-	-
Reading days > 1	2.0	-	-	-	-	-	7.1	6.2
Reading days > 2	-	-	2.3	-	-	-	-	-
Reading days > 3	-	-	-	3.0	-	-	-	-
Page Exposure > .74	0.2	0.5	-	-	-	-	-	-
Magazine likeability rating - top box	-	-	5.6	-	-	-	-	-
Read x issues out of 4 > 2 years	=	=	=	=	=	=	=	<u>1.9</u>
Total Involvement	<b>7.9%</b>	<b>4.0%</b>	<b>17.6%</b>	<b>8.6%</b>	<b>20.9%</b>	<b>2.0%</b>	<b>15.0%</b>	<b>13.5%</b>
<b><u>AD QUALITY</u></b>								
Attention & Appeal	4.2	5.2	-	-	12.6	3.7	-	6.3
Communication, believability, persuasion	<u>6.4</u>	<u>8.2</u>	<u>5.5</u>	<u>9.5</u>	<u>4.6</u>	<u>9.1</u>	<u>13.3</u>	<u>7.9</u>
Total Ad Quality	<b>10.6%</b>	<b>13.4%</b>	<b>5.5%</b>	<b>9.5%</b>	<b>17.2%</b>	<b>12.8%</b>	<b>13.3%</b>	<b>14.2%</b>
<b><u>MAGAZINE EXPOSURE</u></b>								
Ad exposure frequency	<b>2.0%</b>	<b>1.6%</b>	<b>5.3%</b>	<b>2.0%</b>	<b>0.0%</b>	<b>0.0%</b>	<b>10.2%</b>	<b>0.0%</b>
<b><u>CATEGORY PARTICIPATION</u></b>								
Purchased/used product category last 6 months	1.3	3.0	-	-	-	1.7	4.3	-
Intend to purchase/use	=	<u>1.2</u>	=	<u>2.6</u>	=	<u>1.4</u>	=	=
Total Category Participation	<b>1.3%</b>	<b>4.2%</b>	<b>0.0%</b>	<b>2.6%</b>	<b>0.0%</b>	<b>3.1%</b>	<b>4.3%</b>	<b>0.0%</b>
<b><u>OTHER MAGAZINE CHARACTERISTICS</u></b>								
4th quarter of magazine (negative)	0.9	0.7	-	-	-	3.9	-	-
Adjacent to copy heavy edit (negative)	0.8	-	-	-	-	4.9	-	-
50% + Ad (vs. Edit)	3.1	-	-	2.2	-	1.3	-	1.0
Adjacent to compatible editorial	=	=	=	=	<u>1.9</u>	=	=	=
Total Other Magazine Characteristics	<b>4.8%</b>	<b>0.7%</b>	<b>0.0%</b>	<b>2.2%</b>	<b>1.9%</b>	<b>10.1%</b>	<b>0.0%</b>	<b>1.0%</b>

Note: Logit Model @ 95% Confidence

Large differences are also detected from magazine genre to genre. For the Health and Parenting magazines, the models explain over 40% of variance, although this may have been an artifact of fewer ads in those magazine genres, as detailed in Table 2.

**Table 2**  
**DISTRIBUTION OF AD EXPOSURES BY MAGAZINE GENRE WITHIN PRODUCT CATEGORY**

<u>Magazine Genre</u>	<u># of Ad Exposures</u>			<u>Total</u>
	<u>CPG</u>	<u>Pharma</u>	<u>Apparel</u>	
<b>Health</b>	83	100	0	183
<b>Home Services</b>	258	111	53	422
<b>Parenting</b>	105	0	58	163
<b>Women's</b>	403	29	210	642
<b>Unclassifiable</b>	0	98	52	150
<b>Total</b>	849	338	373	1,560

Ad quality is the single most important contributor to advertising effectiveness in two of the three product categories and three of the four magazine genres tested. The factor that includes communication, believability and persuasiveness is the most influential in the overall model, explaining 6.4% of variance. This jumps to 9.5% in the apparel category. An ad's ability to command attention and appeal only emerges as a highly influential driver of ad effectiveness in the CPG category but is not a significant predictor of ad effectiveness in either of the other two product categories examined. As described earlier, one possible explanation is that the CPG ad is eye-catching whereas the apparel ads use traditional visuals and the pharma ad's creative potential is constrained by strict regulatory guidelines and the need for heavy fair balance statements, including extensive treatment of side effects and contraindications.

The influence of ad quality also fluctuates across magazine genres, exerting a greater influence in Health magazines, driven mainly by attention and appeal that explains 12.6% of variance among these titles. Conversely, the metric of communication/believability/persuasion is most influential in Parenting magazines, where it explains 13.3% of the variance, and least influential in Health magazines, where it explains a mere 4.6% of variance. Only the CPG and pharma executions ran in Health magazines, offering some explanation for this dichotomous effect.

As noted earlier, differences are also observed around the influence of the involvement metrics. They account for 7.9% of variance in the aggregate model, yet this increases to 17.6% in the pharma category and declines to 4% in the CPG category. In fact, this runs counter to the conventional wisdom that involvement is a dominant driver regardless of the product category. Furthermore, there is significant fluctuation in the influence of the components within involvement, across product categories. This signals the need to further quantify the impact of involvement on multiple campaigns.

Additionally, there are significant differences in the influence of the components of involvement across categories and magazine genres. For example, any actions taken is most predictive of ad effectiveness within the context of Parenting magazines whereas newsstand acquisition is most influential for Health magazines. The importance of actions taken reinforce media planner's intuitive beliefs; however, this is not a significant predictor of ad effectiveness in the pharmaceutical category and in three of the four magazine genres tested (although this may be driven by constrained sample sizes within some of magazine genres). Magazine likeability is highly influential in the pharma model. The counter-intuitive importance of readership away from home only and newsstand purchase in this category are noted. While we might speculate this is the result of readership in physicians' offices, there was nothing in the study to suggest that people are more likely to read pharmaceutical ads there. Extensive analysis, conducted to address and validate this counter-intuitive finding, provides no concrete explanations. However, this finding lends credibility to the importance of total audience, versus a focus on subscribers or primary audience only.

Many of the conventional media planning metrics fail to be significantly related to ad recall in any of these models.

- "Far forward, right hand page"
- Read 3 or 4 out of 4 issues
- Primary versus pass-along readership
- Percent of pages opened
- Interest in advertising
- Special position (other than back cover, not measured)
- Total pages in the magazine

As described earlier, characteristics of the publication and ad placement (the other magazine characteristics) account for 4.8% of variance in the aggregate model. This is driven by the importance of a high ad/edit ratio (more than 50% advertising) to the apparel ad campaign (2.2% of variance). Intuitively, apparel advertising works best in magazines where advertising is an important component of the magazine's character, although interest in advertising fails to be a significant variable.

Ad placement in the last quarter of the magazine slightly reduces the likelihood of recalling the CPG product (0.7% of variance). Although this finding is significant for just this one product category, it is consistent with previous studies.

Although magazine exposure frequency accounts for less than 5% of variance, it is a significant variable in all three product categories (whereas involvement variables differ by campaign). This finding is consistent with the intuitive belief that frequent



exposure enhances the likelihood of recall.

Purchase of the product category accounts for up to 4% of the variance in ad recall. This suggests media planners should continue the common practice of targeting print advertising to product users. Counter-intuitively, future product purchase is not a significant variable for the pharma ad. "Intend to purchase" explains some of the variance in the CPG and apparel categories, but not in pharma or in the overall model, perhaps because intention is driven by circumstances such as an unexpected diagnosis.

These findings should be confirmed by additional studies utilizing multiple brand campaigns within categories. The influence of these metrics at a product category level is sometimes so subtle that it cannot be detected with this topline pilot study or these findings may be idiosyncratic to the actual campaigns tested. Nevertheless, the findings suggest that media planner's time would be better-spent using metrics that are more significantly related to ad effectiveness.

## VI. IMPLICATIONS OF FINDINGS

What are the implications of these findings for agencies, for publishers and researchers?

- Increase the focus on understanding the consumer dynamics of individual ad campaigns and product categories to determine which involvement metrics will most enhance ad recall.
- Increase the focus on the quality of print ad creative and the importance of testing copy to ensure it meets the objectives.
- Reduce the focus on analyzing metrics that have little to no impact on ad recall, but potentially can be time consuming for media planners.
- Research suppliers offering new metrics for comparing and evaluating magazine audiences should be prepared to demonstrate a link between those metrics and advertising effectiveness.

### Findings vs. Working Assumptions:

- Among all the print planning tools now being offered, some are more valuable than others; this "value" differs by product category and magazine genre.
  - Implication: Planners should focus their time and analysis on these tools rather than those with no measurable link to ad effectiveness.

**TRUE.** Findings indicate that there is a discernable difference in the value of some tools over others.
- There are significant differences in what contributes to advertising recall between product categories, magazine genres, and potentially also brands.
  - Implication: Different ad campaigns in different product categories may call for different planning tools.

**TRUE.** Findings indicate that ad recall is driven by different variables, depending on the product category. This could also be driven by the brand's market position (e.g., leader vs. new brand).
- Additional factors outside of a media planner's control can be identified and their contribution to ad effectiveness quantified.
  - Implication: Ad effectiveness is influenced by actions of the agency (creative), the client (product user satisfaction) and the consumer (level of category interest/involvement).

**TRUE.** Findings clearly indicate the importance of the strength of the print creative in driving ad recall.
- The role of environment (e.g. placement by quartile) can be quantified and varies by magazine genre and/or product category. In some magazine genres or categories, involvement or other factors may have more influence on effectiveness than placement.
  - Implication: Negotiated ad placement is less important in some magazine genres and/or product categories than in others.

**TRUE.** Findings indicate that positioning (4<sup>th</sup> quarter of magazine and adjacent to copy intensive editorial) has a negative impact on ad recall in the Home Services magazine genre, but no impact in the other magazine genres. Placement adjacent to compatible editorial only contributed to ad recall in the Health magazine genre.

**VII. NEXT STEPS**

This research makes an important contribution to understanding the factors affecting magazine advertising recall. The opportunity to analyze real brands in real life situations and apply consistent analytics across several categories is exciting. However, it is strongly believed that this work should be considered a pilot test for further studies involving multiple brands across multiple product categories. These tests should focus on:

- Consistency of metrics across campaigns within a product category
- The role of magazine genre vs. product category
- The relationship between the metrics planners use to select media and ad recall, in addition to other measures of advertising effectiveness.

**Exhibit 1**

**INVOLVEMENT MEASURES DEFINITION (MRI STANDARD)**

Questions	Definition/Transformation	Note
S5/S6. How many issues you have read out of 4 issues that are published	Read 2 or more issues	Dummy for each level of issues read
	Read 3 or more issues	
	Read all 4 issues	
	# of Issues read: (0 - 4)	Ordinal
Q1. Where you read or looked into the issue	Read away from home only	Dummy
	Read at home	
	Read both at home and away from home	
Q2. Number of different days read the issue	# of different days	Ordinal
	Read for 1 or more days	1 step down median split
	Read for 2 or more days	Median split
	Read for 3 or more days	1 step up median split
Q3. Time spent in total reading or looking into the issue	Time spent reading (ordinal)	MRI standard category
	Time spent reading (cumulative)	Continuous
	Read magazine 16+ minutes	1 step down median split
	Read magazine 31+ minutes	Median split
	Read magazine 46+ minutes	1 step up median split
Q4. Actions taken to reading issues	Cut recipe after reading	Dummy
	Took actions other than cut recipe	
	Took any actions after reading	
Q5a. How obtained this issue	Belong to someone else	Dummy
	From subscription	
	From newsstands	
Q9. Percent of pages opened the last time before today	Percent of pages read: (.05 - .955)	Continuous
	Percent of pages read >.375	Median split
Product of: Q2. Number of different days read the issue	Page exposure: (0 - 9.9)	Continuous
Q9. Percent of pages opened the last time before today	Page exposure > 0.74	Median split
Q10. Overall Rating of the magazine	Top Box	Dummy
	Rating: (1 - 100)	Continuous
Q11. Interest in the advertising that appears in the issue	Top Box	Dummy
	Rating: (0 - 1.5)	Continuous

## INVOLVEMENT MEASURES DEFINITION (EXPERIMENTAL MEASURES)

Questions	Definition/Transformation	Note
Q5a. How soon after you obtained this issue did you read into it?	Read the same day	Dummy
Q5b. How long have you/your household member been a subscriber to this magazine?	4 Categories: Less than a year - 5 years or more	Ordinal
Q6. Recency of reading this issue	Recency (-70 - 0)	Continuous
	Recency greater than -10	Median split
Q7. Was today the first day you read this issue?	Read this magazine before	Dummy
Q12. How long have you read at this frequency?	0.25 - 11	Continuous
	Read at this frequency for more than 2 years	Median split
	1 - 6	Ordinal
Product of: S5/S6: # of issues read out of 4 that are published Q12: how long have you read at this frequency (continuous)	0 - 44	Continuous

## MAGAZINE EXPOSURE AND CATEGORY PARTICIPATION DEFINITION

Description	Definition	Note	
<b>Magazine Exposure</b>	Health	Dummy	
	Home		
	Parenting		
	Women's		
	Unclassifiable		
	Total # of magazine genres exposed to (0 - 5)	Ordinal	
S1. Number of magazines read out of 40 in the last three months	0 - 40	Continuous	
S7. Number of issues read out of 40	0 - 40	Continuous	
S7. Ad Exposure Frequency: Read or looked into other magazine(s) where ad ran	4 magazine genres: (0 - 3+)	Ordinal	
<b>Category Participation</b>	Q22. Have purchased the product in the last 6 months	Yes/no	Dummy
	Q22. Intend to purchase in the next 6 months	Yes/no	Dummy

**DEFINITION OF OTHER MAGAZINE CHARACTERISTICS**

	Description	Variable
<b>Circulation</b>	Less than 500,000	Dummy
	500,000 to < 1 Million	
	1 million +	
	% Subs	Continuous
	% news-stand	Continuous
<b>Editorial/Copy</b>	Percentage of magazine composed of ads	Continuous
	50%+ ad (vs. edit)	Dummy
	Heavy copy edit adjacency	Dummy
	Edit has photo/illustration	Dummy
	Compatible Edit Adjacency	Ordinal
	Total pages of magazine	Continuous
<b>Positioning</b>	Location of the ad (first page of ad/total pages)	Continuous
	Location - First quarter of magazine	Dummy
	Location - 4th quarter of magazine	Dummy
	RH page	Ordinal
	LH page	Ordinal
	Opposite another ad	Dummy
	Special position (No 4th/back Cover)	Dummy

**TWO FACTORS DERIVED FROM AD QUALITY**

Factors	Items
<b>Communication, Believability &amp; Persuasion</b>	Communicates the main message
	Is believable
	Would persuade me to buy this brand if I was in the market for this type of product
<b>Attention &amp; Appealing</b>	Gets your attention
	Is appealing