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A Mixed-Method Approach for Developing Market Segmentation Typologies in the Sports Industry

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Abstract

This study presents a mixed-method approach for segmenting a sports product-market using participation motivation data. Qualitative data are used to segment a national sports product-market—running footwear—using qualitative analysis software as well as multivariate statistical approaches. This study describes a systematic approach to developing a consumer segmentation typology using both demographic variables as well as self-expressed motivations for sport and fitness participation. The mixed-method approach reported here employs qualitative data to help validate subsequent quantitative cluster analysis, and draws upon cluster profiles to establish the structure for market segmentation. The findings from this study offer implications for marketing research and marketing communications in the sport industry.

A Mixed-Method Approach for Developing Market Segmentation Typologies in the Sports Industry

Consumers possess myriad and complex motivations for sport and fitness participation (Shank, 2002; Stewart, Smith, & Nicholson, 2003). The complexity

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of understanding consumers' underlying motivations for sports or fitness participation points to both the opportunity and challenge for marketers in developing effective and meaningful market segmentation practices that are based on consumer typologies. Past research has shown that understanding consumers' underlying motivations for product (Mehta, 1999; Hong & Zinkhan, 1995) and sport spectator (Trail, Fink, & Anderson, 2003) consumption is important to developing advertising appeals. Gaining a more complete understanding of individuals' participation motivations in activities such as running and sports product-markets such as running shoes, through the development of consumer typologies, can also enable marketers to develop more meaningful and effective segmentation and marketing communications strategies. The development of market segmentation strategies can be particularly important in such industries as athletic footwear, where brands such as Nike, New Balance, and Reebok compete fiercely for "share of feet" in widely diverse markets of both young and old and casual- and performance-based consumers.

Recent studies (e.g., McDonald, Milne, & Hong, 2002) involving sports consumers as well as assessments of sport consumer research (Funk, Mahoney, & Havitz, 2003) suggest that effective segmentation practices can result from developing a deep understanding, beyond mere demographic profiles, of the consumer and the psychological reasons driving motivations and participation. An important question facing both sport researchers and marketers, however, is not only how to generate a deeper understanding of their consumers, but also how to analyze and use this information (such as motivation and participation data) that

"... consumers possess multiple and unique motivations—including achievement, competition, social facilitation, physical fitness, skill mastery, physical risk, affiliation, aesthetics, aggression, value development, self-esteem, self-actualization, and stress release—for participating in particular sport activities."

involves multiple dimensions. In analysis, multi-dimensional data such as this can result in too fine a segmentation approach, revealing consumer profiles that may not be sufficiently distinct from each other to warrant the execution of unique marketing communications approaches targeting the derived consumer groups. Given this, there is a growing realization that the benefits of finer consumer typologies should be weighed against the efficacy and cost of executing those typologies in marketing strategy (Stewart, Smith, & Nicholson, 2003). Ideally, analysis of participant motivation data would involve both qualitative data, to elicit in-depth information about participation motivation, as well as quantitative data in order to reduce the dimensionality of consumer types and to better understand the underlying structure of the data.

The purpose of this study is to develop a consumer typology based on analysis of consumer participation motivation data through a mixed-method approach. In doing so, this study seeks to extend the methodological basis for conducting sport research and developing market segmentation strategies. We present and demonstrate an approach for using qualitative data to segment a national sports product-market—running footwear—using multivariate statistical approaches. This research represents an approach to segmenting consumers not only by demographic background data but also by participation motivation data provided through qualitative responses to an open-ended survey question. We demonstrate this mixed-method approach in a market segmentation study using a national survey conducted in partnership with a well-known running shoe and apparel brand and *Runner's World* magazine.

The remainder of the paper is in four sections. First, we review the literature regarding participation motivation in the sports and leisure behavior context. We also review applications and benefits of mixed-method research and its use in sports marketing. Next, we present a mixed-method segmentation approach for quantifying qualitative data from open-ended questions. This approach includes using computer-based qualitative analysis software (QSR NVivo, 1999) to code and organize the open-ended responses as well as multivariate methods such as principal components and k-means clustering. We demonstrate this mixed-method research using data collected from *Runner's World* subscribers. We then review the implications of

this study to research and practice as well as the limitations of such a study, and offer suggestions for future research.

Literature Review

Participation Motivation

The central premise to our study is, given the complex mindset of consumers in sport and fitness activities such as running, where rational and emotional motivations play into not only product consumption but also participation, marketers need to understand the underlying nature of participation motivation in order to develop meaningful and effective communication strategies, including the development of advertising messages. In developing market segmentation models one needs to also recognize the wide array of social and psychological factors and motivations that underlie benefits sought from sport consumption. For the purposes of this research, we conceptualize participation motivation as the drive to satisfy physiological and psychological needs and wants through consumption of products and activities (Lindquist & Sirgy, 2003). Whereas socio-demographic variables, such as sex, income, age, household size, category, and brand usage may be useful in understanding consumer behavior, classifying sport consumers based on underlying participation and consumption motivations can be more revealing (e.g., Trail & James, 2001; Green-Demers, Pelletier, Stewart, & Gushue, 1998).

Numerous sport consumer studies evaluating sport participation and consumption are based on motivational factors (e.g., Brooks, 1994; Weissinger & Bandalos, 1995; Green-Demers et al., 1998; Trail & James, 2001; Gladden & Funk, 2002; McDonald, Milne, & Hong, 2002; Trail, Fink, & Anderson, 2003). For instance, Brooks (1994) outlines the relation between the underlying extrinsic and intrinsic motivations for sports participation. Brooks examines what factors motivate adults to participate in various sports and fitness activities and proposes that such external stimuli as marketing and advertising messages help consumers to form images of what the activity means to them at a personal level. These images then lead to both judgments and feelings associated with the activity as well as participation in that activity.

Related to intrinsic motivation and leisure activity, Weissinger and Bandalos (1995) develop the Intrinsic Leisure Motivation (ILM) scale involving constructs

such as self-determination, competence, commitment, and challenge. Further, Green-Demers et al. (1998) suggest that continued participation in certain sports characterized by monotonous and repetitive training involves interest-enhancement elements as well as intrinsic and extrinsic motivating factors. The authors propose and test a model of interest-enhancement and motivation and illustrate significant relationships between interest-enhancement strategies such as challenge, variety, and self-relevant rationale for participation and underlying intrinsic and extrinsic motivation.

> "...researchers recognize the contribution that mixed method research—combining qualitative and quantitative methods—can lead to stronger inferences and enhance overall knowledge of the research issue."

McDonald, Milne, and Hong (2002), drawing upon Maslow's human needs hierarchy, present evidence illustrating that consumers possess multiple and unique motivations—including achievement, competition, social facilitation, physical fitness, skill mastery, physical risk, affiliation, aesthetics, aggression, value development, self-esteem, self-actualization, and stress release—for participating in particular sport activities. In other sports consumption contexts such as sports team identification that are categorized by high consumer affective and cognitive involvement, motivations for consumption may be captured in numerous ways, including investigating the affect- and cognitive-based motivations for attitude formation or participation (Gladden & Funk, 2002).

Related to sport consumption, Trail and James (2001), in developing the Motivation Scale for Sport Consumption (MSSC), identify motives such as achievement, skill, escape, and social elements that drive sport spectator behavior; subsequent studies (e.g., Trail, Fink, & Anderson, 2003; James & Ross, 2004) applied modified versions of the MSSC in various sport spectator contexts.

This review of the related literature suggests that sport participation and consumption motives should be viewed as a multidimensional construct composed of a broad range of both environmental as well as psychological elements, and that understanding consumers at levels deeper than mere demographic profiles is important to brand positioning and marketing communications practice. It points to the importance of understanding the resulting motivations for participation in such sport and fitness activities as running in the development of segmentation and marketing communication strategies, as well as the importance of reducing these multiple dimensions in a

structured approach in order to better interpret and understand the findings.

Mixed-Method Research

A wide array of recent published work in sport research (Funk, Mahoney, & Havitz, 2003; Lachowetz, McDonald, Sutton, & Hedrick, 2003; Mason & Slack, 2003; Silk & Amis, 2000; Stewart, Smith, & Nicholson, 2003) reflects the importance and role of qualitative research in studying consumer behavior. Notwithstanding the well-recognized benefits of employing quantitative research methods, one relative advantage of qualitative research is that it can be a source of rich descriptions and explanations of lived experiences. In their review of sport consumer typologies, Stewart, Smith, and Nicholson (2003) argue that qualitative methods should form the basis of sport consumption models and that "there are strong grounds for undertaking more qualitative research...to tease out some of the more subterranean beliefs and motivations..." (p.214).

While information gained from purely qualitative research may be useful, combining qualitative and quantitative approaches can help the researcher to benefit from the relative advantages of each method (Teddlie & Tashakkori, 2003). Accordingly, researchers recognize the contribution that mixed method research—combining qualitative and quantitative methods—can lead to stronger inferences and enhance overall knowledge of the research issue.

For this study, we define mixed method research as the integration of both quantitative and qualitative methods in a single study in order to achieve a greater level of knowledge regarding the research issue. Among others, Rossman and Wilson (1984) have suggested that combining qualitative and quantitative approaches can assist elaborate analysis and lead to richer findings and corroborate findings via triangulation (i.e., the support that each method offers the others' findings). Moreover, Teddlie and Tashakkori (2003) present three areas in which mixed method approaches are superior to single approach designs: (1) mixed methods research provides insights to research issues that single methods cannot, (2) mixed methods research offers stronger inferences, and (3) mixed methods research can help to capture a greater diversity of respondent views.

Given the multidimensionality of constructs such as participant motivation in sport research, the challenge for researchers is how to combine qualitative insights with quantitative data for reduced dimensionality, and to do so in a manner that is understandable and meaningful, while retaining the richness found in the original qualitative data. Particularly in research

investigating sport participation, the challenge inherent in traditional survey-based approaches is how to uncover underlying meanings behind or motivations for sport participation. Likewise, the challenge inherent in purely qualitative approaches is to offer some type of inferential statistic that defines directions or relationships within the data.

In this study, we employ a mixed-method approach to segment running participants based upon participation motivations. We describe the integration of quantitative and qualitative methods and the mixed-method design employed in this study next.

"Perhaps most important for sport research and the development of market segmentation approaches, this mixed-method approach illustrates how the use of qualitative data can help validate subsequent quantitative cluster analysis, as well as how the established cluster profiles help to set up the structure for market segmentation models."

Method

Research Setting and Data Collection

The research setting for this study involved subscribers to *Runner's World* magazine, a publication targeting running enthusiasts with a circulation in the US of approximately 500,000 subscribers. This research context and subsequent sample size is appropriate for the application of the mixed-method research design described here because it involves a consumer segment whose participation motives regarding running may be rational, or emotional, or both. In order to effectively segment this market, relying on quantitative approaches would risk losing the richness of the open-ended qualitative responses, and to rely solely on qualitative approaches would risk leaving the researcher with an unwieldy and less meaningful array of segmentation types.

Data for this study were gathered as part of a larger data collection effort. A four-page questionnaire was mailed to 2,000 *Runner's World* subscribers. A cover letter, a small incentive (a running pace wheel), and postage-paid return envelope were included in the mailing. A follow-up postcard was sent approximately two weeks after the initial questionnaire mailing. This generated 864 (43.2%) responses.

Closed-ended questions in the questionnaire examined the following: running shoe purchase influences, running shoe and apparel brands last purchased by the respondent, perceptions of various running shoe and apparel brands and running shoe and apparel technologies, and background questions regarding shoe and apparel purchase location and running history (years running, miles run per week, races participated in during previous year, age, and sex). The questionnaire also included an open-ended question (final question of the survey) that asked respondents "Finally, how important is running to you and why?" Space was provided on the questionnaire for 15 lines of responses. Of the 864 questionnaires returned, 815 respondents (94.3% of the total responses) answered

Figure 1
A Mixed-Method Approach for Integrating Qualitative and Quantitive Analysis

Survey Design

Open-ended Questions

QUALITATIVE ANALYSIS
1. Form Initial Categories
2. Analyze with NVivo
   a. Code text data electronically
   b. Generate coding reports
   c. Compare generated codes with the initial codes
3. Independent judges code open-ended responses for each of the 10 categories with a binary score
4. Assess interjudge reliability and resolve discrepancies. Create data file for subsequent analysis.
10. Assess credibility of the clusters with open-ended data.

Closed-ended Questions

QUANTITATIVE ANALYSIS
5. Data reduction with principal components analysis
6. Create factor scores for motivations
7. Segment runner types with K-Means Clustering Algorithm
8. Assess reliability of cluster solution
9. Assess external validity by profiling clusters with close-ended data. Look for managerially meaningful differences.

Table 1
Inter-Judge Reliabilities

	Frequency of Agreements	Percentage Agreements	Reliability (I_r)
Addiction	728	.89	.87
Fitness	731	.90	.89
Competition	707	.87	.86
Self-Esteem	724	.89	.88
Mental Health	721	.88	.88
Weight Control	786	.96	.96
Social Reasons	768	.94	.94
Spiritual	524	.64	.53
It's who I am	678	.83	.81
Goal striving	715	.88	.87
Overall	7082	.87	.86

Table 2
Rotated Factor Pattern[1]

	Factor 1	Factor 2	Factor 3	Factor 4
Addiction	**-.569**	.164	.054	.023
Fitness	**.663**	-.092	.010	.079
Competition	.193	.161	.008	**.660**
Self-Esteem	-.051	.107	**.709**	-.094
Mental Health	**.618**	**.360**	-072	.126
Weight Control	.202	**-.616**	-.069	.074
Social Reasons	-.096	-.154	.093	**.711**
Spiritual	.044	**.747**	-.029	.071
It's who I am	**-.454**	.068	-.231	**.351**
Goal striving	.036	-.082	**.754**	.185
% Variance	14.5%	12.1%	11.7%	10.7%

[1]Extracted with Principal components; loadings > $\pm$.30 shown in bold.

this question. The purpose of including the open-ended question is that, generally, open-ended questions are best used when exploratory information is gathered and when a complete set of closed responses is not known *a priori*. Further, given the nature of the question, it is important for the respondent to be willing to think about and provide complete responses (Dillman, 2000). The high response rate and quality of responses (evidenced by the length of the response) suggest that this condition was met.

Mixed-Method Design

A schematic diagram for the mixed-method design employed in this research is illustrated in Figure 1. This design is based upon independent coding of the open-ended responses enabled by QSR NVivo (QSR NVivo,

1999), a qualitative analysis software program, and subsequent principal components and cluster analysis.

Qualitative analysis of open-ended responses.

Initially, analysis of the 815 open-ended responses involved a multiple-step process outlined by Miles and Huberman (1994). The first step involved reading the open-ended responses and analyzing the text data of the open-ended responses for specific themes. The 10 categories were determined using standard procedures outlined in the literature (Kassarjian, 1977; Kolbe & Burnett, 1991). The process entailed having two of the authors read all the comments and then mutually agreeing on which categories were present in the data. Thus, the categories were not predetermined *a priori*, but rather were generated from the data.

The second step involved analysis with NVivo. After the responses were electronically imported into an NVivo text database, they were re-read and coded by two of the authors together using NVivo to summarize the responses into specific categories that reflected why running was important to the respondents.

From the open-ended responses, this initial coding process produced 10 summary categories that described individuals' motivations for running. These categories were addiction, fitness, competition, self-esteem, mental health, weight control, social, spiritual, "it's who I am," and goal striving. The use of NVivo initially in the coding was particularly valuable given the iterative nature of the coding process in which the text responses were read, electronically coded, and then re-coded. NVivo allowed for key words or themes to be coded, or attached to the text. These segments of text could then be retrieved for further analysis.

The second step involved electronically generating coding reports in NVivo that aggregated similar responses across the 10 categories identified in the initial coding process. These coding reports were printable and enabled access to the data, specifically the open-ended responses by category, which helped to cross-check the categorization of responses for thematic accuracy.

The third step involved assigning each of the responses to one or more of the 10 derived categories. Given the 10 derived categories for running motivation and because of the multi-faceted reasons provided by the respondents, two independent coders (not authors of the paper) placed the 815 open-ended responses into one or more of the 10 derived categories. Each of the 815 open-ended responses was given a binary score (1/0) for inclusion in each of the 10 categories.

The fourth step involved assessing the reliability of the coding. The inter-judge reliabilities between the two independent judges for the 10 categories are

Table 3
Cluster Centroids of Factor Scores

	Total	Healthy Joggers N=315	Social Competitors N=153	Actualized Athletes N=167	Devotees N=181	F	Prob.
Factor 1	0.0	.46	.39	.02	-1.15	182.8	.000
Factor 2	0.0	-.32	-.09	.18	.48	30.5	.000
Factor 3	0.0	-.51	-.01	1.55	-.55	527.6	.000
Factor 4	0.0	-.56	1.67	-.41	-.07	592.9	.000

shown in Table 1. Overall, the coders agreed on 87% of their judgments. The percentage of agreement for each of the categories ranged from 96% agreement on the weight control category to 64% on the spiritual category. The overall reliability (Perreault & Leigh, 1989) was .87, and ranged from .96 to .53 on individual items. After discrepancies were resolved by the authors, a data file was created for subsequent analysis.

Quantitative analysis of qualitative data.

The fifth step involved reducing the dimensionality of the 10 categories. A principal components analysis (PCA) of the 10 response categories was then conducted to better understand the underlying structure of the data and create orthogonal linear composites of motivations to serve as metric inputs to the clustering algorithm.

While principal components is most often done on metric data, violating this assumption and using dummy variables [0-1] can be done (Hair, Anderson, Tatham, & Black, 1995, p. 226). With large sample sizes, this application of PCA produces robust results. The rotated results of the principal components analysis are shown in Table 2. The analysis produced four factors with eigenvalues greater than 1, which explained 49% of the variance in the data.

The sixth step involved calculating factor scores based on the rotated loadings for subsequent analysis. The seventh step involved segmenting the runners to reduce the large number of respondents (based upon their responses for motivations for running) into a more meaningful and interpretable number of smaller subgroups. In this step, a k-means clustering algorithm was applied to the factor scores for the four principal components.

The eighth step involved assessing the reliability of the cluster solutions. For this step, ranges of cluster solutions ranging from three to five clusters were examined. A four-cluster solution was selected because it produced the most interpretable results. A snake-plot of the four segment solution by the underlying 10 motivations indicates a rich solution that cap-

tures differences across groups. The cluster centroids for the factor scores and the F-tests for centroid differences are reported in Table 3. Based on the pattern of the data shown in Table 3, we labeled the clusters the Healthy Joggers, the Social Competitors, the Actualized Athletes, and the Devotees.

The ninth step involved assessing the external validity of the cluster solution. We were able to do this by merging the closed form data with the cluster solutions based on qualitative data. The profile of the four clusters by closed-form background variables is shown in Table 4. Statistical differences among clusters are found in terms of miles ran per week (F=16.7, p<.001), days ran per week (F=13.6, p<.001), and 5Ks (F=12.6, p<.001), 10Ks (F=3.8, p<.05), 1/2 Marathons (F=8.0, p<.001), and Marathons (F=4.8, p<.01) entered per year. In addition, differences were found in terms of the number of years they have been running, as well as age and sex. Table 5 profiles the clusters by reporting the percentage of members who ascribed why they ran to each of the 10 motivations. Statistically significant differences were found for all groups.

The 10th step involved assessing the credibility of the cluster profiles with representative quotes from the qualitative data. This step helped support the labeling effort and reinforce the insights provided by the quantitative data.

Results

Cluster Profiles Using Quantitative and Qualitative Data

As shown in Table 4, the first cluster—the Healthy Joggers—ran the least amount of miles per week (21.0), and their participation levels in races (e.g., 2.0 5Ks/year, and 1.1 10Ks/year) is below average. Similar to the overall response rate, over 70% of this group has been running for 5+ years. In this group, 32.7% of its members are 40-49 years old, and 55.6% are male. The data from Table 5 show that this group is motivated by fitness (70%) and mental health (52%) reasons and, to a lesser extent, spiritual (23%) and weight control (21%)

Table 4
Profile of Clusters by Runner Background

	Total	Healthy Joggers N=315	Social Competitors N=153	Actualized Athletes N=167	Devotees N=181	F	Prob.
Miles ran/week	24.8	21.0	29.0	24.6	28.2	16.7	.000
Days ran/week	4.5	4.0	4.9	4.7	4.8	13.6	.000
5Ks/year	2.9	2.0	4.6	3.0	2.8	12.6	.000
10Ks/year	1.3	1.1	1.6	1.2	1.6	3.8	.011
1/2 Marathons/year	.43	.31	.67	.35	.50	8.0	.000
Marathons/year	.32	.25	.42	.23	.44	4.8	.003
Triathlons/year	.21	.24	.26	.09	.19	0.7	.554
						$Pr(\chi^2)$	Cramer's V
How long have you run?	(%)	(%)	(%)	(%)	(%)	.014	.092
1 year or less	4.4	5.4	.7	6.6	3.9		
2-5 years	24.9	23.5	19.6	33.5	23.8		
5+ years	70.6	70.8	79.7	59.9	72.4		
Age						.009	.104
< 25 years old	21.0	17.1	22.9	28.7	18.8		
25-39 years old	32.6	31.1	27.5	38.3	34.3		
40-49 years old	29.5	32.7	28.1	24.0	30.4		
50+ years old	16.8	19.0	21.6	9.0	16.0		
Sex						.000	.149
Females	46.3	44.4	37.3	59.9	44.8		
Males	53.7	55.6	62.7	40.1	55.2		

"One of the benefits of the mixed-methods design reported here lies with its ability to infer multiple dimensions of motivation within cluster profiles (e.g., the Social Competitor cluster identified in this study), whereas in sport motivation research individuals are often times classified by distinct motivators (i.e., a person is either primarily driven by social or by competition needs)."

reasons. This cluster was labeled "Healthy Joggers" because of their propensity to run for physical and mental fitness, while running relatively the fewest miles per week of all four groups. As one respondent stated:

"The older I get running becomes more important. It helps me stay fit and healthy. It helps me to maintain my weight. It's a great stress reliever and my two dogs love it too. I am very much a recreational runner and do not worry too much about times. Consequently I don't run too many organized races."

The second cluster—the Social Competitors—ran the most miles per week (29.0) and days per week (4.9) of any group. They were also very active competitors, ranging from 4.6 5Ks/year to .46 marathons per year. This group was the most experienced—79.7% of this segment has been running for 5+ years. Interestingly, this group has the highest percentage of runners 50+ years (21.6%) and males (62.7%). As with the Healthy Joggers cluster, these runners were highly motivated by fitness (68%) and mental health (61%). While it is reasonable to expect that fitness and mental health are important motivations for most running types, as the name suggests, the Social Competitors cluster is differentiated by two dimensions which did not register for the Healthy Joggers —social reasons (61%) and competition (52%)—and which help to define this individual. In addition, this group claimed fitness (68%) and spiritual reasons (38%) as motivations for running. For one individual, running is a social enabler: "It is at the top of my list... I have met so many wonderful people at races and from running!"

Table 5
Profile of Clusters by Runner Motivation

	Total	Healthy Joggers N=315	Social Competitors N=153	Actualized Athletes N=167	Devotees N=181	Pr(χ^2)	Cramer's V
	%	%	%	%	%		
Addiction	12.1	1.0	7.2	10.2	37.6	.000	.430
Fitness	52.8	70.2	68.0	52.7	9.9	.000	.477
Competition	10.4	0.0	52.3	1.8	1.1	.000	.659
Self-Esteem	17.8	1.9	9.8	67.1	6.6	.000	.659
Mental Health	45.8	51.7	61.4	42.5	25.4	.000	.249
Weight Control	14.3	21.0	20.3	7.2	4.4	.000	.213
Social Reasons	16.5	0.0	61.4	8.4	14.9	.000	.600
Spiritual	38.4	23.2	38.6	42.5	60.8	.000	.294
It's who I am	8.9	3.0	11.8	1.2	28.7	.000	.398
Goal Striving	17.8	2.2	26.1	58.1	0.6	.000	.588

And for another: "I have not experienced in any other sport or activity such enjoyment and support from those you run with or against. It is a personal activity that only those involved in understand."

The third cluster—the Actualized Athletes—ran 24.6 miles per week and 4.7 days per week. This group runs an average amount of 5Ks (3.0), but is much less likely to participate in triathlons (0.9). This group is the least experienced, with 40% of its members who have run less than 5 years. The group is also the youngest (28.7% less than 25 years old) and contains more female runners (59.9%) than any other segment. This cluster was labeled "Actualized Athletes" because of their relatively high motivations for self-esteem (67.1%), fitness (52.7%), mental health (42.5%) and spirituality (42.5%). Accordingly, one respondent stated:

"Running is important to me because it has helped me feel a great sense of accomplishment. I run before work and it makes me feel good to know that even if I have a horrible day at work, I already accomplished something great before I stepped through the door."

Another talked about the spiritual aspects of running and mental well being: "Running trail ultras has become my spiritual refuge and source of renewal of the soul. It is my meditation, my retreat to inner peace, the place where I become one with the universe. It rests onto my soul."

The fourth cluster—the Devotees—logs a lot of miles (28.2 miles per week) and days (4.8 days per week). Interestingly, the Devotees do not run as many 5Ks as other groups, but rather prefer the longer races. They run more marathons than any other group (.44 per year). About 65% of this group is between 25 and 50 years old and 55% are males. Runners in this group are more likely than others to claim they run because they are addicted to the activity (37.6%)—they state they run because "it's who I am" (20.8%). In addition, this group has the highest spiritual reason for running (60.8%). Perhaps running has an addictive quality for this group because running and its benefits occupy such a central role in their lives. One individual talked about running and the self: "When I run I feel more whole than with any thing else. Eventually I become the run and the run becomes me. That's the greatest feeling in the world. To stop running would be to separate myself from me." And a second spoke of running's paramount importance in his or her life:

"Running—it is not life or death—it's more important than that."

An important step in the mixed-method design described here is that these open-ended responses (additional representative quotes for each of these clusters are shown in Table 6) were compared to the cluster profiles to validate the resulting profiles.

Implications for Research and Practice

This study offers several findings and implications for research involving sport participant motivations and the development of sport consumer typologies.

Implications for Research

Implications of this study for sport marketing research are that, given the complex mindset of sport participants (in activities such as running) where rational and emotional, as well as extrinsic and intrinsic motivations, may play into sport consumption and participation (see Funk & James, 2001; Milne &

Table 6
Representative Quotes by Cluster Profile

Healthy Joggers

"I find running to be both relaxing and is the primary way along with a good diet that I keep up my plan for good health and fitness." -Female 50+ years old, 18 miles/week, 4 days per week

"Running is a very important because I use running to relieve stress and to think about what is bothering me. I use running to clear my head. Running is important to maintain fitness and to counteract my poor diet of late." -Male, < 25 years old, no mileage reported.

Social Competitors

"Running is one of the greatest joys of life. Keeps the body mind, and spirit soaring. Running with friends is special. Competition pushes me to new levels. Can travel to races and see new places. I can share stories with runners from all over the world." -Female, 25-39 years old, runs 40 miles per week, 5 days/week

"I just recently started running 3 yrs ago. I used to weigh 317 lbs I'm now down to 245. Before I leave work I change and go directly to a 1/2 mile track located on the way home. My running is very important; it relieves a lot of stress and is something that is within my control. I have made many acquaintances at the track. We all motivate each other. If someone misses one day everybody is aware and concerned. That alone motivates you to keep going. Besides I am trying to get down to 199lbs." -Male, 40-49, runs 24 miles/week, 6 days week

Actualized Athletes

"I quit smoking at age 33, in 1978, and took up running and I will never stop running. I bike & kayak but running is my first love. It makes me feel good about myself and it gave me a lot of confidence. I've run many marathons in my past yrs and many races and you cannot describe the feeling of accomplishment at the end. It gave me the confidence to go back to school at the age of 40 and get a degree in nursing." -Female, 50+ years old, runs 30 miles, 6 days/week

"I love to run. I've always been athletic and enjoyed team sports. But running is different. It's a solitary sport. It pits me against me. I'm 42 yrs old and I know I've yet to reach my potential as a runner. My best yrs are behind me and I know I'll never be world class but I still have room to improve and I'll keep trying, training, testing. It makes me fit, it makes me happy. I love to run." -Male, 40-49 years old, runs 35 miles/week, 5 days/week

Devotees

"It is a big part of my life. It's like brushing your teeth—it's a gift I give myself every day or almost everyday. It is who I am and I never want not to run. It's the most wonderful total feeling in life. It has made me grow in so many ways and also appreciate life so much more. You can do it anywhere at any time—no expense." -Male, 50+ years old, runs 38 miles/week, 6 days/week

"It's part of who I am. Running is the most important free time activity I have besides spending time with my kids. I'm a happier person when I get my running." -Female, 25-39, runs 20 miles/week, 4 days/week

McDonald, 1999; Green-Demers et al., 1998; Brooks, 1994), the integration of qualitative and quantitative methods in a segmentation model adds both richness and rigor to the findings. The mixed-method approach illustrated here enables a more detailed understanding of consumer sport participation motivation than would either purely qualitative or quantitative research.

The motivation types uncovered in this study are similar to those suggested by past sport participation and consumption research. Intrinsic and extrinsic participation motives (e.g., Brooks, 1994; Green-Demers, 1998; McDonald, Milne, & Hong, 2002) can be related to the idea of running for spiritual, self-actualization, or physical fitness and weight loss. The concepts of commitment and challenge are similar to the addictive and competitive qualities of running conveyed in this study. Interestingly, motives examined in previous sport spectator research, such as achievement, escape, and social interaction (see Trail & James, 2001), are similar to the characteristics found in the clusters profiled in this study that are related to physical and emotional health, competition, stress release, and interaction with other runners at races and events.

One of the benefits of the mixed-methods design reported here lies with its ability to infer multiple dimensions of motivation within cluster profiles (e.g., the Social Competitor cluster identified in this study), whereas in sport motivation research individuals are often times classified by distinct motivators (i.e., a person is either primarily driven by social or by competition needs).

Perhaps most important for sport research and the development of market segmentation approaches, this mixed-method approach illustrates how the use of qualitative data can help validate subsequent quantitative cluster analysis, as well as how the established cluster profiles help to set up the structure for market segmentation models. Given the wide array of open-ended responses containing numerous variations in themes, the qualitative analysis of such data is an inherently complex process. The coding of the responses for mutually exclusive participation motivation themes, along with the subsequent cluster analysis, helped us to better understand and classify the respondent comments by grouping and conceptualizing responses with similar patterns and characteristics. The use of cluster analysis shows how the 10 categories, originally derived from the qualitative data, are structurally interrelated. Through cluster analysis, and by reducing the number of dimensions from 10 (10 original categories for running motivation) to four, we lower the dimensionality of the data and move to higher levels of abstraction to enhance the interpretability of the data.

Implications for Practice

Implications of this research for sport marketing practice is that this the mixed-method approach and findings reported here can enable organizations involved in the promotion of running (e.g., athletic footwear and apparel brands such as Nike, Reebok, adidas; running clubs; running event directors) to discriminate between groups of runner types and develop advertising or promotional messages to effectively communicate with these groups.

For instance, marketing communications efforts (e.g., advertising messages, in-store or on-site displays) targeting the Healthy Joggers segment might be based on a message or theme that portrays the benefits of running for physical and mental health (e.g., to lose weight, have more energy, reduce stress). For Social Competitors, the message might be based on thematic elements involving "a community of runners" and the socializing nature of competition at running events. Marketing communication efforts targeting Actualized Athletes might focus on female runners (perhaps younger mothers with children) and stress the feelings of accomplishment, empowerment, and control over one's life that result from running. For Devotees, marketing communications themes could focus on the idea of running as a central element to one's daily life, or the concept that this person's self-identification prominently includes himself or herself as a "runner."

The approach and findings reported here can assist sport brands in the development of more insightful and relevant market segmentation and marketing communication efforts designed to reach a specific market (e.g., the running market) whose members may possess complex and multiple motivations for participation as well as product consumption. This methodological approach can also benefit other organizations such as health care providers as they develop communications programs geared towards individuals for whom regular exercise (such as running or walking) may be beneficial.

Study Limitations and Future Research

In interpreting these findings it is important to consider that the data for this research are based upon the thoughts of subscribers to a magazine targeting running enthusiasts and may not be representative of other groups of runners. The relevance of these findings may be limited to those sport consumers that share characteristics similar to the sample. Because of the qualitative component of this research used to elicit participation motivations, the reporting of these motives does not reflect the relative strength of the various motives indicated. Additionally, it should be noted that some of the questionnaire items or background questions asked in the questionnaire could conceivably have influenced the open-ended responses regarding the importance of running. Some of these items may have led respondents to overexaggerate their running routine and hence its importance to the respondent.

Future research examining segmentation models might explore questions directly related to personal aspirations and sport participation. Further, the mixed-method research design outlined in this study can serve as a stepping stone for future studies that seek to empirically demonstrate the effectiveness of such segmentation models linking self-reported participation motivation data to advertising response and effectiveness.

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