

# Why A General 45% Suicide Attempt Rate For Transgender Women Is Mathematically And Observably Implausible.

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## Abstract

An oft repeated statistic is that 45% of transgender people attempt suicide at some time in their lives. A simple spread sheet calculation shows that this probably can't be the case given the observed increase in the number of transgender people. Something else must have been going on with the particular study that is often cited (and misquoted) for that statistic. If that statistic is generalize-able to the whole transgender population then over a 50 year period the transgender population shrinks by half.<sup>1</sup> This is the opposite of the observed trend. Therefore it is mathematically impossible for that number to generalize beyond the sample in the cited study.

## Introduction

A study was conducted by UCLA which sought among other things to determine the suicide rate of transgender men (biologically female gender behavior male) and transgender women (biologically male gender behavior female, Transwomen).

Suicide attempts among trans men (46%) and trans women (42%) were slightly higher than the full sample (41%). Cross-dressers assigned male at birth have the lowest reported prevalence of suicide attempts among gender identity groups (21%). (Haas, b).

(Shapiro, 2016) then argues that transgender healthcare is not helping on the basis of this statistic. Ben Shapiro and others argue that transgender people should be given psychological treatment that dis-affirms their transgender behavior. They argue that trans women in particular should not be treated with hormones or addressed with gender concordant pronouns and instead should be addressed by biological sex (Shapiro, 2016).

It will be shown in this paper that there are important and common misconceptions regarding statistics, in arguments like (Shapiro, 2016) . It is not the intention of this paper to single out Shapiro since these misconceptions are common, but to educate so discussion can flow from actual facts not misinterpretations of facts.

## Statistics

There are two big misconceptions of statistics in this common argument which is not only made by Shapiro. One regards sampling the other regards how a statistic will play out over time. The sampling issue is simple to understand. If one were to sample a glass of water from the ocean and see that it contains no fish; then

conclude that there are no fish anywhere in the ocean, we would all know that is false. Larger sample size can help, but there will be margins of error that must be considered, as often stated in political polls.

Another common misconception comes from thinking of a population as frozen in time. If one says that half of *group X* does *thing Y* then in any given reasonable period of time, say a year, half the people in *group X* will really actually do *thing Y*. If the number does not mean just exactly that then it is meaningless. Consider that a coin can either be heads or tails so a single flip has a 50-50 chance of being heads or tails. Flip 1000 coins, one time and maybe 45% will be heads and 55% will be tails. Do that 1000 times and average the percent that are heads and *the percent that are tails and those averages will be close to 50-50.* (Lewis, 2012) When one says that a coin flip will on average give heads 49.9% of the time that means that 49.9% of coin flips will be heads.

## Transgender Health

Contrary to a popular belief transgender health care is not simply blind affirmations. There is a process of real life experience as the target gender, psychological counseling, medical and aesthetic treatments. This all takes years and happens before or instead of any surgical intervention.

A transgender person is one who starts out life as one gender and one biological sex (not anatomically intersexed) who then switches to another gender role as often shown by names and personal pronouns, clothing, employment choices, and in some cases hormones and surgeries. A transgender woman is, in US and UK culture, one who is biologically male who lives in the gender role typical of a female. A transgender man in this same culture is one who is biologically female who lives in the gender role of a male. This excludes minor gender non conformity, bigender, agender, or non-binary people. This definition of transgender may also include other gender expressions if they meet the definition of a transgender man or woman in most material ways.

According to the World Professional Association for Transgender Health Standards of Care (WPATH SOC's) *psychological treatment is a very important part of the solution and is the first step.* Those standards recommend intensive psychological counseling, a long period of real life living as a transgender person in society, followed at the very end by surgery IF requested and with the approval of two PhD'd psychologist and the patients MD. (WPATH, 2001) There are those in the transgender who feel strongly that it is offensive to treat transgender people with psychology (TEGU), and there are those who feel it is a good and necessary step (J. Lester Feder, 2016).

However, Ben Shapiro and others who hold his views argue that if we treat transwomen like men and address them as men and don't accommodate them at all it will make them act like men and make them better. *Assuming a modicum of good faith on their part they use (Haas, b) and a few other studies to try and justify their views as coming from a place of wanting to help trans people.*

The math does not support their point of view.

## Numerical Analysis

The point was made by a comment under a Ben Shapiro article on the Daily Wire which pointed out that the 45% statistic implies that the transgender population would crash to almost zero in a short amount of time. The author of the current paper decided to examine how this number would play out over time.

Starting with the general population times the prevalence of transgender people of 380 per 100,000 ([Meerwijk and Sevelius, 2017](#)). Times the population of the United States of America as of March 2018 of approximately,  $G$ , 330 million ([US](#)).

$$P_0 = Gt_p$$

Subsequent years are computed from this formula. The transgender population in year  $y$  is equal to the product of one minus the product of the fraction of suicide attempts and suicide successes with the size of the transgender population the previous year. Then add the number of people born times the percentage of births that will be someone who eventually comes out as transgender 0.01%. Computed simply by dividing the number of transgender people by 50 and not meant to claim anything about the etiologies(s) or cause(s) of transgenderism.

$$P_y = P_{y-1} (1 - S_A S_S) + B t_b$$

A summary of the spreadsheet calculation is here in figure 1. The excel file is attached.

Figure shows that by year 50 the transgender population would be half the size, by year 100 the population drops by another half. ***The observed trend has been exactly the opposite of this with the estimate of the transgender population doubling.*** ([Flores](#))

Transgender Population Over Time Given 45% Suicide Attempts and 0.04% Successes and 0.01% of Births

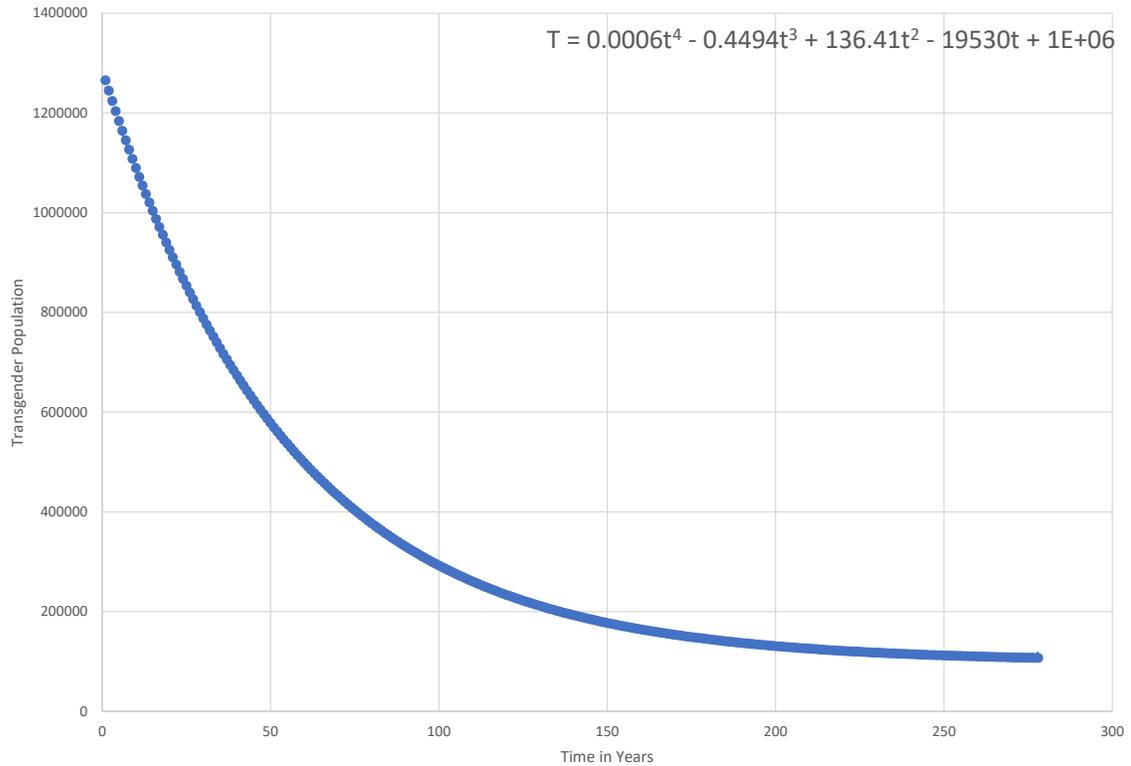


Figure 1: Summary of the spreadsheet calculation showing that over a 50 year period IF the suicide attempt rate reported in (Ann P. Haas) and often cited by (?). Given a 45% suicide rate over a 50 year period the transgender population would shrink by half.

## Conclusion

The often cited number of 45% suicide rate for transgender women is not generalize-able beyond the sample used in the study by (Haas, a). The statement that 45% of transgender women attempt suicide has to mean that, *In a given year one either tries to kill themselves or they do not, or it is a meaningless statistic.* Saying that 45% of transwomen try to kill themselves at some point in their lives has to mean that in an average year that many try to kill themselves. That is what is implied by the misuse of the findings of (Haas, a) by people like (?). A simple mathematical extrapolation for what that would do to the population over time shows it cannot be naively generalized to all transgender people. To do so is like scooping a glass of water out of the ocean, finding no fish in it and concluding that the ocean is, therefore, devoid of life.

**The UCLA study was done well**

We wish to be clear the study honestly reported the suicide attempt rate based on their survey. For their survey and their sample it is valid. However, the mathematics reinforce the following limitations of the study which are stated in the paper (Haas, a) .

The study was conducted as a survey distributed online and on paper. It is based on self reports. (Haas, a) states that while they took precautions that surveys which ask people if they've attempted suicide will often inflate the rate through people reporting other types of self harm as an attempt. The survey also did not explore the mental health status of the people sampled.

Lastly and most importantly the sample used was one of convenience not a selected and randomized study with proper control groups. *Therefore the people who answer the survey are those who are most motivated to answer the survey.*

### Commentator Comments are Not Facts

The pure mathematics, *facts of the strongest kind*, show that given the actual population data, *the second strongest kind of fact*, that the statistic based on a sample is not actually a fact outside of that sample.

The above three facts need to be mentioned when anyone such as (?) or others who wish to make an anti transgender rights case. This UCLA study does not support their conclusion which is based on a simple over generalization of the findings of that study by commentators who are able to give the impression of intellectual rigor to the masses.

## References

- Andrew R Flores. How Many Adults In The United States Identify As Transgender. <http://williamsinstitute.law.ucla.edu/wp-content/uploads/How-Many-Adults-Identify-as-Transgender-in-the-United-States.pdf>. URL <http://williamsinstitute.law.ucla.edu/wp-content/uploads/How-Many-Adults-Identify-as-Transgender-in-the-United-States.pdf>. Accessed on Thu, March 22, 2018.
- Haas. Suicide Attempts Among Transgender and Gender Non-Conforming Adults - Williams Institute. <https://williamsinstitute.law.ucla.edu/wp-content/uploads/AFSP-Williams-Suicide-Report-Final.pdf>, a. URL <https://williamsinstitute.law.ucla.edu/wp-content/uploads/AFSP-Williams-Suicide-Report-Final.pdf>. Accessed on Thu, March 22, 2018.
- Haas. Suicide Attempts Among Transgender and Gender Non-Conforming Adults - Williams Institute. <https://williamsinstitute.law.ucla.edu/wp-content/uploads/AFSP-Williams-Suicide-Report-Final.pdf>, b. URL <https://williamsinstitute.law.ucla.edu/wp-content/uploads/AFSP-Williams-Suicide-Report-Final.pdf>. Accessed on Thu, March 22, 2018.
- Nikki Tsukamoto Kininmonth J. Lester Feder. Why Transgender People In Japan Prefer To Be Told They Have A Disorder. *Buzzfeed*, August, 2016. URL <https://www.buzzfeed.com/lesterfeder/transgender-in-japan>. Accessed on Thu, March 22, 2018.
- Dan Lewis. Gamblers Take Note: The Odds in a Coin Flip Aren't Quite 50/50. *Smithsonian Magazine*, November, 2012. URL <https://www.smithsonianmag.com/science-nature/gamblers-take-note-the-odds-in-a-coin-flip-arent-quite-5050-145465423/>. Accessed on Thu, March 29, 2018.

- EL Meerwijk and JM Sevelius. Transgender Population Size in the United States: a Meta-Regression of Population-Based Probability Samples. *Am J Public Health*, 107:e1–e8, Feb 2017.
- Ben Shapiro. 3 Facts About Transgenderism The Media Ignored To Push The Caitlyn Jenner Hero Story. *Daily Wire*, May, 2016. URL <https://www.dailywire.com/news/5683/3-facts-about-transgenderism-media-ignored-push-ben-shapiro>. Accessed on Thu, March 22, 2018.
- TEGU. – Denmark losing patience with WHO, will depathologise trans identities. <https://tgeu.org/idahot2016statement/>. URL <https://tgeu.org/idahot2016statement/>. Accessed on Thu, March 22, 2018.
- US. US Census Bureau, Population Clock: World. <https://www.census.gov/popclock/world>. URL <https://www.census.gov/popclock/world>. Accessed on Thu, March 22, 2018.
- WPATH. *Standards of Care for the Health of Transsexual, Transgender, and Gender Nonconforming People*. World Professional Association for Transgender Health, 2001. URL <https://www.wpath.org/media/cms/Documents/Web%20Transfer/SOC/Standards%20of%20Care%20V7%20-%202011%20WPATH.pdf>. Accessed on Thu, March 22, 2018.