The Relative Contributions of Endorsement and Scientific Evidence on Athletes' Product Preference

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Sport science plays an increasingly significant role in the development and performance of elite athletes. Consequently, sport organizations are finding it necessary to develop and maintain systems to enhance the contributions of sport science to athlete development (Green & Houlihan, 2005). Meanwhile, entrepreneurs are developing an increasing array of products for athletes, some of which derive from scientific research, and some of which do not. Athletes are consequently bombarded with marketing messages. Some messages are bolstered by endorsements by other athletes; some include reports of scientific evidence supporting the product’s use.

The challenge for product marketers and for sport managers is comparable, although the stakes are different. Product marketers need to know what factors drive athletes’ product choice in order to sell their product; sport managers want athletes to choose products that can be shown to have a beneficial effect. The shared concern, then, is to identify the relative influence of selling features. The relative effects of endorsement and scientific evidence are of particular interest because the former is costly and may add credibility to products of questionable value, while the latter is more challenging to obtain but lends credence to the product’s use. In non-sport settings, an athlete’s endorsement can be effective, particularly if the athlete is a credible endorser (Martin, 1996).

This study examines and compares the preference structures of two groups of adult athletes (runners and triathletes) when choosing an exercise recovery drink. There is abundant scientific evidence supporting the use of a carbohydrate and protein post-exercise drink (Ivy, 2001), although electrolyte replacement drinks have a longer history and remain more popular despite being less effective for muscle recovery. Chocolate milk can also be effective (Karp et al., 2006), and water is also commonly chosen for post-exercise recovery. Several Olympic athletes publicly attribute their success, in part, to the use of a post-exercise recovery drink, although which drink is advocated is typically linked to an endorsement deal. The relative contributions of scientific evidence and athlete endorsement are identified conjointly here with three other factors expected to be important to athletes: price, taste, and fat content.

METHOD

PARTICIPANTS. A web-based survey was emailed to 1,700 adult athletes competing in triathlon or running. Six hundred ninety-nine surveys (41.1%) were completed and returned, with 617 (36.3%) having complete data. The sample was 53.3% male and 46.7% female; 56.9% were triathletes and 43.2% were runners. Average age was 40 years (SD=10.7). Average household income was between $75,000-$99,999.

MEASURES. Respondents ranked eight (unbranded) drinks characterized by differing combinations of the five product characteristics of interest. Price was identified as $1.25 or $3.50; there was either 5 grams of fat or no fat; taste was either “acceptable” or “delicious,” scientific evidence was either present or absent; the product was not endorsed or was endorsed by either Kirsten Armstrong or Michael Phelps. In addition to the product rankings and demographics, the athletes also rated eight sources of influence (coaches, family, friends, and 5 types of media), stated whether they currently used a recovery drink (and, if so, which one), and rated their level of competition (beginner, intermediate, or advanced/elite).

ANALYSIS. Part-worths for each of the five product characteristics were obtained from conjoint analysis. Cluster analysis showed that the eight sources of influence collapsed into three categories: highly influenced (by all outside sources), moderately influenced, or little influenced. Those three categories were used in subsequent analyses. A five-way MANCOVA for which the part-worths were dependent variables tested the effects of age, education, and income (covariates), as well as sport, influence, gender, level of competition, and whether the athlete currently used a recovery drink (fixed factors). Recovery drinks named by the 390 athletes currently using such a drink were categorized as either electrolyte replacement, carbohydrate and protein, chocolate milk, or water. Discriminant function was used to determine the effect of the part-worths on drink choice.

RESULTS

Part-worths (obtained from conjoint analysis) showed that scientific evidence accounted for 34.2% of the athletes’ overall utility for a post-exercise recovery drink; price accounted for 24.4% of their overall utility; taste accounted for 20.8% of their utility; fat accounted for 17.2% of their utility; endorsement accounted for 3.4% of their utility. Drinks were rated higher if they had

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supporting scientific evidence, lower price, better taste, less fat, and/or no endorsement. All part-worths were significantly different from zero, except the part-worth for endorsement.

The MANCOVA showed that the gender´ level ($F(5,380)=3.05, p=.01$) and gender´ current use ($F(5,379)=2.34, p=.04$) interactions were significant. The main effect for gender was also significant ($F(5,379)=2.66, p=.02$). Other effects were not statistically significant ($p>.05$). Examination of the univariate tests and accompanying means showed that female athletes valued taste, but male athletes did not. Males at intermediate and advanced/elite levels strongly preferred no fat, while others were indifferent. Males currently using a recovery drink actively disliked endorsement, while others were indifferent.

Discriminant function analysis showed that only the first canonical variate was statistically significant ($Wilk’s lambda=.961; p=.013$), yielding a canonical correlation of .197, accounting for 98.7% of the cumulative variance, and yielding 48.8% correct classification. Discrimination was based entirely on a contrast between scientific evidence and endorsement. Inspection of the discriminant function coefficients and the functions at group centroids showed that as the value for scientific evidence rose and declined for endorsement, athletes were more likely to choose water, and as the value for endorsement rose and for scientific evidence declined, athletes were more likely to choose a carbohydrate and protein drink. The other two drinks fell midway between these two extremes.

**DISCUSSION**

Adult athletes highly value scientific evidence when choosing a product to support their performance, but do not necessarily value endorsement by a famous athlete. That does not mean, however, that these athletes correctly understood what science has to say (Ivy, 2001), as those who valued scientific evidence were more likely to prefer water, particularly if they disliked endorsement. Similarly, a high value for endorsement combined with a low value for scientific evidence to render preference for a carbohydrate and protein drink. These findings suggest that endorsement can confuse athletes, although scientific evidence is desired. Thus, athletes may need expert help to understand and interpret the evidence.