A Forensic Investigation and Critique of
Suicidal Ideation Reported in a Turnaway Study

David C. Reardon

Elliot Institute, Gulf Breeze, FL USA

Abstract

In a published report of suicidal ideation rates drawn from the Turnaway Study, the abortion advocacy group Advancing New Standards in Reproductive Health (ANSIRH) asserted that their findings proved that abortion has no effect on suicidal ideation. Therefore, laws requiring notification of abortion's link to higher suicide rates were not based on good science.   But how good is the science ANSIRH offers to displace the evidence of an abortion-suicide connection? The Turnaway Study upon which they rely is drawn from a non-random, non-representative convenience sample which suffered from a 68% refusal rate and a 50% attrition rate. No conclusions applicable to the general population of aborting women can be drawn from such a sample. Moreover, on closer examination, ANSIRH's suicidal ideation trajectory analysis is severely flawed and violates SCOPE guidelines. Basic and critical information is withheld, specifically the mean scores and number of women identified as having suicidal thoughts. Instead, readers are provided with only highly massaged results from a mixed-effects logistic regression employing thirteen covariates which appear to have been chosen precisely to water down the confidence intervals to such a high degree that virtually nothing was statistically significant. In addition, ANSIRH suggested that an attrition analysis of three of the covariates used strengthened the reliability of their finding. But the fact that they chose not to report on attrition rates associated with the other ten covariates, much less the two outcome variables related to suicidal ideation, actually exposes the falsity of this reliability claim. Rather than proving that abortion has no effect on suicidal behaviors, ANSRIH's published analysis provides evidence of deliberate obfuscation and disinformation by a group funded and dedicated to the expansion of abortion rates around the world.

Background

Numerous studies have found that abortion is associated with elevated rates of suicide or suicidal ideation [1–9]. For example, a Finnish study of the entire nation's population linked medical records to death certificates to reveal that the risk of completed suicide in the first year following an abortion was three times higher (OR=3.08; 95% CI: 1.57 to 6.03) than for the general population of women [1]. In addition, after controlling for over twenty covariates related to prior mental health, a study of National Longitudinal Study of Adolescent to Adult Health Survey (Add Health) revealed that abortion was independent risk factor for suicidal ideation (OR=1.69; 94% CI:1.28 to 2.22) [8]. This risk was dramatically higher (RR=3.44; 95% CI: 1.5 to 7.7) among the Add Health women who

reported that their aborted pregnancies were at least somewhat wanted [7]. That finding is consistent with studies showing the negative mental health effects are more common among women who feel pressured to abort contrary to their own preferences [9–11]. Additionally, a randomized national survey of Canadian women 41 to 45 years of age, with a 95% completion rate, found that 17% of women reporting a history of abortion reported substantial to high levels of suicidal ideation which they attributed to their abortions [9].

These findings have disturbed abortion providers. Not with concern for their patients, but with a concern for those challenging their right to withhold this information from their patients [12, 13].

Facing pressure to counteract these studies [14], Advancing New Standards in Reproductive Health (ANSIRH), a research division at the Bixby Center for Global Reproductive Health, which provides training for abortion providers [15], published a study in 2018 based on their Turnaway Study [16]. Employing a highly complex mixed-effects logistic regression analyses, the study examined two variables indicative of suicidal ideation and thirteen covariates. Using their models' projected suicidal ideation rates, ANSRIH asserted that suicidal ideation rates are not significantly different between the aborting groups and the group that carried their pregnancies to term. This formed the basis for their definitive assertion that: "Levels of suicidal ideation were similarly low between women who had abortions and women who were denied abortions. Policies requiring that women be warned that they are at increased risk of becoming suicidal if they choose abortion are not evidence based."

Not evidence based? ANSIRH's study did not actually test the validity of the studies upon which women's right to know laws are based. So, they have not actually disproven the validity of prior studies. So that part of their conclusion is clearly not itself evidence based.

Instead, ANSIRH appears to be asserting that the evidence they have presented in their paper so superior to that of other studies that all other results should be ignored in deference to their findings. Indeed, this theme that the Turnaway Study is the be-all and end-all of "reliable evidence" is a regular talking point in nearly all their news releases, fact sheets, and books [17, 18].

But how reliable is the evidence offered by ANSIRH?

The Turnaway Study Relies on a Non-Random, Non-Representative Sample

While ANSIRH boasts that the Turnaway study is the most "rigorous study" of women ever recruited at abortion clinics, that bar is very low. The fact is that abortion clinic-initiated studies have extraordinarily low participation rates [19] The women who anticipate the most negative feelings after an abortion are the least likely to agree to be questioned, much less repeatedly, in the days, weeks, and years following their abortions [10, 11, 20, 21]. This leads to massive self-selection bias in every survey initiated at abortion clinics.

Specifically, the first defect in the convenience sample used for the Turnaway Study, is that the recruitment method was not random. There were methodological exclusions of women seeking

abortions for therapeutic reasons, plus clinic personnel also had complete liberty in choosing who to invite. Following this pre-screening process, 3,045 women were invited to participate, of whom 62% refused, even after being offered the enticement of a $50 gift card per interview [22]. Among those who agreed to be interviewed, another 15% immediately dropped out before the first interview eight days later. In addition, nearly 50% of the Turnaway Study participants dropped out during the course of the five-year study.

In short, this process of self-censure led to a massive underrepresentation of women who feel pressured to abort in violation of their own preferences, a group which includes nearly 70% of all abortion patients [11]. In addition, the 50% attrition rate over the course of the study was certainly most profound among the remanent of women who were experiencing the most negative reactions. Indeed, one of ANSIRH's own published analyses reveal that the women reporting the least relief at the baseline interview were most likely to dropout while those who reported the highest rates of relief and happiness were most likely to remain in the study [23].

In short, it is a basic principle of scientific analyses that one cannot draw conclusions applicable to the general population if the study population is based on a non-random and/or non-representative sample. Surely, ANSIRH would make the same argument against drawing generalized conclusions based on surveys consisting only of participating in post-abortion recovery groups [24, 25]. Such convenience samples are useful for developing hypotheses, but they do not support conclusions generalizable to the entire population.

But when it comes to their own Turnaway study, ANSIRH consistently hides the low participation rate in their news releases and fact sheets. Worse, both their published conclusions and public statements lack any provisional suggestions that their results "may indicate" this or that. Instead, they consistently assert that their findings and conclusions are definitive. This is a direct violation of Strengthening the Reporting of Observational studies in Epidemiology (STROBE) guideline requiring "cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence" [26] In short, their conclusions and assertions far exceed the value and reliability of their evidence.

The Turnaway Study Does Not Actually Distinguish Between Women Who Have and Do Not Have a History of Abortion

While seldom mentioned, the Turnaway Study sample is further tainted by ANSIRH's decision to ignore the effects of abortions experienced by their birthing group, either before or after being turned away at the time of their index pregnancy. Fully 40% of the Turnaway group giving birth had prior histories of abortion [27]. In addition, over the five-year period examined, some women from all the groups may have had one or more additional abortions. This, too, is ignored.

How can researchers identify if there are any effects associated with abortion when all four groups have women in them who have a history of abortion? For example, if a woman who gave birth has a

subsequent abortion which leads her to contemplate suicide, should that suicidal risk be attributed to her delivery or her abortion?

ANSIRH's failure to exclude women in the Turnaway birth group who had prior or subsequent abortions unnecessarily confounds their results. In short, this inappropriate admixture makes it impossible to separate any effects associated with having or not having an abortion.

ANSIRH's Suicidal Ideation Study is Deceptive and Misleading

This commentary was itself inspired by an effort to more deeply understand and investigate ANSRIH's analysis of suicidal ideation trajectories based on the Turnaway Study [16]. Two outcome measures were examined. The first, from the Brief Symptom Inventory (BSI) asked participants if they had thoughts of ending their lives within the last seven days, with answers ranging from not at all (coded = 0) to extremely (coded = 4). The second, from the Patient Health Questionnaire (PHQ) asked "Over the last 2 weeks, how often have you been bothered by any of the following problems? Thoughts that you would be better off dead or hurting yourself in some way?" The options ranged from "not at all" (coded = 0) to "nearly every day" (coded = 3). In addition, the study considered thirteen covariates: abortion clinic site, maternal age, time elapsed between each survey and recruitment, race, educational level, employment status, parity, marital status, history of anxiety or depression, history of child abuse or neglect, intimate partner violence (physical or psychological) within the prior year, any drug use prior to the index pregnancy, and problem alcohol use prior to the index pregnancy.

My initial review of their published results indicated that the percentage of women who gave birth after being turned away by an abortion provider had less risk of suicidal ideation (1.29%) than women who aborted in the first trimester (1.53%; 18% higher), later term abortions (1.92%; 49% higher), or who were delayed in getting an abortion elsewhere (2.02%; 56% higher) when assessed one week after being recruited at their abortion clinics (From Table 2 [16]).

These results appeared to directly conflict with ANSIRH's claim that there were no significant differences between the four groups. So, I decided to calculate the confidence intervals for these reported probabilities. Since the number of women in each group at each time frame were not reported in the suicidality paper, I retrieved that data from another analysis of the same dataset [28]. Based on those two sets of data points, I then computed the number of women reporting suicidality in each group and time frame. Then, I calculated standard error of means (SEM) for each proportion, which equals the square root of p*(1-p)) / n, where p is the reported proportion and n is the total number of women assessed in each group at each time period. Finally, using this SEM, I was able to calculate 95% confidence intervals for the percentage of women at risk of suicidal ideation in each group and time period.

The results are shown in Table 1. What is immediately evident is that the adjusted mixed-effects logistic regression model used by ANSIRH produced nothing that could remotely shed any meaningful light on the question being investigated. The sample size was simply far too small to

yield any meaningful results. In many cases, the number of women projected to have symptoms of suicidal thoughts are fractional, which obviously does not represent what the actual raw counts would have shown. And the confidence intervals are so broad that the upper bound is often five to twenty times greater than the lower bound.

Table 1: Predicted percentage and 95% confidence intervals of the subset of women with any suicidal ideation symptoms based on ANSIRH's adjusted mixed-effects logistic regression analysis.

Question	Time of interview	Group	% w/ symptoms	N*	N w/ symptoms	SEM	95% CI
Any suicidal thoughts in past 7 days	1 week	birth after turnaway	1.29%	160	2.1	0.0089	-0.46% to 3.04%
		near limit abortion	1.92%	413	7.9	0.0068	0.60% to 3.24%
		1st trimester abortion	1.53%	254	3.9	0.0077	0.02% to 3.04%
		delayed abortion	2.02%	50	1.0	0.0199	-1.88% to 5.92%
	1 year	birth after turnaway	0.92%	136	1.3	0.0082	-0.68% to 2.52%
		near limit abortion	1.31%	352	4.6	0.0061	0.12% to 2.50%
		1st trimester abortion	1.16%	224	2.6	0.0072	-0.24% to 2.56%
		delayed abortion	1.00%	40	0.4	0.0157	-2.08% to 4.08%
	2 years	birth after turnaway	0.64%	125	0.8	0.0071	-0.76% to 2.04%
		near limit abortion	0.87%	321	2.8	0.0052	-0.15% to 1.89%
		1st trimester abortion	0.87%	193	1.7	0.0067	-0.44% to 2.18%
		delayed abortion	0.47%	37	0.2	0.0112	-1.73% to 2.67%
	3 years	birth after turnaway	0.45%	108	0.5	0.0064	-0.81% to 1.71%
		near limit abortion	0.58%	282	1.6	0.0045	-0.31% to 1.47%
		1st trimester abortion	0.64%	182	1.2	0.0059	-0.52% to 1.80%
		delayed abortion	0.21%	31	0.1	0.0082	-1.40% to 1.82%
	4 years	birth after turnaway	0.31%	99	0.3	0.0056	-0.79% to 1.41%
		near limit abortion	0.38%	276	1.0	0.0037	-0.35% to 1.11%
		1st trimester abortion	0.48%	173	0.8	0.0053	-0.55% to 1.51%
		delayed abortion	0.10%	28	0.0	0.0060	-1.07% to 1.27%
	5 years	birth after turnaway	0.21%	81	0.2	0.0051	-0.79% to 1.21%
		near limit abortion	0.25%	250	0.6	0.0032	-0.37% to 0.87%
		1st trimester abortion	0.35%	159	0.6	0.0047	-0.57% to 1.27%
		delayed abortion	0.04%	26	0.0	0.0039	-0.73% to 0.81%
Thoughts of better	6 months	birth after turnaway	0.85%	146	1.2	0.0076	-0.64% to 2.34%
		near limit abortion	1.67%	378	6.3	0.0066	0.38% to 2.96%
		1st trimester abortion	1.89%	240	4.5	0.0088	0.17% to 3.61%

off dead or self-harm in past 2 weeks		delayed abortion	1.84%	45	0.8	0.0200	-2.09% to 5.77%
	1 year	birth after turnaway	0.90%	136	1.2	0.0081	-0.69% to 2.49%
		near limit abortion	1.51%	352	5.3	0.0065	0.24% to 2.78%
		1st trimester abortion	1.64%	224	3.7	0.0085	-0.02% to 3.30%
		delayed abortion	1.37%	40	0.5	0.0184	-2.23% to 4.97%
	2 years	birth after turnaway	1.05%	125	1.3	0.0091	-0.74% to 2.84%
		near limit abortion	1.17%	321	3.8	0.0060	-0.01% to 2.35%
		1st trimester abortion	1.13%	193	2.2	0.0076	-0.36% to 2.62%
		delayed abortion	0.63%	37	0.2	0.0130	-1.92% to 3.18%
	3 years	birth after turnaway	1.22%	108	1.3	0.0106	-0.85% to 3.29%
		near limit abortion	0.91%	282	2.6	0.0057	-0.20% to 2.02%
		1st trimester abortion	0.77%	182	1.4	0.0065	-0.50% to 2.04%
		delayed abortion	0.28%	31	0.1	0.0095	-1.58% to 2.14%
	4 years	birth after turnaway	1.42%	99	1.4	0.0119	-0.91% to 3.75%
		near limit abortion	0.70%	276	1.9	0.0050	-0.28% to 1.68%
		1st trimester abortion	0.12%	173	0.2	0.0026	-0.40% to 0.64%
		delayed abortion	0.52%	28	0.1	0.0136	-2.14% to 3.18%
	5 years	birth after turnaway	1.64%	81	1.3	0.0141	-1.13% to 4.41%
		near limit abortion	0.54%	250	1.4	0.0046	-0.37% to 1.45%
		1st trimester abortion	0.35%	159	0.6	0.0047	-0.57% to 1.27%
		delayed abortion	0.05%	26	0.0	0.0044	-0.81% to 0.91%

*Number of women at each stage drawn from online Supplement 2 associated with Biggs 2017 [28]

Notably, similarly broad confidence intervals, orders of magnitude wide, are also evident in Table 3 of the original paper [16].

Omissions of Key Data

These bizarre findings led me to a closer scrutiny of the paper. Most notably, I realized that the entirety of the paper is designed to withhold the actual data describing both the number of women experiencing suicidality in each group and their mean scores on the two scales utilized. For example, while Table 1 provides descriptive statistics and the exact count of women within each category of the covariates, the count of women reporting suicidal thoughts on the two scales of most interest are conspicuously absent. The same omission appears in Table 2. These omissions are a violation of the Strengthening the Reporting of Observational studies in Epidemiology (STROBE) guideline which require well designed studies to "report numbers of outcome events or summary measures" and to "give *unadjusted estimates and, if applicable,* confounder-adjusted estimates" (emphasis added) [26] since the ANSIRH report only provides the outcome estimates selected from their mixed-methods logistic regression.

Clearly, the most straight forward approach to determining if there are differences in suicidality scale scores would have been to conduct t-tests to determine if the mean scores of each group

were significantly different within each time frame. But this simple test was not reported...though it was certainly performed by ANSIRH and subsequently shelved.

Given the differences that still linger in the mixed-effects logistic regression, there is no doubt that the t-tests would have shown that women giving birth had significantly lower risk of suicidal thoughts. But since that was an unwelcome result, ANSIRH had to bury not only the exact number of women in each category, but also design a study that would expand the confidence intervals so far across all domains that they could then assert there were no statistically significant differences between their four groups.

In an effort to verify these inferences, I requested the counts and mean scores for each time period from the lead author. But to date, my request has been ignored. That non-response, incidentally, violates the American Psychological Association's ethical standards on data sharing [29].

Mixed-Effect Shenanigans

The way ANSIRH achieved their desired outcome was through the selection of a "mixed-effects" analysis that allowed them to bring in seemly meaningful covariates as a means for obscuring what would be revealed in straightforward comparisons. In general, adding covariates to any logistic regression model, including a mixed-effects regression, will affect the width of the confidence intervals for the estimated odds ratios. Whenever covariates are correlated with each other, this can lead to multicollinearity which can inflate the standard errors of the regression coefficients, leading to wider confidence intervals. In addition, the complexity of the model increases with the addition of each additional covariate. This increased complexity may lead to overfitting, which can also contribute to wider confidence intervals due to increased uncertainty about the estimated coefficients.

Notably, only six of the covariates were significantly correlated with either of the two mixed-model outcomes. Given the large number of data points included in the Turnaway Study, dozens of other covariates could have been included in addition to or instead of those chosen by ANSIRH. There is no clear justification for using the thirteen covariates they chose, except perhaps that after numerous attempts these were the best fit for producing the desired non-significant finding across all four groups.

Instead of selecting covariates that fit their desired results, ANSIRH could and should have tested all covariate candidates with a Bayesian logistic regression. This is an automated process which grades every possible combination of covariates to determine which covariates, and which combinations of covariates, produce the most credible influences on suicidal ideation. Absent such an analysis, readers are right to be concerned that the covariates chosen by ANSIRH were chosen for their ability to obscure rather than to clarify the statistical associations between suicidal thoughts and abortion.

What an Incomplete Attrition Analysis Really Reveals

In an apparent effort to bolster the credibility of their findings, ANSIRH's suicidal ideation report includes a section titled "Attrition Analysis." It states that another mixed-effect regression analysis, "data not shown," was conducted which revealed that three of the thirteen covariates used in the suicidal thoughts analyses were *not* associated with a higher risk that women dropped out of the study.

If three of thirteen variables were *not* associated with attrition, doesn't that imply that the other ten variables *were associated* with higher risk of attrition?

Even more importantly, why weren't the two outcome variables for suicidal thoughts tested to see if they were associated with a higher risk of women dropping out?!! Surely, that would be the first attrition test that should have been done. If ANSIRH had results proving there was no association between suicidal thoughts at week one or year one and subsequent dropouts, they would have been quick to report that finding, including the data to support it. That would have been an attrition analysis worth reporting. Instead, we're offered a throwaway assurance that three of the thirteen covariates were *not* associated with attrition, apparently with the hope that readers skimming the section headlines will be satisfied that an "attrition analysis" was conducted that strengthened the authors' conclusions.

Notably, since it is clear that attrition did contribute to the decline in suicidal thoughts reported over the five years examined, it is also clear why the covariate representing the the time between recruitment and each interview was one of the six variables with a significant odds ratio as reported in Table 3.

Skimming Past Imminent Suicidality

In the section describing their use of the Sheehan Suicidality Scale to identify women at imminent risk of suicide, ANSIRH reports identifying four cases of women at imminent risk of suicide on the days that interviews were conducted. None were in the birth group. Two were from the first-trimester abortion group and two from the later term abortion group.

In a transparent effort to dismiss these cases as unrelated to these women's abortions, the ANSIRH authors' state that "All four indicated that the abortion was the right decision for them." But this is misleading. It implies that all four reported no negative emotional or mental health effects that were attributable to their abortions. But the actual question posed in the Turnaway Study was a yes or no response to "Given your situation, was the decision to have an abortion the right decision for you?" A subsequent study testing this answer on a sliding scale revealed that a "yes" answer commonly co-existed with reports of severe negative emotional effects [11]. Even ANSIRH's own analyses elsewhere reveal high rates of regret sadness (64%), guilt (53%) and anger (31%) which are concurrent with women reporting that they made the right decision and higher than the same emotions among the women who carried to term [30].

These findings, and interviews with women, suggest that most women interpreted ANSIR's "decision rightness" question as equivalent to "Given your situation, did you make the best decision you could at that time?" A positive response does not indicate an absence of negative reactions. It only indicates an affirmation that the vast majority of women will affirm that they made the best choice they could at the time of their abortions.

In short, there is no basis for assuming their abortion histories did not contribute in any way to the four cases of imminent suicidality reported by ANSIRH. The Turnaway Study's "right decision" question simply does not exclude concurrent effects on suicidal thoughts.

A better crosscheck for an abortion connection would have been a check on how these four women scored on their PTSD evaluations. Elsewhere, ANSIRH reported that 16% of the Turnaway Study's aborting women reported at least three symptoms of PTSD, of whom 19% attributed their symptoms to their abortions [31]. Did any of the four women who reported imminent suicidality have PTSD symptoms? Did any attribute their PTSD symptoms to their abortions? That's not reported by ANSIRH. Instead, we're given a misleading suggestion that all four women were "right" with their abortions.

Conclusions

Careful examination of the results reported in ANSIRH's suicidal trajectories analyses reveal that that the Turnaway Study size is simply too small to support the mixed-effects logistical regression that was presented. The large number of covariates chosen for the analysis simply overwhelmed the small study size and resulted in confidence intervals that were far too wide to be meaningful.

In addition, the convenience sample upon which the Turnaway Study is based cannot support any generalizable conclusions since it was non-randomly collected, has an extraordinarily high self-censure and attrition rates, and is adulterated by inclusion of women with a history of abortion in the group giving birth, which is the primary group of interest.

As a result, there is no justification for ANSIRH offering even any tentative conclusions, much less their definitive assertion that the results of other studies can be ignored or that "policies requiring that women be warned that they are at increased risk of becoming suicidal if they choose abortion are not evidence based" [16].

Rather than proving that abortion has no effect on suicidal behaviors, ANSRIH's published analysis provides evidence of deliberate obfuscation and disinformation by a group funded and dedicated to the expansion of abortion rates around the world [14, 32, 33] even at the expense of the women exposed to unwanted and unsafe abortions (Elliot Institute 2004).

References

[1]   Gissler M, Hemminki E, Lönnqvist J, et al. Suicides after pregnancy in Finland, 1987-94: register linkage study. *BMJ* 1996; 313: 1431–1434.

[2]   Morgan CL, Evans M, Peters JR, et al. Suicides after pregnancy. *Bmj* 1997; 314: 902–902.

[3]   Gissler M, Karalis E, Ulander V-MV-M. Decreased suicide rate after induced abortion, after the Current Care Guidelines in Finland 1987 - 2012. *Scand J Public Health* 2014; 43: 99–101.

[4]   Reardon DC, Ney PG, Scheuren F, et al. Deaths associated with pregnancy outcome: A record linkage study of low income women. *South Med J* 2002; 95: 834–841.

[5]   Fergusson DM, Horwood LJ, Boden JM. Does abortion reduce the mental health risks of unwanted or unintended pregnancy? A re-appraisal of the evidence. *Aust N Z J Psychiatry* 2013; 47: 819–27.

[6]   Luo MY, Jiang XQ, Wang Y, et al. Association between induced abortion and suicidal ideation among unmarried female migrant workers in three metropolitan cities in China: a cross-sectional study. *BMC Public Health* 2018; 18: 625.

[7]   Sullins DP. Affective and Substance Abuse Disorders Following Abortion by Pregnancy Intention in the United States : A Longitudinal Cohort Study. *Medicina (B Aires)* 2019; 55: 1–21.

[8]   Sullins DP, DP S. Abortion, substance abuse and mental health in early adulthood: Thirteen-year longitudinal evidence from the United States. *SAGE Open Med* 2016; 4: 11.

[9]   Reardon D. The Prevalence and Effects of Unwanted Abortions in Canada: A Retrospective Cross-sectional Study. *Zenodo*. Epub ahead of print 2024. DOI: 10.5281/ZENODO.10823234.

[10]   Reardon DC, Longbons T. Effects of Pressure to Abort on Women's Emotional Responses and Mental Health. *Cureus* 2023; 15: e34456.

[11]   Reardon DC, Rafferty KA, Longbons T, et al. The Effects of Abortion Decision Rightness and Decision Type on Women's Satisfaction and Mental Health. *Cureus*; 15. Epub ahead of print 11 May 2023. DOI: 10.7759/CUREUS.38882.

[12]   8th Cir. (en banc). Planned Parenthood Minn., N.D., S.D. v. Rounds. 2012.

[13]   AfterAbortion.org. All Abortion Risks Must Be Disclosed, Appeals Court Rules. *AfterAbortion.org*, https://www.afterabortion.org/all-abortion-risks-must-be-disclosed/ (2012, accessed 26 March 2024).

[14]   Martin N. How One Abortion Research Megadonor Forced the Supreme Court's Hand: the foundation is known for its secrecy. *Mother Jones*, https://www.motherjones.com/politics/2016/07/abortion-research-buffett/ (2016, accessed 21 March 2024).

[15]   S G, Wolfe M, Group TTCW. *Early Abortion Training Workbook*. San Francisco, CA: Advancing New Standards in Reproductive Health, Bixby Center for Global Reproductive Health,

http://www.teachtraining.org/trainingworkbook/EarlyAbortionTrainingWorkbook2012.pdf (2012).

[16] Biggs MA, Gould H, Barar RE, et al. Five-year suicidal ideation trajectories among women receiving or being denied an abortion. *American Journal of Psychiatry* 2018; 175: 845–852.

[17] Foster DG. The Turnaway Study: ten years, a thousand women, and the consequences of having--or being denied--an abortion. 2020; 360.

[18] Greene Foster D. Yes, science can weigh in on abortion law. *Nature* 2021; 599: 349–349.

[19] Reardon DC. The abortion and mental health controversy: A comprehensive literature review of common ground agreements, disagreements, actionable recommendations, and research opportunities. *SAGE Open Med* 2018; 6: 205031211880762.

[20] Adler NE. Sample Attrition in Studies of Psychosocial Sequelae of Abortion: How Great a Problem?1. *J Appl Soc Psychol* 1976; 6: 240–259.

[21] Söderberg H, Andersson C, Janzon L, et al. Selection bias in a study on how women experienced induced abortion. *Eur J Obstet Gynecol Reprod Biol* 1998; 77: 67–70.

[22] Reardon DC. The Embrace of the Pro-Abortion Turnaway Study. Wishful Thinking? or Willful Deceptions? *Linacre Q* 2018; 85: 204–212.

[23] Rocca CH, Kimport K, Roberts SCM, et al. Decision Rightness and Emotional Responses to Abortion in the United States: A Longitudinal Study. *PLoS One* 2015; 10: e0128832.

[24] Burke T, Reardon DC. *Forbidden Grief: The Unspoken Pain of Abortion*. Springfield IL: Acorn Books, 2007.

[25] Reardon DC. *Aborted Women, Silent No More*. Chicago, IL: Loyola University Press, 1987.

[26] Cuschieri S. The STROBE guidelines. *Saudi J Anaesth* 2019; 13: S31.

[27] Rocca CH, Kimport K, Gould H, et al. Women's Emotions One Week After Receiving or Being Denied an Abortion in the United States. *Perspect Sex Reprod Health* 2013; 45: 122–131.

[28] Biggs MA, Upadhyay UD, McCulloch CE, et al. Women's Mental Health and Well-being 5 Years After Receiving or Being Denied an Abortion. *JAMA Psychiatry* 2017; 74: 169.

[29] American Psychological Association. Ethical Principles of Psychologists and Code of Conduct, http://www.apa.org/ethics/code/index.aspx#8_14 (2010, accessed 1 February 2017).

[30] Rocca CH, Kimport K, Gould H, et al. Women's Emotions One Week After Receiving or Being Denied an Abortion in the United States. *Perspect Sex Reprod Health* 2013; 45: 122–131.

[31] Biggs MA, Rowland B, McCulloch CE, et al. Does abortion increase women's risk for post-traumatic stress? Findings from a prospective longitudinal cohort study. *BMJ Open* 2016; 6: e009698.

[32]   Novielli C. The secrecy surrounding the abortion pill's maker and influential financial investors must end. *Live Action*, https://www.liveaction.org/news/secrecy-abortion-pill-maker-investors/ (2019, accessed 25 March 2024).

[33]   Reardon DC, Harrison D, Skop I, et al. *Overlooked Dangers of Mifepristone, the FDA's Reduced REMS, and Self-Managed Abortion Policies: Unwanted Abortions, Unnecessary Abortions, Unsafe Abortions*. Arlington, VA, https://lozierinstitute.org/overlooked-dangers-of-mifepristone-the-fdas-reduced-rems-and-self-managed-abortion-policies-unwanted-abortions-unnecessary-abortions-unsafe-abortions/ (2021).

[34]   Elliot Institute. Brief of the Elliot Institute, Rachel's Vineyard, & Entering Canaan Ministry as Amici Curiae Supporting Respondents, US Food and Drug Administration v Alliance for Hippocratic Medicine, US Supreme Court, 23-234, 2024., https://tinyurl.com/Elliot2024Brief (2004).