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SPORTS DRINK SURVEY ANALYSIS

An investigation by

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I. EXECUTIVE SUMMARY:

The survey study in question was designed to explore the connection between certain types of consumers to the sports and energy drink market. Their preference in brand, or lack thereof, would be in part due to their demographics, behavior in activities related to exercise, as well as use history in the market. The survey was conducted in the Spring of 2020 and generated 210 responses that span the connected United States.

The majority of the questions in the survey questions were categorical, which included interest levels, and multiple-response questions. For the latter types of questions, the raw frequencies were used to determine the spread in responses. With regards to demographics, the respondents age spanned _ and _ with the majority being _

Based on survey responses to question 9 (“How important are the following as reasons why you exercise?”), we were able to group respondents into three categories; (1) Consumers that exercise for General Health (2) Athletes (3) Consumers that do not exercise. We used this clustering method to view which brand of sport/energy each consumer category prefers.

Similarly, for question 16 (“How important are the following to you when you select a sports/energy drink to consume?”) We were able to group respondents into three categories;(1) Consumers who are looking for the most affordable and available product. (2) Impressionable consumers that purchase based on marketability (3) Health conscious consumers. From here, we were able to analyze which brands these groups of consumers prefer.

II. SURVEY OVERVIEW

The survey data in question was collected via a study in the Spring of 2020. The focus of the survey was to discover important features that gauge consumer interest or disinterest with respect to the sports and energy drink market.

The structure was straightforward, and questions revealed consumer demographics, like age and binary, traditional gender, as well as questions that reveal traits and behaviors, divided into their respective blocks. These questions probed interest levels regarding specific activities, statements on exercise and beverage consumption, and beverage attributes. Individually, these results are trivial. However, the diverse set of questions should be able to allow researchers to generate insights into what type of respondents consume or do not consume sports and energy drinks, and potentially what influences their decisions affiliated with selecting their preferred beverage(s) of choice.

III. AGGREGATE ANALYSIS

This section will explore the frequencies, means, and standard deviations of the total responses (210), as well as all responses available for questions not answered by all participants. The focus was on developing a thorough idea of what demographic groups are represented in the data, as well as what is significant to them with regards to how they interact with various activities, sports/energy drinks and media outlets.

Through frequency analysis, we found that the survey respondents were predominantly female (52.38%) and between 26 and 49 years old (55.72%). A majority of respondents participate in outdoor activities (67.62%) and/or sports (61.43%) at least once a month. Additionally, most respondents consume sports drinks (64.29%). With regards to consumption habits, most respondents consume sports/energy drinks when they are exercising (32.86%) or thirsty (25.24%).

For respondents that consume sports drinks, we observed that four out of thirteen variables were, on average, moderately important to very important when selecting a sports drink to consume. These variables were: “endorsement by athlete or celebrity” (3.41), “availability at the vending machine” (3.03), “attractive packaging” (3.32), and “color” (3.16). Aside from energy drinks, respondents reported consuming coffee, soda, juice, energy bars, and “other” food products for an energy boost. Energy drink consumers represented a minority (29.52%), while coffee drinkers (46.2%) and juice drinkers (36.2%) represented the majority. This is important to note when examining which sports drinks respondents have tried. 71.43% of all respondents have tried Gatorade, while only 40.95% of respondents have tried Red Bull.

Respondents reported participating in a variety of outdoor activities including walking (56.19%), running/jogging (20.95%), biking (20.95%), rock climbing (10.95%) and swimming (33.33%). Many of them reported exercising outdoors and playing outdoor sports. The most common outdoor sports played among respondents are swimming (24.76%), basketball (25.71%), biking (22.86%), and running/jogging (20.48%). The most popular outdoor activity, however, was walking (62.38%). Consequently, we can deduce that the majority of respondents were not regularly participating in organized sports.

We also observed that respondents rely on a variety of media sources for news. A majority of respondents reported getting their news from television (60%) and social media (60%). Second to these sources were family & friends (32.86%) and radio (30%). Respondents who checked company websites for news were in the minority (12.86%).

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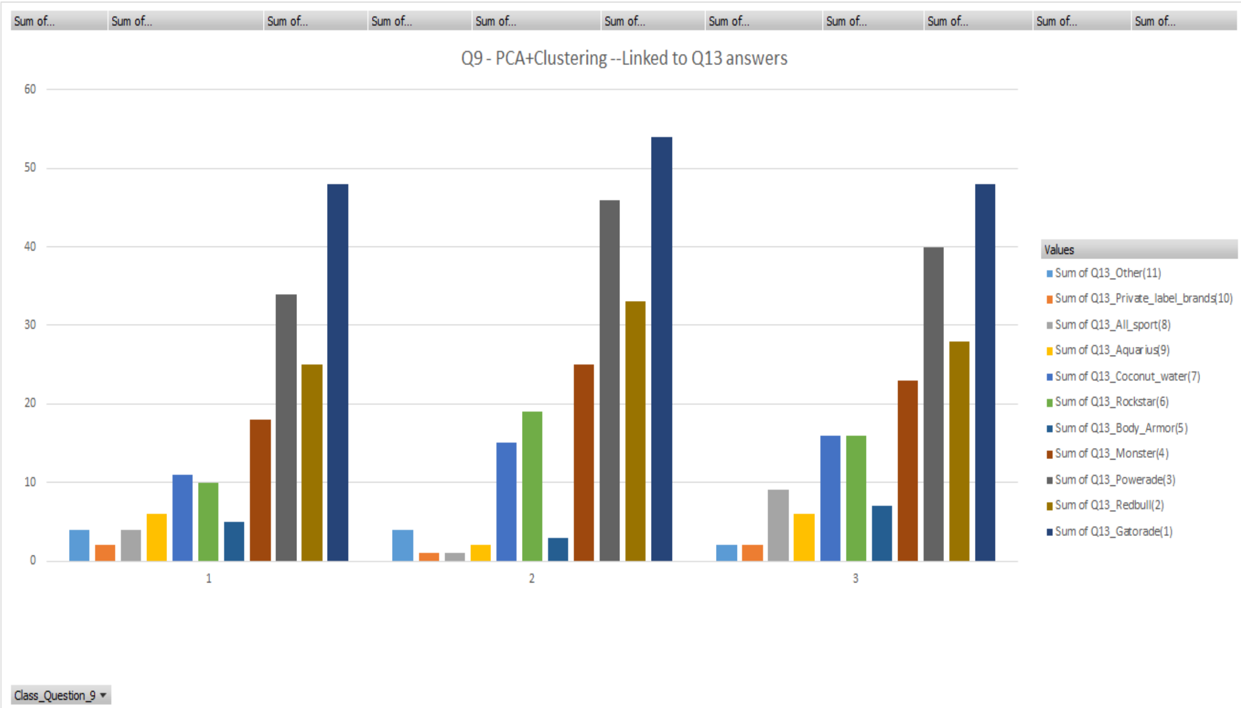
IV. METHODOLOGY

The questions we focused our analysis to are Q9 and Q16 and then linked the conclusions from these questions to Q13 which specified the Brand of Sports Drink they have had. Q9 focuses on why a person exercises and Q16 talks about the qualities a person looks out for in a sports drink.

For both Q9 and Q16 we first carry out Principal Component Analysis. We then interpret each Factor. Then we carry out K-means clustering on them individually, grouping them into three clusters.This allowed us to pinpoint each respondent to a cluster. Once we found the cluster members we tried to find a relation between the cluster and the brand of sports drink that respondents belonging to the cluster have had.

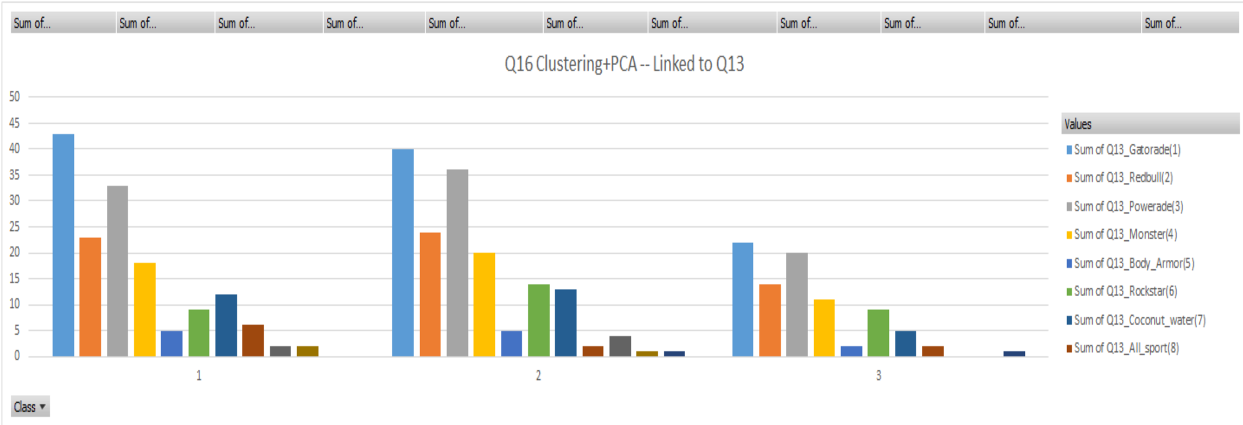
Note: While conducting PCA, only the first two factors had an Eigenvalue greater than 1. But this created a lot of overlap and did not allow us to interpret the results efficiently. So we considered the third factor as well which had an Eigenvalue of 0.9.

V. RESULTS & FINDINGS



In this case, we were able to group respondents of question 9 into 3 different consumer groups. (1) Consumers that exercise for General Health (2) Athletes (3) Consumers that do not exercise. Initially, it is clear that Gatorade, Powerade, RedBull, and Monster are the four most popular brands of sports drinks.This is true across all three of our clusters, regardless of an individual's reason for exercising. These apparent patterns are representative of the state of the sports/energy drink marketplace. However, our analysis also shows us that consumers in the first group are less inclined to purchase energy drinks, especially those with high sugar content, compared to the other groups.

Additionally, it seems that respondents in the second group are not only avid consumers of sports/energy drinks but seem to prefer energy drinks like RedBull, Monster, and Rockstar over the healthy alternatives like Coconut Water. Interestingly, respondents in the third group, who don't exercise, prefer to purchase Coconut Water just as much as the popular energy drink Rockstar. It is clear that the Athlete group (2) are the most prominent consumers of this market, we also see how the top 4 brands truly dominate this marketplace. With that being said, there is competition within the 'lesser' brands for a share of the market. For instance, a brand like All Sport is much more popular among consumers in group (3) compared to the other consumer groups.



Lastly, based on the information above, we can see the three groups of respondents from question 16; (1) Consumers who are looking for the most affordable and available product. (2) Impressionable consumers that purchase based on vendibility and they do not pay attention to ingredient content, while also falling for endorsed brands. (3) Health conscious consumers. Although, there are less total respondents in group 2 compared to group one (42 vs 70) We see that group 2 consumes more RedBull, Rockstar, and Monster than any other group.

VI. Conclusion

The surveyors constructed an excellent questionnaire that allowed the team to understand the types of people that are active in the market. The analysis describes the reasons why a person exercises or what a customer looks out for while buying a sports drink. With the help of Multivariate Analysis techniques like Principal Component Analysis followed by K-means clustering we could interpret answers and group people who think alike. With the help of the groups and the interpretations we can plan Marketing Strategies and target a focused group of people according to the characteristics of our product. We could validate our findings if we had a few numbers regarding sales of the product we are focusing on. We think including a few more questions regarding the product itself would be more insightful. For example, the maximum price one would pay for a sports drink. We as Marketing Analysts have found patterns amongst customers and also we have come to various conclusions regarding the products questioned in the surveys.