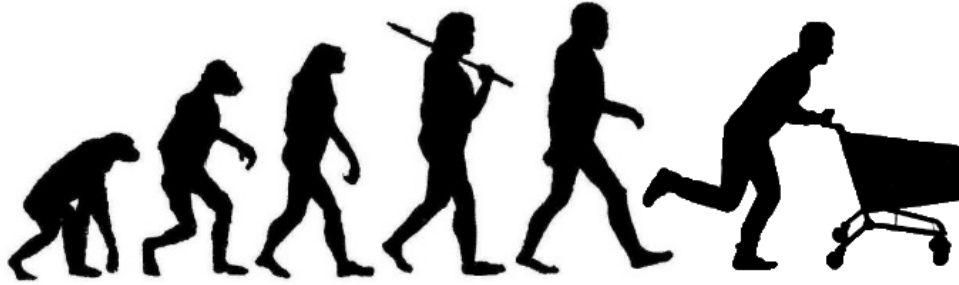


The 2015 CHIditarod Sabotage Report



The Evolution of Sabotage

~or~

A Meta-analysis of Mayhem

Hear ye, hear ye. We've donned our counting caps, and our statistics robot has been switched back on. He sits in the corner, whirring patiently, contemplating the glorious future when robot-kind rules the earth. In the meantime, however, we've put its computing power to good use to build charts and graphs and other shiny things that bring us joy.

Each year, we analyze the sabotage that takes place in the annual CHIditarod shopping cart race. We do this to help keep our racers informed. We do this to make sure the event can keep up with our racers' nefarious innovation (there be evil geniuses among us). And we also do this because we know that, just like a fine bourbon and delicious Girl Scout cookies, science and mayhem pair very well together. You also can look real good when you combine them while wearing a smoking jacket and, if you're feeling it, a monocle. Because monocles, obviously.

This year, as a special treat for our statistics robot (oh, how robot loves to play!) we crunched numbers from the last FIVE YEARS to bring to you the most meta-tastic analysis of sabotage yet.

So hold on to your pants. Or don't. I mean, preferably ask permission from the person next to you before you get naked. Just do what you need to do to get comfortable. You ready? Ok. Here goes...



Monocle!

METHODS

In March 2015, after the Xth annual CHIditarod, racers were sent an email link to a survey, wherein we ask them to wax poetic about their race experiences. We do this every year after every race, now that we have figured out how to use computers and Internet things.

In the survey, racers were asked about a number of subjects, but the thing we care most about in this report is SABOTAGE. Racers were asked whether they were victims of sabotage and whether they acted as saboteurs against another team. Racers were then prompted to give a descriptive, narrative account of these encounters.

The data supplied in these surveys were coded into a binary (1/0 or yes/no) variables:

- Whether a racer was a victim of sabotage
- Whether a racer dished out sabotage onto others
- Whether a racer reported bribing a judge during the race
- Whether a racer was male or female¹
- Whether a racer was 21-25 or 26+ years old.
- Whether a racer is participating in the CHIditarod for the very first time.

We used these data to compare the likelihood of racer shenanigans (sabotage, bribery, etc.) across differences in age, gender, and racing experience. We used a statistical method called a Chi-squared test² to figure out whether these things were related—whether younger or older racers (or more or less experienced racers) were more or less likely to get tangled up in the webs of sabotage that we weave.

¹ **How do we measure gender?** In our survey, we ask racers to report their gender and leave an open-ended response space where racers can write whatever answer they see fit. We don't specify whether we are asking for assigned gender at birth, gender identity, or any other specific meaning of the word. We let people write whatever they want. This year, we divided racers into male and female because every open-ended response we received was one of the following: "male"; "M"; "Female"; "F"; and one instance of "I am a lady". Whether any individual who participated in our survey identifies as trans*, genderqueer, or any other non-binary identity was not captured by this survey simply because it wasn't reported (and cause we weren't super specific). If you have questions about our reasoning or if you are a research wiz with some good ideas about how to capture gender in different and meaningful ways in a survey, give us a holler at info@chiditarod.org. We love people and we love data and we love talking about people and data. We're also open to ideas for improvement.

² **CHI²-DITA-WHAT?** Briefly, a Chi-squared test compares two statistical distributions to each other (in this case all the responses from first-timers and all the responses from experienced racers). The Chi-squared test quantifies how similar or different those two distributions are from each other. This comparison is given as a risk-ratio—i.e. the chance that you will dish out sabotage if you are a first-time racer versus the chance that you will dish out sabotage if you are an experienced racer. The Chi-squared test also allows us to calculate how likely it is that increasing the sample size (i.e. having 1,000 survey respondents rather than only 200) would reveal these two distributions to be essentially the same. In other words, the test also calculates how likely it is that any difference that we see between the two groups is spurious, or pure chance. The statistical term for this likelihood is called the p-value. If a p-value is calculated at 0.01, then there is a 1% chance that any difference in the compared distributions is caused by chance based on bias in the sample; if the p-value is 0.5, there is a 50% chance that the difference is pure chance. It is generally accepted that if a calculation has a p-value of 0.05 or less, it is considered "statistically significant." Anything higher than 0.05 means the evidence is considered inadequate to support the conclusion that there is a real difference between the two groups. There's no "natural" reason why 0.05 is the magic number. That's just the number that scientists everywhere have kind of agreed on.

We also went back to the narrative accounts of sabotage that were given, and we coded these events based upon patterns that emerged. We then determined the relative frequency with which each type of sabotage occurred. Tables!

This time around, because CHIditarod X was like a big deal and stuff, we compared data from the past 5 years to see trends in the shenanigans that CHIditarod racers get up to. MOAR TABLES!

All of the data was cleaned and coded using Microsoft Excel 2011 for Mac, v 14.1.0 (and also OUR MINDS!). All descriptive statistics and statistical analyses were generated using Stata/IC 10.1 for Macintosh. I mean, yea, it's an older version, but, like, those new licenses are expensive, yo. We've got a sticker on our little lappy that reads, "My other car is MatLab." It's very funny. We are quite clever. Ask us about our knock-knock jokes.

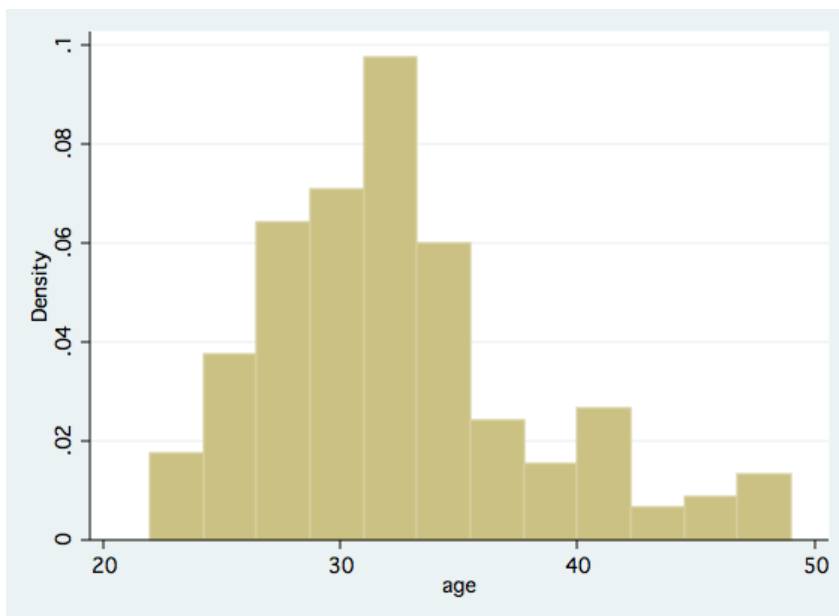
RESULTS

In 2015, 200 individual racers responded to our survey. Thanks, ye 200 folk.

Age

Based on these numbers, we estimate that the average age of a CHIditarod racer in 2015 was 32.3 years old with a standard deviation of 5.72 years. In plain terms, that means that 68% or about 2/3 of our racers were between 26.6 and 38.0 years old.

Here's a histogram (aka fancy bar chart) showing the age distribution for the 2015 race:



Incontrovertible
proof that 32 is
the new 29.

Now that we've been at this survey business for a few years, we can also show you how the age of our racers has changed over time. As you can see from the table below, we are getting slightly older each year, which means that the intergenerational Thunderdome CHIditarod will soon be upon us. Or it means that we're out of touch with the youth of today. But, whatever. Our life experience makes us more skilled at organized mayhem. And we are very, very good looking.

Interestingly, the average age of CHIditarod racers is increasing at a pace of just about 1 year at each subsequent race. The average racer age was about 30 in 2013, about 31 in 2014, and about 32 in 2015. This year, maybe it'll be about 33? It's cool. Happy Jesus year, everybody!

Proof that the patented CHIditarod anti-aging regimen ain't working:

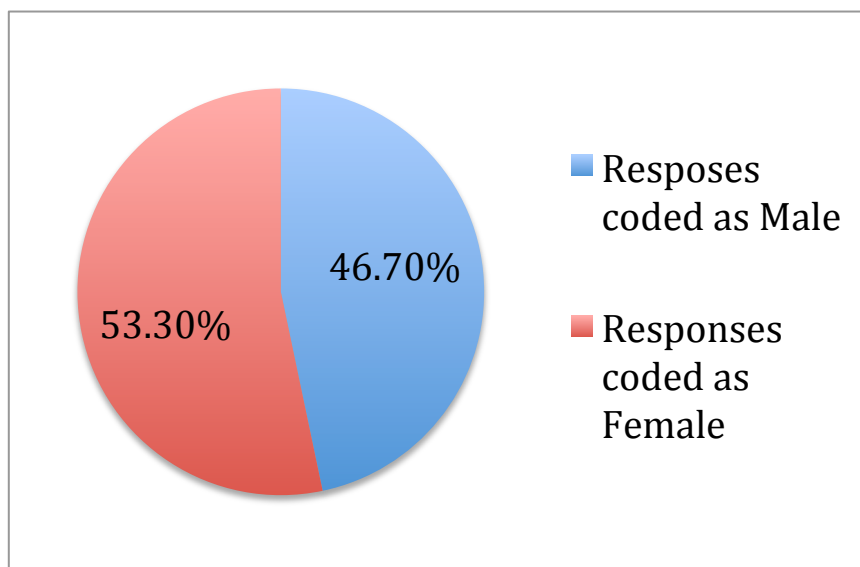
Stats for racer age (in years)	Mean	Min	Max	SD
2015	32.27	22	49	5.72
2014	31.5	21	53	6.06
2013	30.37	21	52	5.47
2012	30.5	21	62	5.82

Gender

We were also able to determine that, as per usual, our racers were pretty evenly split in 2015 between those who self-identify as male (46.%) and those who self-identify as female (53.3%), with racers of the female persuasion eeking ahead by just a few percentage points.

In 2015, we coded the following responses as female: F, female, Female, lady

We coded the following responses as male: M, Male, male, man



Racer Experience

Typically, each CHIditarod race is attended by first-time racers and veteran racers in relatively equal numbers. 2015 was no exception. Our survey results allow us to estimate that about 43% of our racers were first timers. The other 57% had been to at least one CHIditarod as a racer in past years.

How long have you folks been hanging around here?

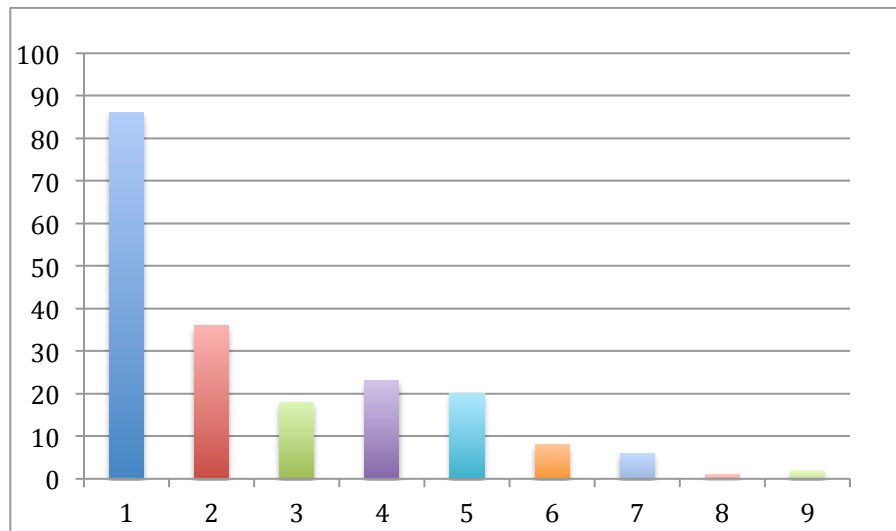
Number of times a racer has run in the CHIditarod (including 2015)	N	%
1	86	43.0
2	36	18.0
3	18	9.0
4	23	11.5
5	20	10.0
6	8	4.0
7	6	3.0
8	1	0.5
9	2	1.0

Here's that same data again, but in a bar graph. Because we like the colors.

How many CHIditarod Races have the 2015 runners participated in? (including 2015)

X-axis: number of CHIditarods in which someone has raced.

Y-axis: number of survey respondents with that level of experience.



Sabotage!

If there's one rule of the CHIditarod, it's this: Sabotage happens. But what kind of sabotage is there? Over the last 5 years, all of the incidents of sabotage reported in our annual racer survey can be roughly divided into 10 different categories. If you are racing in the CHIditarod, you can reasonably expect to experience one or more of the following:



Thankfully, zebra mussels have not yet been implicated in sabotage.
© CC, USFWS Pacific Region

- **Cart bondage** – This includes everything from zip-tying carts together, duct-taping carts to telephone poles, saran wrapping carts, etc.
- **Altering cart orientation in space-time** – The relocating of carts to the back of the bar, the other side of the street, the dumpster, to the second story of the building, etc. Hanging carts from fences and “L” lines also counts.
- **Theft of cart components or props** – Theft of artistic components, like decorations and art pieces, or technical components, like ropes and steering mechanisms, from carts.
- **Sticky sabotage** – The relocation of peanut butter, molasses, whipped cream, shaving cream, Vaseline, or a variety of other viscous fluids onto your cart or your person.

[FYI – food based sabotage is SUPER against the rules and will get you disqualified from the race. It has unfortunately happened in past years. But we're super serious. You'll get DQ'd so fast. Don't do it.]

- **Creative happy sabotage** – Someone has surreptitiously applied glitter, stickers, and My Little Ponies to your cart. Also vandalism, including paint and major re-branding of your cart at the whim of other teams. Shenanigans.
- **Disabling wheels** – Applying obscene amounts of duct tape or some other bulky material to shopping cart wheels for the purposes of hindering their movement and making the cart a real pain in the butt to drag along. Great Stuff foam and liquid adhesive also counts.
- **Psy ops** – This is creative sabotage that is intended to trick other teams into thinking that it is to their advantage to violate the rules of the race and/or sending people on wild goose chases. This includes switching around street signs, handing out fake “skip a checkpoint” coupons, etc.
- **Cart mass embiggening/adding weight** – Placing cinder blocks, concrete, bricks, your teammate, law textbooks, or other significant weights into the cart of your enemies and/or tying them to said cart.
- **Petty Theft** – Unfortunately, this has happened a handful of times over the years, so we keep track of the trend. This is rare. The thing about bad apples is that they are living worst.

But, as we know, not all forms of sabotage are created equal. Year after year, the disabling of wheels and various styles of cart bondage have proven to be the most popular and durable forms of sabotage at the CHIditarod. In 2015, sticky, smelly, substance based sabotage also made a comeback.

**The Relative Frequency of Different Kinds of Sabotage
As Reported by Both Victims and Saboteurs in 2015**

2015 SABOTAGE	N	%
Cart bondage	31	26.96
Altering cart orientation in space-time	6	5.22
Theft of cart components or props	4	3.48
Sticky sabotage	18	15.65
Creative happy sabotage	11	9.57
Disabling wheels	31	26.96
Psy ops	4	3.48
Barrier methods	0	0
Cart mass embiggening/adding weight	8	6.96
Petty theft	2	1.74
TOTAL	115	100

Unsurprisingly, these patterns have changed and evolved over the years. Here are a few trends and events that have defined the history of sabotage:

- 2012 was the year that tying cinderblocks to carts was first unveiled.
- 2013 was the first year that U-locks were officially banned, thus causing a temporary decline in the rate of cart bondage at the race; fear not, though. Racers are creative and replaced U-locks and chains with zip ties, duct tape, and other items that are easy to remove yet SUPER ANNOYING to get rid of.
- 2013 witnessed a massive increase in food-based sabotage. There was chocolate sauce and mayo all over the place that year. After this race, food-based sabotage was explicitly banned at the race.
- 2015 saw an increase in sticky sabotage, but this time, it wasn't food. Rather, some godless, fear-mongering people figured out you could tape down the aerosol button on bottles of Axe body spray and toss them into people's carts. We call it The Great Axe Body Spray Terror. I still have bad dreams.

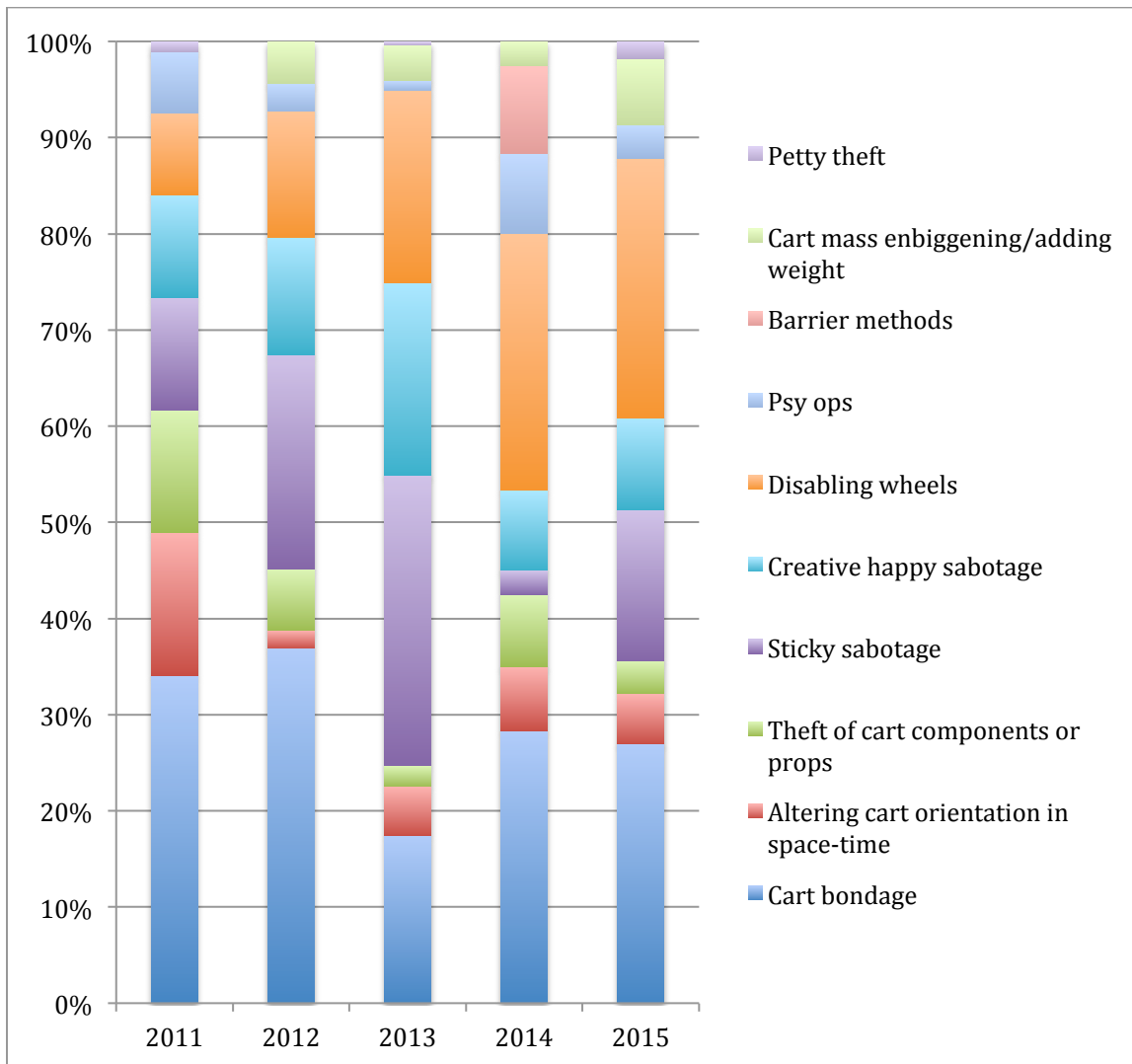


Kinda like this, but way, way grosser.
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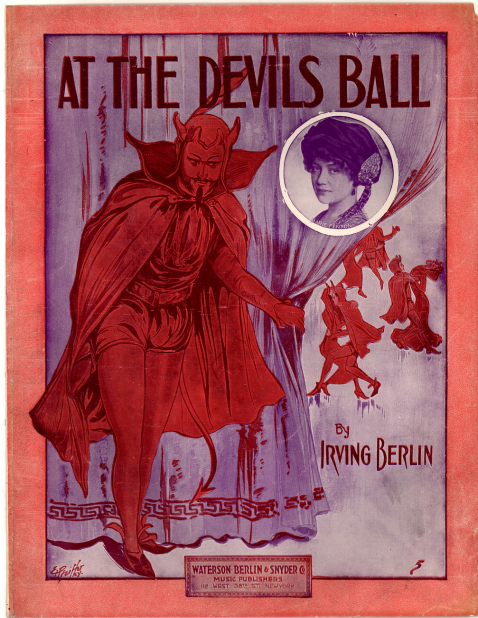
- 2014 saw the birth and the death of barrier methods, aka teams being captured whole in veritable spider webs of saran wrap as they ran down the sidewalk. It was super creative and kinda cool looking, but very labor intensive. This is the Galapagos Tortoise of sabotage. We're unlikely to ever see it again.

All of these trends, and more, are summarized in the chart below, which shows how patterns in the use and frequency of these different types of sabotage have changed over the years (at least in the years that we've been collecting this data).

How Have the Relative Rates of Different Types of Sabotage Changed Over Time?



The Profile of the Common Saboteur and the Typical Sabotee



Back in 2011, we started doing this whole Sabotage Report thing because we had a suspicion that first time racers were both more likely to be victims of sabotage (ostensibly because they didn't know what to expect) and to be taken off guard by the types of sabotage that they experienced, thus causing much wailing and gnashing of teeth. We think sabotage is super fun, and that it adds a great new dimension to the race; but it's only fun if people know it's coming. Otherwise, a completely unsuspecting victim is likely to be all, "What the devil? Who are these jerks?"

We don't want your first CHiditarod to feel like this. Or, I mean, we do. But only in an ironic way. We want you to WANT to be surrounded by evil. But just a little evil. A little but of cute, manageable evil.
© CC - Wikimedia

Back in 2011, we found that, yes, first time racers were more than TWICE as likely (2.45 times as likely, to be exact) than experienced racers to fall victim to sabotage. Womp womp. Since then, that pattern has pretty much disappeared. Even though first time racers appeared slightly more likely to fall victim to sabotage, over time, those differences weren't statistically significant. In other words, the difference in risk of sabotage victimhood were so small that they couldn't be distinguished from "noise" (or random chance) in our data.

All that changed in 2015, though! Not only were first time racers very probably about 50% more likely to be victim to sabotage, they were also MORE THAN TWICE AS LIKELY TO DISH OUT SABOTAGE! Also, more than 70% of y'all bribed officials, and you did so in equal amounts. Our judges and volunteers are equal opportunity exploiters.

Who is doing the voodoo that you do?

How do first time racers compare to experienced racers in terms of bribing and sabotage?

% of 2015 racers who...	First time racers	Return racers	Risk ratio	p-value for the difference in risk	Did science find any measurable different between the two groups?
Were victims of sabotage	36.0%	23.1%	1.56	0.0588	Pretty likely.
Were active saboteurs	40.5%	19.4%	2.09	0.002	Hell yes.
Bribed race officials	70.1%	72.5%	0.97	0.7226	Nope.

As we have done in previous years, we also compared the risk of dishing out sabotage, falling victim to sabotage, and bribing officials across self-reported gender. For the 4th year in a row (we only started asking people to report their gender in 2012), this made no difference.

Sabotage Knows No Gender Identity

% of 2015 racers who...	Identified as Female	Identified as Male	Risk ratio	p-value for the difference in risk	Did science find any measurable different between the two groups?
Were victims of sabotage	29.8%	27.3%	1.09	0.723	Nope.
Were active saboteurs	29.3%	26.2%	1.12	0.641	Nope.
Bribed race officials	72.0%	70.9%	1.02	0.869	No, you are all equally corrupt.

We also considered whether racer age was affecting the likelihood that someone would be involved in sabotage. And, wouldn't you know it, the whipper snappers between 21 and 25 years of age unleashed a fiery universe of mayhem upon us! They were more than twice as likely than racers of 26 years or older to dish out sabotage and twice as likely to be victim to sabotage. They are evildoers!

It's important to keep in mind that the racers 25 years old and under made up an estimated 5% of our racers in 2015, which means that even though they are very likely to try to sabotage you, they make up a small part of the overall sabotage threat. So, think of them like piranhas. There aren't that many of them out there, but you let them swarm, they can skeletonize a cow in like 2 minutes flat.

[Insert Children of the Corn Reference Here]

% of 2015 racers who...	Were 25yrs old or less	Were over 25rs old	Risk ratio	p-value for the difference in risk	Did science find any measurable different between the two groups?
Were victims of sabotage	53.8%	26.5%	2.03	0.036	Yes.
Were active saboteurs	53.8%	26.2%	2.05	0.033	Yes.
Bribed race officials	70.1%	72.5%	0.97	0.723	Nope.

CONCLUSIONS!

- 1) We may be getting older, but we're not getting any younger!
- 2) Almost half of our racers every year are first-timers. WE ARE SO HAPPY YOU CAME OUT TO JOIN US!
- 3) Remember that a lot of people that you run into during the race are having their first CHiditarod ever. The culture of this event changes every year. Expect change. Expect surprises. Have fun with each other.
- 4) Young people are evil.
- 5) New racers might be evil. It's a coin toss. But they learn how to sabotage real quick!
- 6) Watch your cart.
- 7) Watch your wheels.
- 8) Watch out for law textbooks.
- 9) If you need help, the bike marshals are there for you!
- 10) MUSH!



A noble cart contemplates the future of sabotage.
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