

Race Results Analysis

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This analysis summarizes and compares race results by age and gender.

Raw Data

The raw data used in this analysis is a set of individual race results including finish time, pace, age, and gender for each athlete. Bib number is the unique identifier, and event name is a free text description of the race.

event_name	bib_number	age	gender	finish_time	pace
Spartan SC Beast - Sat Open	303	34	M	117.1500	9.681818
Spartan SC Beast - Sat Open	5536	14	M	122.8000	10.148760
Spartan SC Beast - Sat Open	5535	34	M	122.8833	10.155647
Spartan SC Beast - Sat Open	7643	39	M	127.3333	10.523416
Spartan SC Beast - Sat Open	2548	43	M	128.6500	10.632231
Spartan SC Beast - Sat Open	1466	36	M	128.9000	10.652893

Calculations

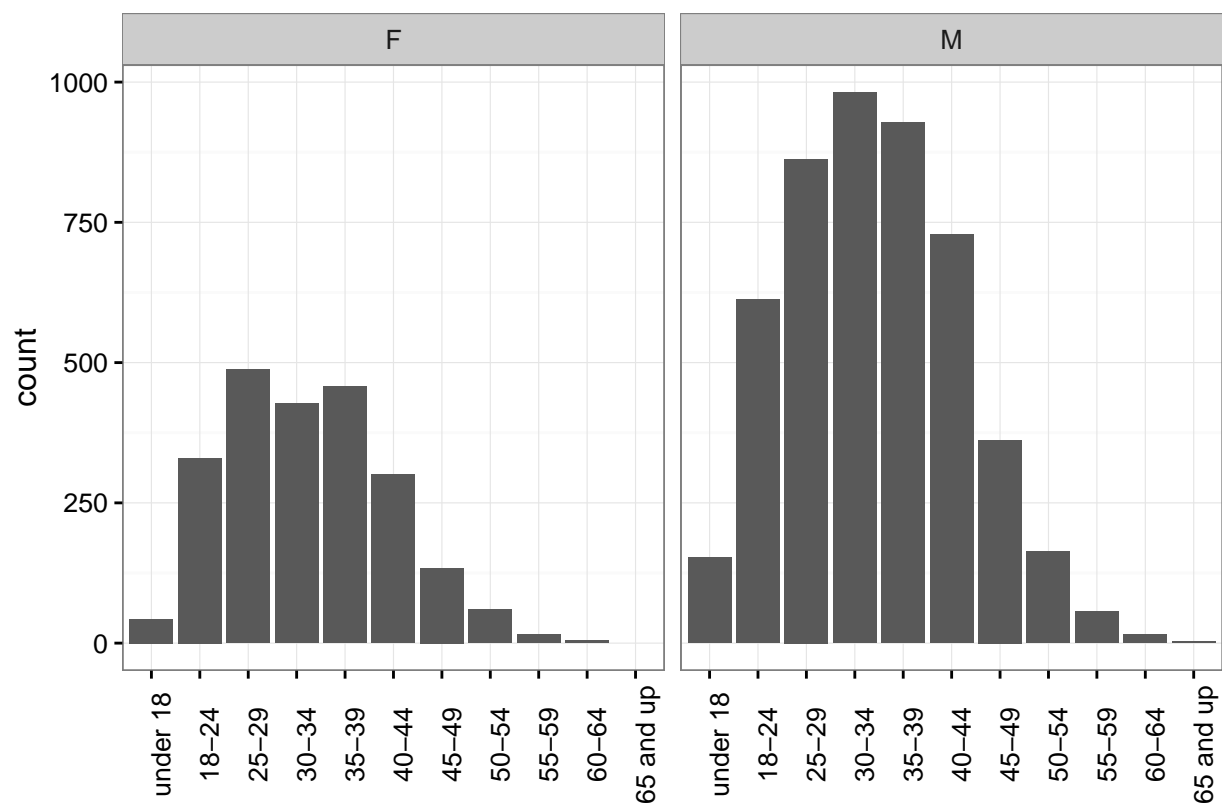
To compare across age and gender, ranks and percentiles within categories and age groups must be calculated.

age	gender	finish_time	pace	age_cat	age_group	rank_overall	rank_agegrp	rank_gender	pct_overall
34	M	117.1500	9.681818	30-34	M_30-34	1	1	1	0.0000
14	M	122.8000	10.148760	under 18	M_under 18	2	1	2	0.0000
34	M	122.8833	10.155647	30-34	M_30-34	3	2	3	0.0000
39	M	127.3333	10.523416	35-39	M_35-39	4	1	4	0.0000
43	M	128.6500	10.632231	40-44	M_40-44	5	1	5	0.0000
36	M	128.9000	10.652893	35-39	M_35-39	6	2	6	0.0000

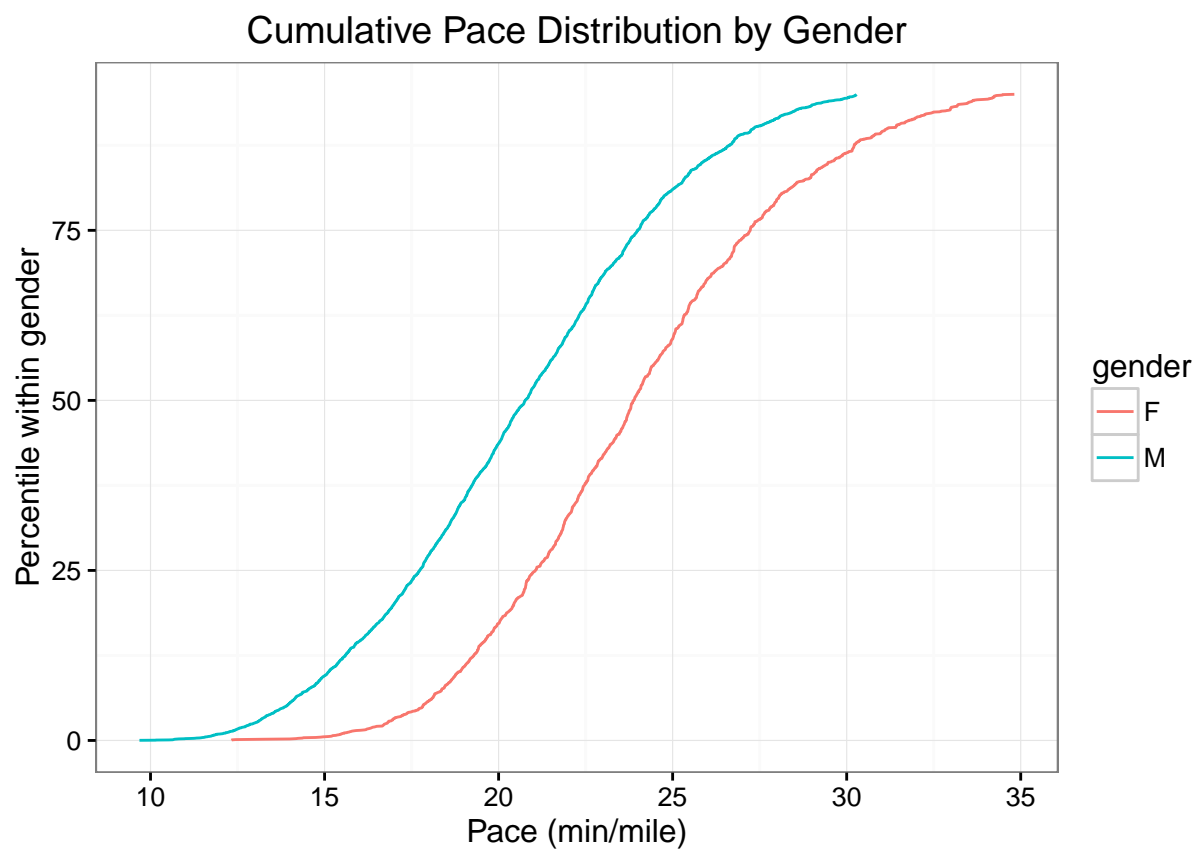
Graphical Analysis

Who participated

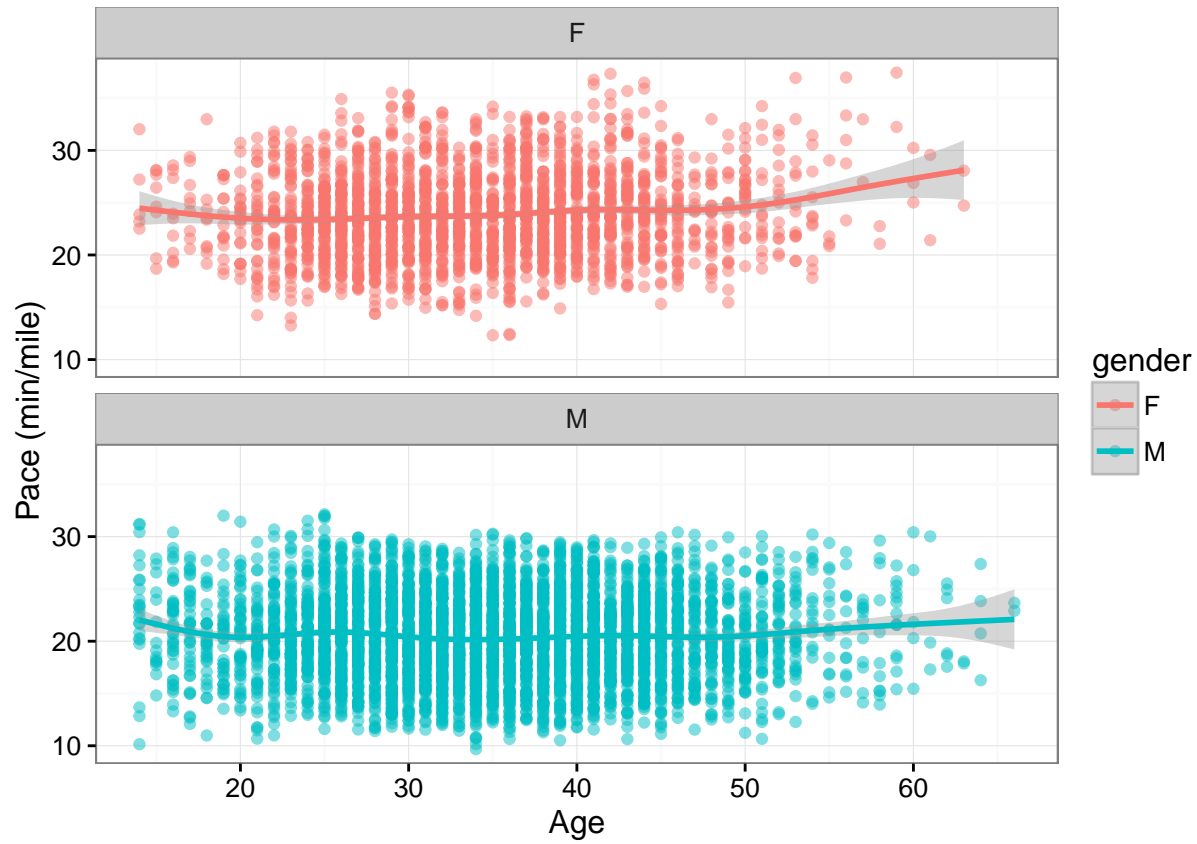
A total of 2,260 women and 4,866 men participated in the Spartan SC Beast - Sat Open.



Pace by gender



Pace by age



Gender gap

Adjusting for gender, how do athletes in the same performance percentiles of their gender compare on pace?
Is the gender gap consistent across the performance range?

pct_gender	F	M	gap_gender
1	14.51791	11.37755	3.140352
2	15.99365	12.39636	3.597295
3	16.75576	12.94580	3.809957
4	17.14517	13.31187	3.833298
5	17.64062	13.68733	3.953288
6	17.91598	14.00365	3.912324

