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How Much Training Do Road Racers in USA Cycling Actually Do? An Observational Study of 543 Athletes, by Racing Category and Gender

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Abstract

Advances in bicycle instrumentation and social media applications make it possible to quantify training and racing. PURPOSE: The primary purpose was to compare training volume of USA Cycling (USAC) road racers, split out by racing category and gender. A secondary purpose was to compare power profiles of these groups. METHODS: Part 1. USAC racers with a Strava® account were selected. Using 2019 data uploaded from GPS head units, 543 racers (279 men, 264 women) were studied. Part 2. A subset of racers with power meters (N=346) were contacted to obtain demographic information and peak power data (5-s, 1-min, 5-min, 20-min, and 1-h). 92 racers (67 men, 25 women) agreed to participate. ANOVAS were used to compare annual training/racing metrics and power data across categories and genders. RESULTS: Part 1. Training/racing volumes (annual hours, distances, races, and ride days) rose significantly as the level of expertise increased. There were significant gender differences for pros ($p<0.001$) for all variables except ride days, but there were no gender differences within categories 2, 3, 4, and 5. Part 2. In terms of peak power ($W \cdot kg^{-1}$), there were significant main effects for category and gender ($p<0.001$), but no significant interactions. Overall, men produced more power than women. Categories 1/2 produced significantly more power than categories 3, 4, and 5, but the differences between categories 3, 4, and 5 were marginal. CONCLUSION: Cycling coaches can use this information to develop training programs for bicycle road racers at all levels, and for tracking their progress.

Keywords

Endurance Sports; Bicycling; Exercise; Training Volumes; Power profiles

1 Introduction

Road racing in the United States grew in popularity during the 1970s with the introduction of the United States Cycling Federation (USCF), which later developed into USA Cycling (USAC). While professional road racing remains far more recognized in Europe, participation in amateur bike racing in the United States remains quite popular with roughly 60,000 unique racing licenses acquired annually, in 2020 (USA Cycling). Of those USAC license holders, each racer is designated as belonging to a category between 1 and 5, with category 5 comprised of beginners and category 1 comprised of elite racers. Racers can earn upgrade points through placings at USAC-sanctioned events to move up in category (USA Cycling).

Bicycle road racing consists of three primary disciplines: road races, time trials, and criteriums. There are differences in the length and format of these events, and they each have distinct energetic demands. This allows riders with different physiological characteristics and training habits to be more suited to one event or another. Several physiological factors influence a racer's success in the disciplines: maximal oxygen uptake (VO_{2max}), lactate threshold (LT), muscle fiber type, and body composition are relevant to bicycle road racing. VO_{2max} values have been well documented in road cyclists; this is especially true at the professional level (Bell, Furber, V. A. N. Someren, Anton-Solanas, & Swart, 2017; Coyle, 2005; Padilla, Mujika, Angulo, & Goiriena, 2000; Pinot & Grappe, 2015), but less so at the amateur level (Tanaka, Bassett, Swensen, & Sampedro, 1993).

Although these physiological variables are measured in laboratory settings, advances in technology have allowed cyclists to obtain relevant measurements on the bike, even on outdoor rides. Head units use a global positioning system (GPS) to display a live map of a rider's location for navigation, and can also display and record distance, speed, elevation, heart rate (HR) (if synced with a heart rate monitor), and power output (if synced with an on-bike power meter). In addition, the use of social media apps, such as Strava® (www.Strava.com) now allow cyclists to upload GPS files to track progress along road segments and compete against their peers (asynchronously) over the same road segments. Strava® is an online platform that permits a closer look at the training habits and physiologic performance capabilities of professionals and amateurs alike. Scientific studies have been published on the training habits and power outputs of professionals (Bell et al., 2017; Coyle, 2005; Mujika & Padilla, 2001; Padilla et al., 2000; Pinot & Grappe, 2015; van Erp, Sanders, & de Koning, 2019), but much less information exists on amateur cyclists (Mayolas-Pi et al., 2017; Oviedo-Caro et al., 2021; Tanaka et al., 1993).

Bike racers use technology to track their distance, ride time, speed, power output, elevation gain, heart rate, and GPS-generated course routes. Cycling coaches can consult with their riders and write training plans, then adjust these plans based on rider feedback and training metrics. Effective coaching can improve a rider's physical performance by providing clear goals, a training program, feedback, and motivation (Panzera, 2010).

The primary purpose of this study was to compare the training volumes of road racers in USAC, split by category and gender, through the use of publicly available information. These data can provide insights into the differences between categories and genders, and can quantify what road racers actually do in practice. A second purpose was to compare the power profiles of USAC road racers, split by category and gender. Assessment of power produced over discrete time durations on the bike can yield data on the physiological capabilities of racers relative to those of their peers.

2 Material and Methods

2.1 Part 1. Training/Racing Characteristics of USAC Road Racers

2.1.1 Participants

Part one of the study was completed using secondary analysis of publicly available Strava® data. The inclusion criteria included having an active USAC race license, road racing in the U.S. in 2019, having a public Strava® profile, and performing regular uploads from January 1, 2019 – December 31, 2019. USAC road race results from all regions of the country were selected, and then cyclists who participated in these races were searched for on Strava®. This included any type of race held on the roads (criterium, time trial, and road race). Mountain bike, cyclocross, and track races were not included. If a cyclist did not have a public Strava® profile with weekly data for the 2019 calendar year, they were excluded from the study. In total, 543 participants were examined. For each of the USAC Categories 2, 3, 4, and 5, 50 men and 50 women were studied. For Category 1 men, 50 racers were also studied. However, due to the limited number of category 1 women and professional racers meeting inclusion criteria, only 44 category 1 women, 29 professional men, and 20 professional women were studied. The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved by the University of Tennessee Institutional Review Board (IRB protocol 20-06205). Part I made use of publicly available data posted on Strava® or the USAC website, so it was not necessary for cyclists to provide informed consent.

2.1.2 Procedures

For part one, participants were chosen using a stratified sampling technique. For each region of the country (Northeast, Southeast, Midwest, Southwest, and West), an equal number of USAC races were selected to represent the study. Three placings in each race were selected using a random number generator, to help ensure an accurate representation of riders. Thus, both high and low placings within each category (e.g., 3rd, 11th, and 27th place in each category of each event) were included. If a rider did not meet the criteria for inclusion in the study, then another number was randomly generated until three riders per category, per event, were obtained. The corresponding rider's publicly available data were obtained on Strava®, a social media app for endurance sports that can upload and display cycling activities when paired with a GPS-enabled head unit or smartphone. Inclusion criteria included an active USAC license and an active Strava® account. By using cyclists' publicly available data, their annual cycling distance, annual cycling hours, days of racing per year, total races per year, and days of riding per year were recorded.

2.1.3 Statistical Analyses

Statistical analyses were performed with IBM SPSS statistics software version 27.0 (IBM, Armonk, NY). Two-way ANOVAs (gender x category) were run. Outcome variables were annual duration, annual distance cycled, average speed, annual ride days (including training and/or racing), annual race days, and annual races (i.e., number of bike races, regardless of whether they were time trials, criteriums, or road races). For multi-day events, each stage was considered a race. If gender x category interactions were significant, then tests for simple main effects were run using paired comparisons with Bonferroni adjustment. If only the main effect category was significant, then Tukey's post hoc comparisons were run to test for significant differences between combined categories. The alpha level was set at 0.05 for all comparisons.

2.2 Part 2. Power Output of USAC Road Racers

2.2.1 Participants

For the second part of the study, a subset of the original 543 participants was studied. All road racers who uploaded and displayed their power-meter data were contacted. In all, 346 potential participants were contacted (214 men, 132 women). In the end, 92 USAC amateur racers (67 men, 25 women) submitted their power meter data to the researchers.

The power data were de-identified prior to analysis. The study was conducted in accordance with the Declaration of Helsinki, and the protocol was approved by the University of Tennessee Institutional Review Board (IRB protocol 20-06205) on 01/20/2021. All participants in Part 2 provided written informed consent prior to enrolment in the study.

2.2.2 Procedures

The power data for each cyclist was available on a ride-by-ride basis, but peak power was obtained from a "power curve" generated during a specified time period (i.e., one year). Cyclists with power-meter data posted on Strava® were contacted to see if they would be willing to provide their personal peak power files for 2019. Once cyclists provided informed consent, they were asked to fill out a survey detailing their indoor riding, level of education, job status, height, weight, and USAC category. In addition, each cyclist was also asked to provide information by attaching screenshots on their maximum sustained power output for 5-second, 1-minute, 5-minute, 20-minute, and 1-hour time periods.

2.2.3 Statistical Analyses

Statistical analyses were performed with IBM SPSS statistics software version 27.0 (IBM, Armonk, NY). Two-way ANOVAs (category x gender) were run. Power data were analysed in relative terms, i.e., power-to-body-weight ratio ($W \cdot kg^{-1}$), across five different measurement durations: 5-second, 1-minute, 5-minute, 20-minute and 1-hour. Data were expressed as $W \cdot kg^{-1}$ to adjust for differences in body mass and to allow comparisons with the data tables in the first edition of Training and Racing with a Power Meter by Allen and Coggan (Allen & Coggan, 2006).

Power data for categories 1 and 2 were combined, due to a lack of data on category 2 women. Each outcome variable (i.e. 5-sec, 5-min, 20-min, and 1-hr power values) was analysed separately. Statistical analyses were conducted using 2-way (category x gender) ANOVAs. If gender x category interactions were significant, then tests for simple main effects were run using paired comparisons with Bonferroni adjustment. If only the main effect of category was significant, Tukey's post hoc comparisons were run to test for significant differences between categories. The alpha level was set at 0.05 for all comparisons.

3 Results

3.1 Part 1. Training/Racing Characteristics of USAC Road Racers

In total, 543 racers' training and racing habits are presented in Figure 1. There were 279 men (33.1 ± 9.8 years of age) and 264 women (32.9 ± 9.4 years of age). Data were collected prior to the COVID-19 pandemic, and thus were not subject to the pandemic's influence on cyclist's training, racing, and performance (Muriel, Courel-Ibáñez, Cerezuela-Espejo, & Pallarés, 2021). In general, training volume increased in proportion to USAC category. In other words, the more elite the USAC category, the greater the volume of training.

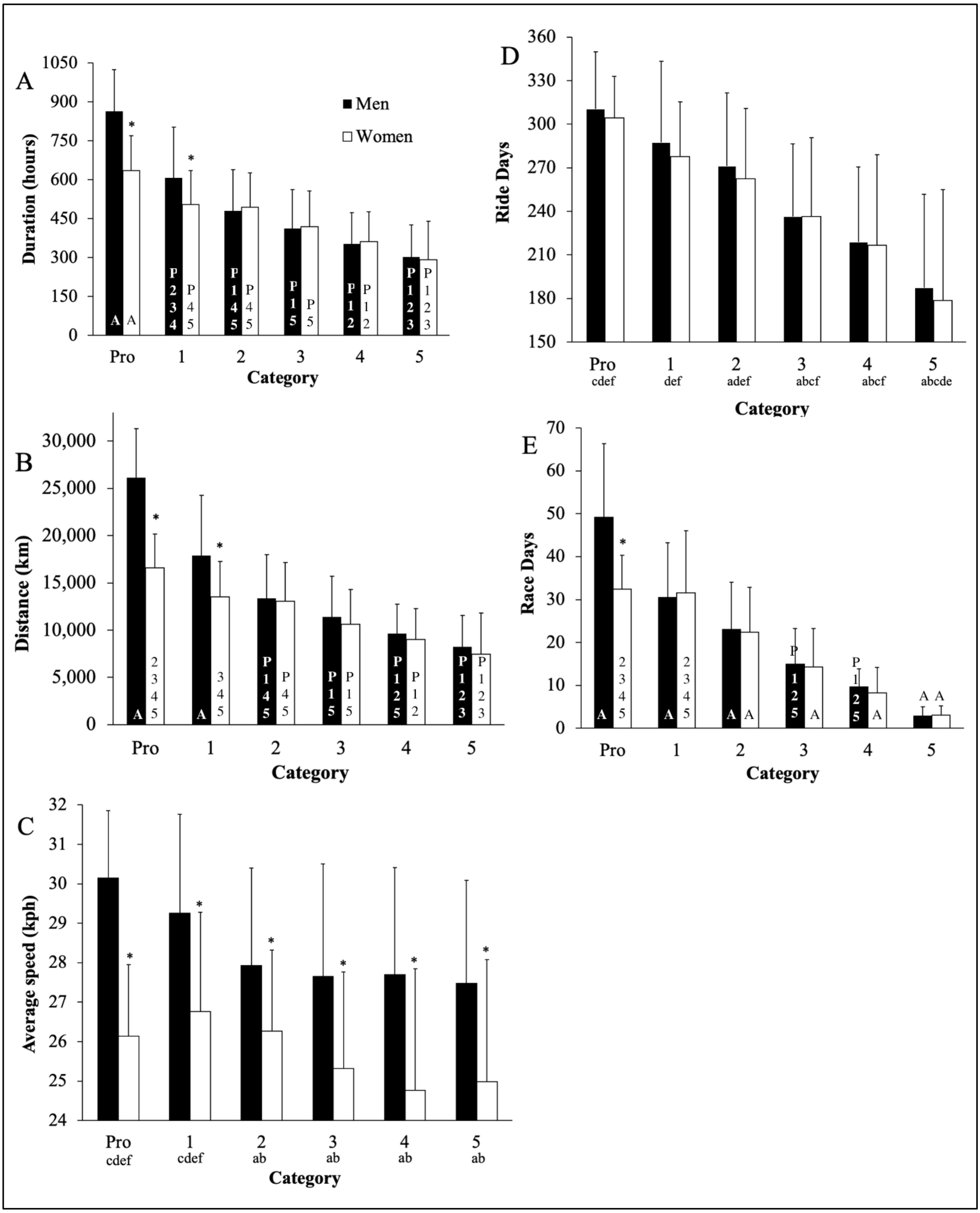

Figure 1. Training/racing volumes of USA Cycling Road racers in 2019. (A) annual duration of training/racing, (B) annual distance cycled, (C) average speed, (D) ride days and (E) race days. Data represent means + SD. Asterisks (*) denote significant gender differences ($p<0.001$). The designations in the B&W bars denote significant differences between gender-specific categories ($p<0.05$); A = all other categories; P = professionals. For outcome variables where no significant interactions existed (panels C, D) the letters (a, b, c) underneath the bars indicate the following: (a) significant difference from Pro (M/W combined); (b) significant difference from Cat 1 (M/W combined); (c) significant difference from Cat 2 (M/W combined); (d) significant difference from Cat 3 (M/W combined); (e) significant difference from Cat 4 (M/W combined); (f) significant difference from Cat 5 (M/W combined) ($p<0.05$).

3.1.1 Annual Duration

There was a significant category x gender interaction [F(5,531)=11.020, p<0.001]. Thus, gender was compared within each category. Professional men cycled more than professional women (p<0.001) and Category 1 men cycled more than Category 1 women (p<0.001), but there were no gender differences for any other categories. For both men and women, the more elite the category, the more time was spent in on-the-bike training.

3.1.2 Annual Distance

There was a significant category x gender interaction [F(5,531)=11.020, p<0.001]. Professional men rode farther than professional women (p<0.001) and Category 1 men rode farther than Category 1 women (p< 0.001), but there were no gender differences for any of the other categories. In general, the more elite the category, the more kilometres they cycled per year.

3.1.3 Average Speed

There was no significant 2-way interaction [F(5,531)=1.521, p=0.181]. There was a significant gender difference [F(1,531)=132.391, p<0.001] with men riding at a higher speed then women (28.36 vs. 25.71 kph, respectively). There was a significant main effect for category [F(5,531)=8.969, p<0.001]. Pro and Category 1 did not differ from one another (p=0.771); however, those two groups had significantly higher speeds than all other categories (p<0.05).

3.1.4 Ride Days

There was no significant 2-way interaction [F(5,531)=0.134, p=0.984]. There was no significant gender difference [F(1,531)=1.478, p=0.225]. However, there was a significant main effect for category [F(5,531)=55.400, p<0.001]. Ride days tended to increase as the category levels became more elite, with professional riders having significantly more ride days than all amateur categories, except Category 1. Category 5 had significantly fewer ride days than all other categories.

3.1.5 Race Days

There was a significant category x gender interaction [F(5,531)=6.620, p<0.001]. Professional men raced on more days per year than professional women, but there were no gender differences for any of the amateur categories. In general, the more elite the category, the more races they completed per year (p<0.05).

3.1.6 Total Number of Races

There were significant main effects of category [F(5,531)=156.8, p<0.001] and gender [F(1,531)=12.862, p<0.001). There was also a statistically significant 2-way interaction [F(5,531)=6.101, p<0.001]. Professional men completed a significantly greater number of races per year (49.9 ± 17.1) than professional women (33.2 ± 7.7) (p<0.001), but there were no significant gender differences for any of the amateur categories.

3.2 Part 2. Power Output of USAC Road Racers

Sixty-seven amateur men (34.3 ± 9.8 years of age; mean ± SD) and 25 amateur women (33.2 ± 9.1 years of age) provided power output data. No professional cyclists volunteered to provide power data (see Table 1).

Table 1. Number of USA Cycling Road racers with power meters from Part 1 who consented to provide power data for Part 2.

	Category 1	Category 2	Category 3	Category 4	Category 5	Combined
Men	23	22	8	10	4	67
Women	8	0	7	7	3	25

There were significant main effects for category and gender ($p<0.001$), but no significant interaction effects. Overall, men produced more relative power ($W \cdot kg^{-1}$) than women across all measurement durations ($p<0.001$) (see Figure 2). Categories 1/2 produced more relative power ($W \cdot kg^{-1}$) than Categories 3, 4, and 5 ($p<0.001$). For shorter durations (i.e. 5-seconds, 1 minute, and 5 minutes) category 3 produced more power than category 5 ($p<0.05$), with category 4 positioned between them (but not significantly different from category 3 or 5). For longer durations (i.e. 20 minutes or one hour), the differences between categories 3, 4, and 5 were minimal and did not reach statistical significance.

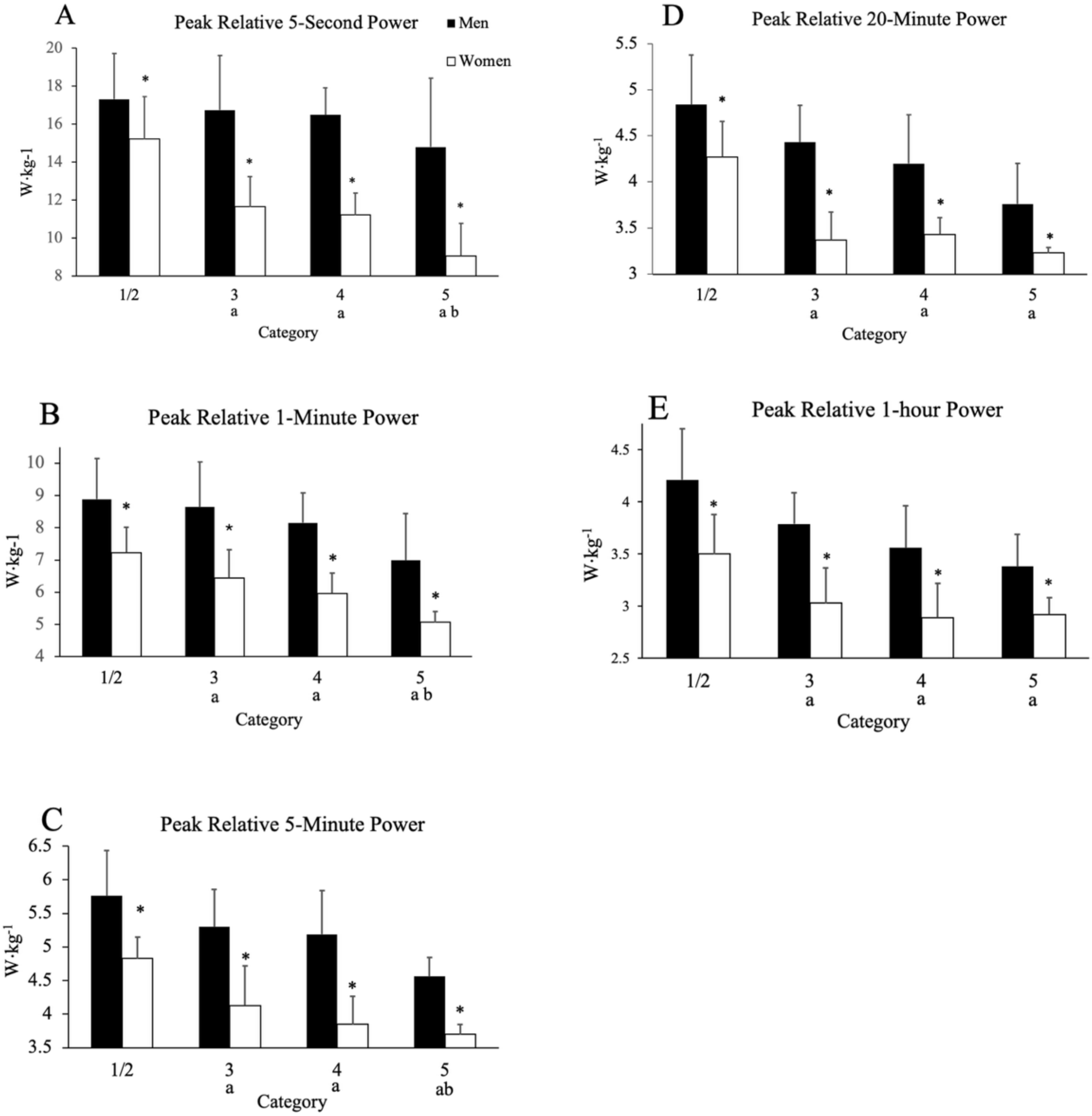

Figure 2. Power profiles of USA Cycling Road racers in USA Cycling in 2019. Data represent mean + SD for the highest on-the-bike power outputs for specified measurement durations. Asterisks (*) denote significant gender main effects ($p<0.001$). There were significant main effects of gender and category for all outcome variables ($p<0.001$), but no significant interactions. The letters (a, b, c) underneath the bars indicate the following: (a) significant difference from Cat 1/2 (M/W combined); (b) significant difference from Cat 3 (M/W combined) ($p<0.05$). Due to the lack of Cat 2 women volunteers, Categories 1 and 2 were combined for the purpose of statistical comparisons.

4 Discussion

4.1 Part 1. Training/Racing Characteristics of USAC Road Racers

This study revealed important data on annual training volumes and the number of events that road racers compete in per year. This is the first time that publicly available data on a large sample of bicycle road racers from across the United States (N=543) has been used for the purpose of analysing their training and racing habits. The methods used represent a novel approach to data collection. Furthermore, the empirical data showed statistically significant mean differences between the men and women, and between certain USAC categories of riders. The data collected in Part 1 allows a re-examination of estimates of annual hours of training for bike racers in different categories, and it extends the research by providing data for men and women, separately.

Training manuals have been published to guide road cyclists in how much to train. *The Cyclist's Training Bible* (Friel, 2003), provides background information, case studies, and a table of "volume guidelines for cyclists." However, these training volumes were rough estimates, according to early editions of Friel's book, and are most likely based on his own personal coaching experience. Although these numbers are frequently cited, little empirical research exists to support them.

The Cyclist's Training Bible (Friel, 2003) has suggested annual training volumes for each USAC category: Category 1: 700-1000 hours, Category 2: 700-1000 hours, Category 3: 500-700 hours, Category 4: 350-500 hours, and Category 5: 220-350 hours. There is no mention of gender in Friel's suggested annual training volumes. In general, the suggested training volumes in Friel's book for category 1 and 2 racers (700-1000 hours) far exceed those observed in the present study for category 1 racers (608 ± 195 and 505 ± 131 hours for men and women, respectively), and category 2 racers (479 ± 160 and 493 ± 133 hours for men and women, respectively) (mean ± SD). This could be partially attributable to the fact that Friel's numbers included time spent in weight-training and other forms of cross-training. In our study, the values for Category 4 racers (352 ± 121 and 361 ± 115 hours for men and women, respectively) and Category 5 racers (301 ± 124 and 291 ± 150 hours for men and women, respectively) (mean ± SD), were closer to Friel's suggested training volumes.

Cycling Fast: Winning Essentials for Cycling Competition (Panzera, 2010), also has annual recommendations on "minimum training requirements" for each category: Category 1: 1,500 hours, Category 2: 1,300 hours, Category 3: 1,000 hours; Category 4, 700 hours; and Category 5: 400 hours. Those training volumes are far greater than those we observed for the road racers in our study. In the case of category 1 riders, Panzera's minimum recommended training volume are roughly twice that of the mean values observed in the present study.

Other researchers (van Erp et al., 2019) compared the training characteristics of professional riders within a single team and found that, on average, men rode farther and for longer durations on each ride, but women trained at a higher relative intensity based on power data. However, scant information exists on gender differences in training volume for amateur riders (Mayolas-Pi et al., 2017; Oviedo-Caro et al., 2021; Tanaka et al., 1993). While we also found that professional men rode farther and longer than professional women, there were few gender differences between amateur men and women (especially within categories 2, 3, 4, and 5). It is possible that the playing field is more level at the amateur ranks. Few men who are professional cyclists hold jobs outside of cycling, while most women who are professional cyclists work part-time or attend university, due to wage disparities. In fact, the Cyclists' Alliance reported in 2020 that 25% of professional women were earning no salary at all in 2020 (The Cyclists' Alliance). In the current study, we observed that nearly all amateur road racers either had a paid occupation outside of cycling, or they attended college/university, and this was true of both men and women. The time constraints associated with work and/or being a student may limit the training volumes of amateur men and women, to a similar extent.

With regard to average speed, two distinct groups separated out from each other, within each gender. There was a large difference in average speed between pro/category 1 men, and category 2/3/4/5 men. Similarly, there was a large difference in average speed between pro/category1/2 women, and category 3/4/5 women. In the US, multiple categories are often combined to form a couple "fields" (e.g., Pro/Cat1/2 and Cat3/4/5), with separate races held for each men's and women's field. This may partially explain why cyclists in the more elite categories had higher average speeds; they completed many more races per year, allowing them to take advantage of drafting other fast riders. Other factors could be that more elite riders have superior physiology, they are more skilled at pack riding, and they generally use lighter weight, more aerodynamic, cycling equipment (Panzera, 2010).

The number of annual ride days are shown in Figure 2. Men and women were very similar within each category (e.g., category 3 men rode 236.4 days, and category 3 women rode 236.6 days, on average). In general, the number of ride days was nearly identical for genders within each category. It should be noted that even professional riders took days off the bike. The enormous training volumes that professional riders accumulate throughout the year may make this necessary to avoid overtraining.

4.2 Part 2. Descriptive Characteristics and Power Output of USAC Road Racers

In Part 2, we collected power on USA Cycling men and women in various categories, from across the United States. Men had significantly higher power-to-weight ratios ($W{\cdot}kg^{-1}$) than women (p<0.001). In the present study, men had 1-min power outputs that were approximately 35% greater than those seen in women, and 60-minute power outputs that were approximately 22% greater than those seen in women. Category 1 and 2 racers generated more power ($W{\cdot}kg^{-1}$) than those in beginner categories (p<0.001), and the differences between categories 3, 4, and 5 were minimal. However, in some cases the differences between category 3 and category 5 reached statistical significance.

Training and Racing with a Power Meter, originally published in 2006 (Allen & Coggan, 2006), and most recently in 2019 (Allen, Coggan, & McGregor, 2019), was one of the first books to show individuals how to analyse power data and use it effectively in training. A chart developed by Coggan displays maximal power outputs adjusted for body weight ($W{\cdot}kg^{-1}$) for each category that reflect 5-sec, 1-min, and 5-min measurement durations, and functional threshold power, or FTP (i.e.- 95% of 20-min maximal power). In the first edition of this book, Coggan built a table using interpolation to estimate the range of values for eight categories (international pro, domestic pro, categories 1-5, and non-racer) based on the highest known values ever recorded and those that Coggan recorded for average, untrained individuals. These time frames were chosen to yield power outputs that approximate maximal neuromuscular power, anaerobic capacity, VO_{2max}, and LT. Thus, even without access to a laboratory, cyclists could ride their own bike equipped with a power meter to estimate these values. Determining an individual's power output over various time intervals has been called "power profiling" and can be used to predict what type of rider the cyclist is (i.e., sprinter, time-trialist, climber, pursuiter, or all-arounder).

Coggan's original power profile table was originally developed by anchoring the high and low ends of the continuum by using professional riders and untrained cyclists, respectively, and then verifying it against amateur riders (Allen & Coggan, 2006). However, there was a need to compare Coggan's power profiles to empirical measurements made on other USAC road racers. In the present study, we collected empirical data on 92 USAC road racers and the results showed that while the power numbers presented by Coggan were reasonably accurate, the differences in power between Categories 3, 4, and 5 were smaller than previously believed.

The current study has both strengths and limitations. In terms of strengths, it is the first study to collect observational data on training and racing characteristics in more than 500 US bicycle road racers, and to compare across categories and genders. It also presents power profiles for a subset of riders who had on-the-bike power meters and volunteered to share their data. In terms of limitations, we did not analyse heart rate data nor the amount of time spent in various training zones, and only cycling activity was considered in our description of training volume. In addition, we only analysed relative power ($W \cdot kg^{-1}$), rather than other units such as raw power (W), compound power score ($W^2 \cdot kg^{-1}$), or allometrically scaled power. There is some evidence from a study of U23 road cyclists that the compound score, along with absolute power, is better able to predict success in road racing (Leo, Spragg, Simon, Lawley, & Mujika, 2020). However, cyclists and coaches are more familiar with relative power, and the use of this expression allowed us to compare our values to those in *Training and Racing with a Power Meter* (Allen & Coggan, 2006). Finally, the sample size for the power data in Part II was less than optimal, particularly for women. In part, this was because there are fewer women competing in the sport of cycling than men.

5 Practical Applications

The results from Part 1 are useful to road racers seeking to upgrade their USAC category, since it tells them how much time their peers are committing to the sport of cycling. Although the present study did not assess mean training intensity or time-in-training-zones, it nevertheless provides accurate, quantitative data on how many hours per year road racers devote to training and racing. In the future, obtaining more data on average power, normalized power, and time-in-training-zones could help to clarify the training intensity of cyclists in different categories.

The data from Part 2 are valuable since they represent empirical data on the power profiles of riders in different USAC amateur categories, and we were able to analyse the differences in mean maximal power statistically. The similarity in physical abilities of riders in categories 3-5 was surprising at first, because they did not match the values provided for Category 1, 2, 3, 4, and 5 riders presented in the first edition of *Training and Racing with a Power Meter* (Allen & Coggan, 2006), especially for the beginner categories. However, in the most recent edition of that book (Allen et al., 2019), the authors removed the Category 1-5 labels but used these descriptors: World Class, Exceptional, Excellent, Very Good, Good, Moderate, Fair, Novice 2, and Novice 1. Our study confirms that this was a good decision.

6 Conclusions

In conclusion, the results from Part 1 of this study provide insights into the differences in training volumes between USAC categories and genders, and quantify what road racers actually do in practice. The training volumes that we measured through empirical data collection are lower than those suggested by common training resources. Cycling coaches can use these data to design training programs that are appropriate for all levels of competitors. However, coaches should do more than just advise riders on physical training programs to optimize their physiological capabilities. They should also advise riders on strategy, tactics, mental training, and bicycle technology, but these factors are beyond the scope of the current study.

In Part 2, we observed the power profiles of USAC road racers over time periods ranging from five seconds to 60 minutes, and compared categories and genders. Overall, men produced more relative power ($W \cdot kg^{-1}$) than women, and categories 1/2 produced more relative power than categories 3, 4, and 5. In addition, the differences between categories 3, 4, and 5 were marginal, although more studies on larger numbers of cyclists are needed to confirm this. Cycling coaches can use the power data to better understand the physiological capabilities of their athletes, and monitor their progress as they develop.

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Data Availability: The data collected in the present study have not been placed in an open data repository because university IRB approval was granted only for specific uses of the data. Although first and last names could be removed, the presence of other personal identifiers such as USAC category, gender, and age might allow individuals to be identified. If researchers are interested in examining the data, they may contact the corresponding author who will work with them to submit a new IRB application for secondary data analysis of the existing dataset.

Conflicts of Interest: The authors have no conflicts of interest to declare.

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