

Trail Racing in Central Arkansas: Participant Characteristics and Motivation

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Trail sports such as mountain biking and trail running races have recently experienced substantial national growth. Finding out who participates in trail events and what motivates participation can help maximize these opportunities and outcomes in Arkansas. The current study examined demographic data of participants in an outdoor trail sports event, how they would characterize such an event, and motivation to participate.

Introduction

Outdoor recreation in Arkansas continues to experience exciting participation growth and recognition for health, quality of life, tourism, and economic benefits. Outdoor recreation is an important component of Arkansas' tourism industry, with 12.7 visitors to State and National parks in 2023, as well as supporting \$7 billion in revenue generation and 69,000 jobs (Jacobs, 2025). Arkansas' governor recently described the development and stewardship of outdoor recreation infrastructure as an "investment [that is] paying off" (Arkansas Department of Parks, Heritage, and Tourism, n.d.). Trail activities are "vitally important" in Arkansas, supporting internationally recognized recreational experiences (Dale, 2023). Arkansas trails have received prestigious recognitions including "best mountain biking destination in the U.S." by Outside magazine, as well as the most "epic"-rated trails in the U.S. by the International Mountain Bicycling Association (Dale, 2023). Arkansas trails are also becoming recognized as a resource for athletic competition, including mountain biking and trail running. Jacobs (2024) noted that Arkansas is a "must-visit destination for endurance athletes", and the U.S. National Mountain Bike Team recently moved its headquarters to the state (Bartholomew, 2022).

In addition to cycling, endurance athletes are also coming to Arkansas to participate in trail running events. The website runningintheusa.com, which promotes trail running across the U.S., lists 38 different trail races in Arkansas for calendar year 2025. These events vary in distance, ranging from 5 and 10K up to distances of 100 miles. There are also creative formats including multi-day stage races, team relay events, and last-person-standing (called “backyard”) events. Arkansas hosts the nationally popular Ragnar relay, the U.S. Adventure Racing Association National Championships, and has four 100-mile running events. This local interest in trail running mirrors national trends that saw trail running’s growth at 231% over the last 10 years (Leand, 2024).

Despite all the outdoor endurance recreation opportunities in Arkansas, the state ranks as the 48th healthiest state in the nation, with 1/3 of adults being obese and 19% of adults reporting frequent mental distress. It is important that we begin to harness the state’s trail activity opportunities to promote and improve public health (Montgomery, 2025), and explore who participates in these events and what motivates their participation. Being able to identify those who enjoy these opportunities and why they enjoy them are important steps in identifying gaps in populations who might not be served by trail activities. The current study investigates demographics and motivation for participation in an Arkansas trail race to further understand their potential as a health resource.

Methods

Human participants’ research approval was obtained from the relevant institutional review board prior to data collection. Participants that registered for the Catsmacker Trail Run 12-mile and 22-mile options completed an electronic survey sent to the email address that they provided as part of their event registration. The Catsmacker Trail Run is an annual running event

that has been part of the Arkansas UltraRunning Association's (AURA) event offerings since 2000. It was chosen because of its offering of two different distance options as well as its reputation as both an entry-level recreational event and a more competitive race, depending on participants' perspectives. Although it is advertised as a recreational run (meaning that results are not tabulated in AURA's race series competition), the Catsmacker contains elements of a competitive race such as finish timing, official race rules, awards for placing, and published results. This event takes place in Arkansas State Parks and Ouachita National Forest jurisdictions in central Arkansas.

Instrument

Demographic data including gender, age, and home city were collected from participant registration forms and event results. The instrument asked participants to self-assess their running experience relevant to distance events, as well as agreement with pre-selected reasons for participating. Finally, participants were asked to characterize the nature of the Catsmacker event.

Results

Characteristics of Survey Respondents

Fifty-two Catsmacker attendees returned the post-event questionnaire, resulting in a 36.1% response rate. Twenty-six respondents were male, and 26 were female. Gender, age, and distance distributions are outlined in Table 1 below.

Table 1: *Demographic Characteristics of Survey Respondents*

Variable	N	%
Gender		
Male	26	50.0
Female	26	50.0
Age		
25-34	4	7.7

35-44	15	28.8
45-54	17	32.7
55 and older	16	30.8
Distance Finished		
22-mile	24	46.1
12-mile	26	50.0
Didn't report	2	3.8

Survey respondents were asked about their level of experience with distance running events, as well as the longest running distance they had completed. Most respondents reported being “fairly” or “very” experienced with distance running, having completed distances of over 30 miles (See Table 5). There were no differences in perceived experience with distance running according to age ($\chi^2=12.31, p=.197$) or gender ($\chi^2=6.00, p=.11$)

Characteristics of Event Registrants

One hundred forty-four participants attended the 2024 Catsmacker event. Seventy-one were female and 73 were male. Age distributions ranged from 17 to 77 years and are outlined in Table 2.

Table 2: *Demographic Characteristics of Participants*

Variable	N	%
Gender		
Male	73	50.7
Female	71	49.3
Age		
34 and younger	27	18.7
35-44	44	30.6
45-54	39	27.1
55-64	23	16.0
65 and older	11	7.6

Participants represented 3 states and 24 Arkansas counties. Distances traveled for this event are shown in Table 3.

Table 3: *Distance Traveled to Event*

Miles	N	%
0-40	64	44.4
41-80	47	32.6
Over 80	33	23.0

Participants could choose to run either a 12- or 22-mile distance. Sixty-two participants chose the 22-mile option, 80 participants chose the 12-mile option, and 2 participants ran some distance but did not finish the event. While the gender distribution was very even for the event overall, more males chose the 22-mile option, while more females chose the 12-mile option.

Gender distribution according to distance choice is shown in Table 4.

Table 4: *Gender Distribution of Different Distance Options*

Variable	N	%
22-mile option		
Male	40	64.5
Female	22	35.5
12-mile option		
Male	32	40.0
Female	48	60.0

Survey respondents were asked about their level of experience and most respondents reported being “fairly” or “very” experienced with distance running, having completed distances of over 30 miles (See Table 5). There were no differences in perceived experience with distance running according to age ($\chi^2=12.31$, $p=.197$) or gender ($\chi^2=6.00$, $p=.11$).

Table 5: *Perceived Experience with Distance Running Events and Longest Running Distance Completed*

Variable	N	%
Perceived experience with distance running events		
Very experienced	18	36.0
Fairly experienced	20	40.0
Somewhat experienced	9	18.0
Fairly inexperienced	3	6.0

Longest running distance completed		
11-20 miles	4	8.0
21-30 miles	12	24.0
Over 30 miles	34	68.0

Respondents were also asked about their reasons for participating in the Catsmacker.

Table 6 displays the extent to which various factors corresponded to their motivation to participate. Participants reported that enjoying running events ($M=4.75$), being around others participating ($M=4.73$), and self-challenge ($M=4.71$) were the top reasons for participation. Higher means indicate greater agreement with the reason for participating.

Table 6: *Means and Standard Deviations for Motivation Items*

Item	Mean
I enjoy running events.	4.75
I enjoy being around other people who are also participating.	4.73
I want to challenge myself.	4.71
I consider it to be an adventure.	4.31
I'm using the Catsmacker as a training run.	3.98
I want to compete with others.	3.24
A friend talked me into it.	2.69

Using a Likert-type scale, respondents were asked whether they viewed the Catsmacker event as exercise, as a recreational activity, or as something else. The means of their responses were calculated and are shown in Table 7. Higher means indicate greater agreement with each characterization.

Table 7: *Means and Standard Deviations for Event Characterizations*

Item (I would define the Catsmacker as:)	Mean	SD
Exercise	4.74	.50
Athletic	4.61	.63
Recreation	4.40	.77
Sport	4.24	.98
Lifestyle Activity	4.24	.91
A Race	3.73	1.15

Discussion

Gender

Event participants were evenly distributed according to gender. This does not reflect the national participation by gender reported by Ronto (2024), which estimated that 36.5% of trail runners are women, while 63.5% are men. While overall event demographics show even participation by gender, women participants were much more likely to run the 12-mile, rather than the 22-mile option. The 22-mile option had almost twice as many male participants than female. This result illustrates the importance of multiple event options in attracting and enabling participation from broad populations.

Age

Whereas traditional, organized sport activities such as basketball and tennis see sharp drops in participation and opportunities during adolescence, (Eime, et al., 2016), trail running remains accessible and popular for older adults. In fact, 90% of trail runners are between the ages of 22 and 55, with 20% of trail runners being over 45 (Ronto, 2024). The Catsmacker's age distribution exaggerates this trend even further, with nearly 51% of participants being over 45, and an impressive 24% being over 55. Considering the reduction of organized sports opportunities into adulthood, trail sports are a way to potentially address this gap and serve a population who might not otherwise get to consider themselves as athletes.

Distance Traveled to Event

Almost all Catsmacker participants were from in-state, although there were a few from surrounding states including Oklahoma and Missouri. However, participants represented 24 different Arkansas counties, encompassing nearly 1/3 of the state. The Catsmacker is a low-key race that isn't included in AURA's series competition, therefore participants may have been less likely to travel from longer distances, such as they were for the Full Moon 50K or Arkansas

Traveler 100, other events in the series that shared the same course location and attracted participants from 7 and 20 different states respectively (Arkansas Ultra Running Association, 2025). Nearly 56% of the Catsmacker's participants traveled more than 40 miles to participate in the event, with 23% traveling over 80 miles. Distances that participants travel to participate in this particular event show that there is potential for these types of events to serve and connect the citizens of Arkansas.

Experience Level

Lack of knowledge, experience, and participation skills are constraints to exercise among adults (American Council on Exercise, 2004). Most (76%) Catsmacker participants reported that they were “very” or “fairly” experienced with distance running events, while 24% reported that they were “somewhat experienced” or “fairly inexperienced”. As previously mentioned, the Catsmacker is billed as a recreational (rather than competitive) run with multiple distances that hopefully appeal to participants of wide-ranging abilities and competitive interests. While this result could be seen as celebrating high levels of physical activity and exercise consistency, it could also be interpreted as illustrating a need to appeal to less experienced trail runners.

Reasons for Participation

Being around others with similar interests was a highly ranked motivational factor, highlighting the community-oriented aspect of trail running events. Social connection with others is associated with decreased risk of illness and disease and is even part of a national strategy outlined by the Surgeon General (Cambieri, 2024; Centers for Disease Control, 2024). This result illustrates the potential for trail running events to address this need for connection to others.

Characterization of the Catsmacker Event

How participants perceive an event is important in their consideration of whether the event is appropriate for them. While some participants may want to compete in a “race”, others may be deterred by this label. The Catsmacker being labeled as a “race” was the least-agreed with characterization of the event. This result suggests the importance of a participatory, rather than competitive, nature. However, participants also highly characterized the event as “athletic”, which is consistent with the highly reported motivation of self-challenge. Incorporating the idea of undertaking personal physical challenge as a primary purpose of trail races might be a way to make these events appealing to those who may not be competing for top finishing places.

Conclusions and Recommendations for Further Study

The current study gives insight into who endurance trail events serve, what motivates them to participate, and how they characterize the events. Trail races seem to serve older adults who may not have as many readily available sport opportunities that younger athletes enjoy. However, keeping these events broadly characterized in terms of their purpose and audience is important in maintaining their appeal to wide audiences. The Catsmacker saw a higher level of female participants than is reflected in national trends, illustrating an opportunity to serve this population. However, noting that a high proportion of female participants chose the shorter distance option, the current study reflects the importance of multiple options in appealing to participants who might not otherwise feel that a longer or more difficult event is appropriate for them.

Previous studies have associated individuals’ identity as “athletes” with positive health behaviors (Helms & Morris, 2020). The current study examined how participants characterized a trail running event, but how might they characterize themselves as participants. Trail races

provide an outdoor recreation experience that challenges participants in ways (i.e., completing the event) that can make them feel good about themselves and improve their self-esteem. Using trail races to improve self-esteem and promote an athletic identity may help participants continue to improve their health and wellbeing.

References

American Council on Exercise (2004). *What keeps you from going to the gym?*

<https://www.acefitness.org/about-ace/press-room/350/american-council-on-exercise-asks-1-500-web-site>

Arkansas Department of Parks, Heritage, and Tourism (n.d). *Arkansas a destination for 50.7*

million visitors in 2023. <https://adpht.arkansas.gov/news/arkansas-a-destination-for-50-7-million-visitors-in-2023/>

Arkansas Ultra Running Association (2025). *Race results: Archives of Arkansas ultras*.

<https://runarkansas.com/RaceArchives.htm>

Bartholomew, B. (2022). *Bentonville becomes home for U.S. National Mountain Bike Team*.

USA Cycling. <https://usacycling.org/article/bentonville-becomes-home-for-us-national-mountain-bike-team>

Cambieri, G. (2024). *Loneliness is hurting our health, but these policies could help*.

<https://hsph.harvard.edu/news/loneliness-is-hurting-our-health-but-these-policies-could-help/>

Centers for Disease Control (2024). Social Connection. [https://www.cdc.gov/social-](https://www.cdc.gov/social-connectedness/about/index.html)

[connectedness/about/index.html](https://www.cdc.gov/social-connectedness/about/index.html)

Dale, T. (2023). *State of the state mid-year 2023: Arkansas' tourism industry booming.*

<https://talkbusiness.net/2023/08/state-of-the-state-mid-year-2023-arkansas-tourism-industry-booming/>

Eime, R.M., Harvey, J.T., Charity, M.J., Casey, M.M., Westerbeek, H., & Payne, W.R. (2016).

Age profiles of sport participants. *BMC Sports Science, Medicine, and Rehabilitation* 8.

Helms, K. & Morris, D. (2020). Relationship of athletic identity to selected health behaviors

among college students: Implications beyond formal sport participation. *Journal of Physical Activity Research*, 5(1), 3-8.

Jacobs, J. (2024). Arkansas: An ultra runner's paradise. *Arkansas Outside*.

<https://arkansasoutside.com/arkansas-an-ultra-runners-paradise/>

Jacobs, J. (2025). *From trails to tourism: Arkansas outdoor industry leaders chart a path for*

growth and sustainability. <https://arkansasoutside.com/from-trails-to-tourism-arkansas-outdoor-industry-leaders-chart-a-path-for-growth-and-sustainability/>

Leand, J. (2024). *Trail running on pace for continued growth.* In *Sports Destination*

Management. <https://www.sportsdestinations.com/sports/running-events/trail-running-pace-continued-growth-34148>

Montgomery, E. (2025). *Arkansas's ranking unchanged as 48th healthiest state for 4th*

consecutive year. Arkansas Center for Health Improvement.

Ronto, P. (2024). *Ultimate Trail Running Stats.* <https://runrepeat.com/ultimate-trail-running-stats>

Running in the USA (n.d.). <https://runningintheusa.com/>

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